



**ENQUIRY DOCUMENT - MR- GATE, GLOBE & CHECK VALVES**

**(Document No : C068-000-WB-MR-3005-043-RFQ)**



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# HINDUSTAN PETROLEUM CORPORATION LIMITED

## LUBE MODERNIZATION & BOTTOM UPGRADATION (LMBU) PROJECT

**(EIL REF. NO. AKG/C068-000-WB-MR-3005/043)**

BIDDING DOCUMENT

FOR

GATE, GLOBE & CHECK VALVES

Part - I: COMMERCIAL SECTION

Prepared by:



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**REQUEST FOR QUOTATION (RFQ)- LIMITED-INDIGENOUS  
[BIDDING THROUGH CPPP PORTAL]  
COVERING LETTER**

**RFQ No.: AKG/C068-000-WB-MR-3005/043**

**Date: 16.03.2026**

<p>This enquiry is issued on Limited Bidding basis only to EIL and/or Owner enlisted suppliers. A separate intimation to the suppliers eligible for this enquiry shall be sent through EIL website (<a href="http://tenders.eil.co.in">http://tenders.eil.co.in</a>) subsequent to issue of enquiry in CPPP Portal.</p> <p>In case a supplier, who has been issued this enquiry, does not register themselves on the CPPP Portal and as a consequence, could not submit their bid on Portal, it shall be deemed that he is not interested in bidding against this enquiry and no further correspondence will be entertained.</p> <p>Bidder registered with EIL shall furnish quotations only for those items / group for which bidder is enlisted with EIL as on date of this enquiry. If bidder quotes for an item/group for which he is not enlisted in EIL, quote of such an item/group will be summarily rejected.</p> <p>In case Bidder is not enlisted with EIL but received the enquiry document being enlisted with Owner, bidder shall submit their bid for the items/groups for which they are enlisted with Owner.</p>	<p>Client: <b>M/s Hindustan Petroleum Corporation Ltd. (HPCL)</b></p> <p>Project: <b>LUBE MODERNIZATION &amp; BOTTOM UPGRADATION (LMBU) PROJECT</b></p> <p>MR No.: <b>C068-000-WB-MR-3005 REV. A</b></p> <p>Item: <b>GATE, GLOBE &amp; CHECK VALVES</b></p> <p>Due Date &amp; Time: Refer <b>CPPP portal</b> <a href="https://eprocure.gov.in/eprocure/app">https://eprocure.gov.in/eprocure/app</a></p>
<p><b>MODE OF BID SUBMISSION:</b></p>	<p><b>Online submission (e-Bids) through above referred Portal. Bid submitted through any other mode shall not be acceptable.</b></p>
<p><b>UNPRICED BID OPENING:</b></p>	<p>Refer <a href="https://eprocure.gov.in/eprocure/app">https://eprocure.gov.in/eprocure/app</a></p>
<p><b>LAST DATE OF RECEIPT OF BIDDER'S QUERIES FOR PRE-BID MEETING</b></p>	<p>Bidder shall upload the pre-bid queries on above referred e-procurement portal within the cut-off date</p>

	specified in the portal. Post cut-off date bidder shall not be able to upload their queries on the portal. EIL/Owner reserves the right not to entertain the queries raised through email / any other mode.
PRE-BID MEETING:	<b>Not Applicable</b>
<b>Confidentiality Agreement (CA) / Non-Disclosure Agreement (NDA)</b>	<b>Not Applicable</b>
COST OF BIDDING DOCUMENT:	Nil
EARNEST MONEY DEPOSIT (EMD):	Not Applicable
REVERSE AUCTION (RA):	<b>Not Applicable</b>
PRICED BID OPENING:	Time & Venue shall be intimated later.
If dates identified as (*) above happen to be a declared holiday in HPCL, Mumbai / EIL New Delhi, the next working day shall be considered.	

## 1.0 INTRODUCTION:

Engineers India Ltd. (EIL), New Delhi has been appointed the Engineering, Procurement, and Construction Management (EPCM) Consultant for this project.

EIL, invites e-bids under Single Stage Two Part Bid System, for the subject enquiry from eligible bidders under limited competitive bidding basis in accordance with Bidding Document.

The complete Bidding Document can be viewed and downloaded from CPPP's e-tender Portal having URL <https://eprocure.gov.in/eprocure/app>.

All amendments, time extension, clarifications, etc. will be uploaded in the above referred e-tender portal only. There will not be any publication of the same through newspapers or any other media. Bidders should regularly visit the above portal to keep themselves updated and submit their Bids based on the latest information/instructions hosted in the portal.

Time and date of opening of Price Bids shall be notified to the qualified and acceptable bidders at a later date.

Request for extension received from any bidder on a date which is less than four days prior to the bid due date may be ignored, since there will not be adequate time for proper communication with Client and other Bidders.

Bidders shall submit the bid directly and in their own names without involving any intermediaries.

Tender information is also available in EIL website <http://tenders.eil.co.in>

## 2.0 TIME SCHEDULE FOR DELIVERY:

Supply: All items shall be delivered **within 270 Days on FOT Site** basis from the date of Award/LOA.

The date of receipt of item at designated delivery location/ site shall be considered as the date of delivery.

## 3.0 Bid Validity

Clause 43 of GTC stands deleted and replaced with the following:

Offer shall be valid for **90 Days** from the bid due date / extended bid due date.

#### **4.0 EVALUATION/AWARD METHODOLOGY:**

4.1 Evaluation and Award shall be done on **item-wise** lowest cost basis (subject to Purchase Preference, if any), as per the provisions of Bidding Document. Item quantity may be further split ordered in-line with purchase preference. GST shall not be loaded for evaluation purpose.

4.2 Purchase Preference for Public Procurement Policy on Procurement of Goods and services from Micro and Small Enterprises (MSEs) Order 2012 shall be applicable in line with the provisions of bidding document. **(Refer respective clause of ITB for Policy details).**

#### **4.3 Eligibility and Conditions:**

Both Class I & Class-II Local Supplier (for definition, refer order) are eligible to bid. Purchase Preference as per "Public Procurement (Preference to Make in India) (PPP-MII) Order, 2017" revised and issued by DPIIT vide Order no. P-45021/2/2017-PP-(BE-II) dated 19.07.2024, shall be applicable only for Class I Local supplier. **(Refer respective clause of ITB for Policy details and concurrent applicability of PPP-MII & PPP-2012 policies).**

4.4 HPCL reserves the right to conduct price negotiation with L1 bidder.

#### **5.0 NETWORTH CALCULATION**

5.1 In line with Cl No 4.3 of ITB, bidder having positive net worth shall only be eligible. Bidder with negative net worth will not be considered barring PSUs approved by Owner.

5.1 Documents for ascertaining Net worth:

- a) Bidder (Companies) shall submit Complete Audited Financial Statement (which includes 'Balance Sheet' and 'Profit & Loss Account' along-with the all schedules, Notes referred to therein and the Auditor's report).
- b) Financial Statements of the Company audited & issued post final bid due date and time shall not be considered for evaluation.

5.2 For the purpose of meeting financial criteria "Immediately preceding financial Year" shall mean year ending 31st March 2025. For bidders, whose financial year closing is at the end of Dec-2024 or Sept-2024 or June-2024, the last three financial years ending with the respective quarters or later shall be considered.

5.3 Submission of Consolidated Audited Financial Statement

- a) Bidder is a Parent/Holding Company: Where only consolidated Audited Financial Statements are prepared and audited, which includes the financial details of their wholly owned subsidiaries etc., consolidated audited financial statement shall be considered for establishing the financial criteria subject to Statutory Auditor/ CEO/ CFO/ Company Secretary or any member of the Board of Directors of the bidder, certifying that standalone Financial Statements of bidder (without the financial data of subsidiaries, etc.) is not separately prepared and audited.
- b) Bidder is a Subsidiary Company: In case a Bidder is a Subsidiary Company and separate Financial Statements of the Bidder is not prepared & audited, but only a consolidated audited Financial Statements of their Parent Company/Holding Company are available, consolidated audited Financial Statement shall be considered for establishing the financial criteria subject to Statutory Auditor/ CEO/ CFO/ Company Secretary or any member of the Board of Directors of the Parent/Holding company (whose Audited Financial Statements are submitted for qualification) certifying in their letterhead that Financial Statements of Bidder are not separately prepared and audited.

5.4 CALCULATION OF NET WORTH

- a) **Net worth calculation: Net worth means paid up share capital, Share Application**

**Money pending allotment\* and reserves# less accumulated losses and deferred expenditure to the extent not written off.** Net worth shall be calculated using the following formula:

**# Reserves to be considered for the purpose of net worth shall be all reserves created out of the profits and securities premium account** but shall not include reserves created out of revaluation of assets, write back of depreciation and amalgamation.

**\*Share Application Money pending allotment will be considered only in respect of share to be allotted.**

Description		Values <in Currency>	Reference (Page no., Clause etc.)
Paid up Share capital (A)	:		
Add: Share Application Money pending allotment (B)	:		
Add: Reserves (As defined above) (C)	:		
Less: Accumulated Losses (D)	:		
Less: Deferred Revenue Expenditure to the extent not written off (E)	:		
<b>Net Worth (A+B+C-D-E)</b>	:		

5.5 Bidder shall ensure that the certificate/reports issued/attested by practicing Chartered Accountant (CA)/Statutory Auditor in India shall contain Unique Document Identification Number (UDIN) of the CA, without which these Certificates/ reports shall not be considered for evaluation. However, this requirement of including UDIN shall not be applicable for certificate/reports issued/attested by a CA practicing in foreign country.

5.6 No relaxation is applicable for Start-ups.

## **6.0 GENERAL**

6.1 EIL/HPCL reserves the right to evaluate the Bids using in-house information.

6.2 HPCL / EIL shall not be responsible or liable for cost incurred in preparation, submission & delivery of Bids, site visit, participating in discussions and other expenses incurred during the Bidding process, regardless of the conduct or outcome of the Bidding process.

6.3 In case, any Bidder is found to be involved in cartel formation, their Bid shall not be considered for evaluation/placement of order. Such Bidder shall be put on Holiday / blacklisted / debarred from Bidding in future for HPCL/EIL.

6.4 Canvassing in any form by the Bidder or by any other agency on their behalf may lead to disqualification of their Bid.

6.5 EIL/HPCL reserves the right to reject any/or all the Bids received or annul the Bidding process at any time at their sole discretion without assigning any reason thereof.

6.6 Unsolicited clarifications to the offer and/ or change in the prices during the Bid validity period would render the bid liable for rejection.

6.7 Clarification, if any, can be obtained from Mr. Abhishek Kr. Singh / Mr. Vivek Dixit / Mr. Amit Kr. Gupta through following number.

Telephone No. +91-11-26762830/2828/2890; E-mail: [abhishek.singh@eil.co.in](mailto:abhishek.singh@eil.co.in) / [vivek.dixit@eil.co.in](mailto:vivek.dixit@eil.co.in); [amitkr.gupta@eil.co.in](mailto:amitkr.gupta@eil.co.in);

6.8 “Engineers India Ltd including its officers and representatives, shall under no circumstances solicit or request any payment, monetary consideration from bidders other than those specifically stipulated in the published tender/enquiry document and its amendments (if any).

Bidders are cautioned that, should they receive any phone calls, messages, emails, or personal approaches requesting payments other than specified in Tender Document, such communications are fraudulent and do not originate from Engineers India Ltd.

Engineers India Ltd shall not be responsible for any financial loss, penalty, or damage caused due to actions taken by Bidders/Contractors on the basis of such communications.”

**This is not an Order.**

For & on behalf of HPCL  
(Authorized Signatory)

Name: Amit Kr. Gupta  
Designation: GM (SCM-C&P)  
E-mail: [amitkr.gupta@eil.co.in](mailto:amitkr.gupta@eil.co.in)

**BID DATA SHEET (BDS)**

Sl. No.	Content	Applicability
1.	EIL commitment vis-a-vis Supplier Commitment	Not Applicable
2.	Part Order, as per clause 34 of GTC	Applicable. Item quantity may be further split ordered in-line with purchase preference as per RFQ Document.
3.	Repeat Order, as per clause 34 of GTC	Applicable
4.	Payment Terms, in line with Cl No-8.0 of Special Conditions Of contract (SPC).	<p><b>A. <u>SUPPLY OF MAIN EQUIPMENT:</u></b></p> <p>95% with full taxes, duties &amp; transportation charges against receipt and acceptance of material at site (HPCL designated warehouse or HPCL MR) along with complete documents (LR, IRN, packing list, Tax Invoice etc.)</p> <p>05% on receipt of all Final/As built Drawings/ Documents/ Data/ Manual in requisite number duly certified by Inspection agency as per VDR specified in Purchase Requisition and uploading the same in EIL/HPCL portal.</p> <p><b>General Notes to payment terms:</b></p> <p>a) 1ST Milestone payment shall be released only after receipt of CPBG (wherever applicable) Wherever ABG is required to be submitted by the supplier against milestone progress payment, validity of ABG shall be valid till CDD which shall be further extended, as required till last date of receipt of all material at site. However, ABG will be released on dispatch/ receipt of material at site (as applicable).</p> <p>b) Prorata payments shall be applicable on dispatch of material. In case of equipment, prorata shall not be on part of equipment.</p> <p>c) In case of indigenous SUPPLIERS, wherever taxes/duties are separately indicated. 100% payment of GST shall be paid on receipt of GST invoices and on proof of payment of GST, or, on auto-population under GST portal.</p> <p>d) All bank charges of respective bankers shall be to respective account.</p> <p>e) Supplier shall submit Billing Schedule within three weeks after placement of FOA/PO (whichever is issued earlier) for EIL/OWNER's approval (wherever applicable). Suppliers requiring multiple dispatches will restrict the number of dispatches to maximum Three, unless agreed otherwise by Project Manager.</p> <p>f) In case site front is not available up to 6 (Six) months (wherever site work is applicable), after receipt of all supplies at site, the payment against the site work shall be</p>

Sl. No.	Content	Applicability
		<p>released on submission of additional Bank Guarantee of equivalent amount valid for 1 (One) year or such extended period as may be required</p> <p>g) Certification for placement of sub-order and/or identification of major raw material, in the above payment terms, shall be carried out by the nominated Inspection agency.</p> <p>h) Wherever the payment provision is there against ABG, and Vendor is not seeking payment against these milestones, those milestone payments shall be released along with milestone of despatch/ receipt of material at site without seeking any ABG for earlier milestone payment.</p> <p>i) Public Sector Enterprises and Central/State Government Department are exempted from furnishing advance Bank Guarantee.</p>
5.	<b>Power of attorney, clause 11 of ITB</b>	Not Applicable
6.	<b>Integrity Pact, clause 13 of ITB</b>	Applicable
7.	<b>Policy for providing Preference to Domestically Manufactured Iron &amp; Steel Products in Government Procurement (DMI&amp;SP), clause 32 of ITB</b>	Not Applicable
8.	<b>Purchase Preference (PPP-MII) to Class-I Local Supplier</b>	Applicable

Project / Client: Lube Modernization and Bottom Upgradation (LMBU) Project of Hindustan Petroleum Corporation Ltd, Mumbai

RFQ No.:

Item:

Notes:

- a) Use capital letters and English language only.
- b) Bidder to submit it duly signed and stamped on each page, as a token of their acceptance and confirmation(s) in respect of RFQ.
- c) Bidder to note that fill in the blanks- data / details is to be entered by the bidder and correct option ticked (the same are also highlighted in shaded grey in the table below).
- d) Bidders are required to carefully fill their responses to below points alongwith submission of relevant documentary evidence as per the provisions of RFQ.
- e) In case the responses are incomplete/ inconsistent and / or not substantiated by relevant document(s) the bidders are at risk of evaluation of their bid being concluded without affording them another opportunity to complete / correct / comply their submission with respect to RFQ requirements. In such a case EIL/ Owner reserves the right to complete the evaluation based on the available information and EIL/ Owners decision shall be final and binding.

SL. NO.	DESCRIPTION	BIDDER'S / SUPPLIER'S CONFIRMATION (Strike out response which is not applicable)
1.	a) Bidder/Supplier Name	
	b) Status of Bidder's Firm: Proprietorship/ Partnership/ Limited Liability Partnership / Public Ltd./ Pvt Ltd./ Govt Deptt./ PSU/ Others (Specify)	
	c) Bidder is the manufacturer or Trader of the offered items (specify).	
	d) Specify HPCL's vendor code, if registered with HPCL	
	e) Specify EIL's vendor code, if registered with EIL	
	f) Supplier's Offer Ref No. & Date	
2.	Name and contact details of Bidder's/ Supplier's authorized signatory: a) Name: b) Tel. No.: c) Mob. No.: d) E-mail:	
3.	a) PAN no. of Bidder b) Specify Despatch Point from where the material/ goods shall be despatched c) GSTIN no.	a) _____ b) _____ c) _____ In case different despatch points are applicable, specify the same as under:-

BIDDER'S SIGNATURE WITH STAMP/SEAL

SL. NO.	DESCRIPTION	BIDDER'S / SUPPLIER'S CONFIRMATION (Strike out response which is not applicable)
4.	Rate of GST	GST Rate (in %) _____ [If a single rate of GST is applicable] If tendered line item-wise GST is different, then the same to be specified by bidder here or in a separate sheet to be attached with ATC.
5.	a) Bidder to note that bidder to quote all-inclusive prices on the GeM portal as per Schedules/ created on the GeM portal. b) Confirm that prices for following has been quoted in the un-Priced Part in the price break-up attached with the bidding document and uploaded with the un-priced bid on GeM portal: i. 2 years O&M Spares ii. Unit Rates for Addition/ Deletion iii. Unit rates for specific test	a) Noted  b) Confirmed
6.	a) Bidder to note that normal merit rate of customs duty shall be applicable for this Project and Client does not provide any letter for availing concessional rate of customs duty. b) Bidder shall furnish the details of import content in case bidder desires to claim variation in prices on account of variation in customs duty and/or variation in exchange rate of imported materials.  BUILT-IN IMPORT CONTENT IN THE OFFER (TICK ONE WHICHEVER IS APPLICABLE).  (IN CASE NO OPTION IS SELECTED, BUILT-IN IMPORT CONTENT SHALL BE CONSIDERED TO BE NOT APPLICABLE AND NO STATUTORY VARIATION ON ACCOUNT OF CUSTOM DUTIES AND VARIATION IN FOREIGN EXCHANGE SHALL BE PROVIDED).	a) Noted  b) Tick whichever is applicable  <input type="checkbox"/> APPLICABLE <input type="checkbox"/> NOT APPLICABLE  (Details of import content, if applicable) shall be furnished in the price schedule format and to be uploaded along with un-priced bid)
7.	Confirm that quoted prices will remain firm and fixed till complete execution of the order except for the statutory variations permitted as per provisions of Taxes & Duties.	Confirmed
8.	Confirm that the offer is valid for the period specified in NIT/RFQ/BDS, from the final 'Bid Due Date'.	Confirmed
9.	MSE Status: a) Confirm whether the Bidder is a MSE Bidder	Yes / No

BIDDER'S SIGNATURE WITH STAMP/SEAL

SL. NO.	DESCRIPTION	BIDDER'S / SUPPLIER'S CONFIRMATION (Strike out response which is not applicable)
		If yes, mention 19 digit UDYAM No. UDYAM-____-____-_____
	b) If the owner of Bidder's organization belongs to MSE social category: SC/ST as per Udyam registration, submit SC/ST Certificate issued by District Authority, duly certified by Statutory Auditor or Notarized or any other specified document.	(Tick whichever is applicable) <input type="checkbox"/> Yes, document attached <input type="checkbox"/> Not Applicable
	c) If the owner of Bidder's organization belongs to the MSE Gender category- Female category, submit requisite documents as required in the RFQ.	(Tick whichever is applicable) <input type="checkbox"/> Yes, document attached <input type="checkbox"/> Not Applicable
	d) Additional Documents in the name of the bidder, as a proof of being a manufacturer, to be submitted by bidder - Factory registration certificate, Central Government certificate, State Government certificate, ISO certificates, third party government authorized agency certificate for manufacturing facilities related to manufacturing of quoted item for this enquiry etc.	Enclosed (If Applicable)
	<p>Notes:-</p> <p>a) As per GeM policy / guidelines, MSE bidders have to update their MSE status and declare whether they are participating as MSE on GeM portal, while bidding on GeM portal.</p> <p>If bidder has ticked the relevant field in GeM portal for availing the MSE preference, then applicability of MSE purchase preference shall be subject to submission of relevant supporting documents by bidder in their bid.</p> <p>If bidder has not ticked the relevant field in GeM portal for availing the MSE purchase preference, then in such a case, MSE purchase preference shall not be admissible to the bidder, even though the bidder may be MSE.</p> <p>b) In case of bidding on other than GeM portal, if no specific declaration towards MSE / SC / ST / Female is made above in the ATC (i.e. no response is marked made against (a), (b), and (c) above) and no relevant documentary evidence is submitted in their Un-priced Bid, it will be considered that the bidder does not belong to above preferential categories &amp; no benefits shall be extended to such bidder.</p>	
10.	Confirm that Bidder is not under liquidation, court receivership or similar proceedings.	(Tick whichever is applicable) <input type="checkbox"/> CONFIRMED

BIDDER'S SIGNATURE WITH STAMP/SEAL

SL. NO.	DESCRIPTION	<b>BIDDER'S / SUPPLIER'S CONFIRMATION</b> (Strike out response which is not applicable)
		<input type="checkbox"/> NOT CONFIRMED (Furnish details of such proceedings if "not confirmed" Note: In case response is not marked, "Confirmed" shall be considered as Bidder's response) Bidder to give correct information, otherwise the bid shall fall under 'misrepresentation of facts' provision of the Bidding Document.
11.	a) Is Bidder involved in any Litigation / Arbitration?  b) In case response to a) above is 'Yes', Bidder hereby confirm that the current Litigation / Arbitration, in which they are involved will not have any impact in work being tendered or in entering into contract during the validity of offer and performing the contract till all the contractual obligations under contract are performed.	a) Tick as applicable <input type="checkbox"/> YES <input type="checkbox"/> NO <i>Note: In case response is not marked, "No" shall be considered as Bidder's response</i> b) Tick as applicable <input type="checkbox"/> YES <input type="checkbox"/> NO <i>Note: In case response is not marked, "Yes" shall be considered as Bidder's response</i> Bidder to give correct information, otherwise the bid shall fall under 'misrepresentation of facts' provision of the RFQ.

BIDDER'S SIGNATURE WITH STAMP/SEAL

SL. NO.	DESCRIPTION	BIDDER'S / SUPPLIER'S CONFIRMATION (Strike out response which is not applicable)
12.	<p>Bidder confirms that:</p> <p>a) None of Directors (in Board of Director) of Bidder is a relative of any Director (in Board of Director) of Owner/EIL OR b) The bidder is not a firm in which any Director (in Board of Director) of Owner/EIL or their relative is a partner.</p>	<p>(Tick whichever is applicable)</p> <p><input type="checkbox"/> CONFIRMED <input type="checkbox"/> NOT CONFIRMED</p> <p>(Furnish details of such proceedings if "not confirmed" <i>Note: In case response is not marked, "Confirmed" shall be considered as Bidder's response</i>)</p>
13.	<p>Bidder confirms that there is no conflict of interest as per provisions of <b>clause 4.1 &amp; 4.2 of ITB</b>.</p>	<p>Confirmed</p>
14.	<p>Integrity Pact Bidder confirms that they comply with the provisions of Integrity Pact (IP) and have submitted IP duly signed and stamped as per <b>clause 13 of ITB</b>. Bidder has ensured that:</p> <p>a) They have submitted the IP duly signed by authorised Bid Signatory. b) IP is signed on all the pages. c) The correct name and number of RFQ is mentioned in the IP.</p>	<p>Confirmed</p>
15.	<p>Undertaking w.r.t. Integrity Pact We hereby declares that no previous transgressions, conforming to the provisions under Section-5 of the IP format enclosed with the RFQ, have occurred in the last three years with any other Company in any country conforming to the anti-corruption approach or with any Public Sector Enterprise in India or Government of India, that could justify his exclusion from the tender process.</p> <p>We further confirm that the above declaration/confirmation are true and correct in all respects, and not in conflict with the declaration mentioned in any part of our bid / financial statements /any other document.</p> <p>We also declare that in case, at a later date, if the declaration submitted in our bid are found to be false, our bid can be disqualified from the tender process or contract</p>	<p>Confirmed</p>

BIDDER'S SIGNATURE WITH STAMP/SEAL

SL. NO.	DESCRIPTION	BIDDER'S / SUPPLIER'S CONFIRMATION (Strike out response which is not applicable)
	terminated and further action can be taken as per the procedure mentioned in "Guidelines for Holiday Listing (Banning of business dealing)".	
16.	Compliance to Bidding Documents – Commercial Terms We hereby agree to fully comply with, abide by and accept the Commercial Terms & Conditions of the Bidding Document including but not limited to NIT/RFQ, ITB, GTC, SCC, SOR, including its notes and annexures and subsequent commercial amendment, if any, without any variation, deviation or reservation.	(Tick whichever is applicable) <input type="checkbox"/> NO DEVIATION <input type="checkbox"/> DEVIATION FORMAT ATTACHED
17.	Compliance to Bidding Documents – Technical We hereby agree to fully comply with, abide by and accept the Bidding Document including but not limited to technical specifications including general/ technical notes and scope of supply/work including documentation as per material requisition (MR) and subsequent technical amendment, if any, without any variation, deviation or reservation.	(Tick whichever is applicable) <input type="checkbox"/> NO DEVIATION <input type="checkbox"/> DEVIATION FORMAT ATTACHED
18.	Bank Mandate ( <b>as per Proposal Form A</b> ) We hereby undertake to submit the Bank mandate Form (refer elsewhere for format) along with first invoice/ bill submission, duly filled and certified by bank along with cancelled cheque. In case the same is not submitted along with first invoice, the subsequent date of submission of mandate form shall be considered as the date of invoice submission.	Confirmed
19.	Bidder confirms that they have submitted Declaration towards Holiday listing as per <b>Proposal Form C</b> .	Confirmed
20.	Bidder confirms that they have complied with PPP-MII ORDER, 2017 and submitted <b>Proposal Form D1</b> .	Confirmed
21.	Bidder confirms that they have complied with DMI&SP policy and submitted Affidavit / Declaration & Undertaking as per <b>Proposal Form E1, E2, E3 &amp; E4</b> (as applicable). Original Affidavit, if any, to be sent through courier.	Confirmed
22.	Bidder confirms that they have comply with Land Border Sharing policy issued by department of Expenditure (Ministry of Finance) of Government of India through OM no. 6/18/2019-PPD and its subsequent amendments till date. Bidder has submitted <b>Proposal Form F1, F2 &amp; F3</b> , towards compliance to the Policy.	Confirmed
23.	Confirm submission of Power of Attorney as per <b>clause</b>	Confirmed

BIDDER'S SIGNATURE WITH STAMP/SEAL

SL. NO.	DESCRIPTION	BIDDER'S / SUPPLIER'S CONFIRMATION (Strike out response which is not applicable)
	<b>11 of ITB</b> on the GeM portal ( <b>Proposal Form G</b> ). (only for NIT cases) Original POA to be sent through courier as per provision of NIT.	
24.	EMD/Bid Security: <b>clause of IFB, clause 12 of ITB</b> Confirm submission of EMD/Bid Security in the form of BG from the approved list of banks as per <b>Annexure 2E to ITB</b> or in the form of Insurance Surety Bond (as per <b>Annexure 2K to ITB</b> ) from Insurance Regulatory and Development Authority of India (IRDAI) regulated Insurance Company or declaration in lieu of EMD/Bid Security as per <b>Proposal Form H</b> (as applicable) on the GeM portal. (Only for NIT cases) Original EMD/Bid Security to be sent through courier as per provision of NIT.	<input type="checkbox"/> EMD APPLICABLE <input type="checkbox"/> DECLARATION APPLICABLE (Tick whichever is applicable)
	Bidder to confirm that SFMS confirmation of EMD Bank guarantee has been submitted	Confirmed
25.	Bidder confirms that they have submitted Declaration towards past performance as per <b>Proposal Form – L</b> .	Confirmed
26.	Bidder confirms that they have submitted Audited Annual Financial statements for last three Financial years (Open Bidding / NIT). Or Bidder confirms that they have submitted Audited Annual Financial statements for immediately preceding Financial year. (Limited Enquiries)	Confirmed
27.	Bidder confirms that they have submitted Details of Past experience (PO, Completion certificate etc.) as per <b>Proposal Form I</b> . (only for NIT cases)	Confirmed
28.	Bidder confirms that they have submitted Details of specific experience as per <b>Proposal Form J</b> . (only for NIT cases)	Confirmed
29.	Bidder confirms that they have submitted <b>Annexure 2 to NIT</b> towards authentication of BQC documents. (only for NIT cases)	Confirmed
30.	Bidder confirms that the Promoter Member Guarantee is applicable in line with relevant <b>clause of NIT</b> and the same has been submitted as per <b>Annexure 2H to NIT</b> . (only for NIT cases)	<input type="checkbox"/> APPLICABLE <input type="checkbox"/> NOT APPLICABLE (Tick whichever is applicable)

BIDDER'S SIGNATURE WITH STAMP/SEAL

SL. NO.	DESCRIPTION	BIDDER'S / SUPPLIER'S CONFIRMATION (Strike out response which is not applicable)
31.	Bidder confirms that the Parent Company Guarantee is applicable in line with relevant <b>clause of NIT</b> and the same has been submitted as per <b>Annexure 2I to NIT</b> . <b>(only for NIT cases)</b>	<input type="checkbox"/> APPLICABLE <input type="checkbox"/> NOT APPLICABLE (Tick whichever is applicable)
32.	Techno-Commercial Amendments (applicable where Technical and/or commercial amendment to bidding document is issued)  We confirm compliance to all Technical and Commercial amendments to the bidding documents issued. As compliance to the same, cover letter of all amendments is submitted with our bid.	Confirmed
33.	All commercial terms / compliance / salient details are given /confirmed in this ATC and not elsewhere in the Offer. Bidder to note that the terms and conditions mentioned elsewhere in their offer or Printed terms and conditions of the bidder, if any, appearing in quotation/offer or Bidder's own terms and conditions, shall not be given any cognizance.	Confirmed

**DECLARATION BY THE BIDDER:**

We further confirm that the above declaration/confirmation (including the pre-filled / default response to be considered in case relevant option is not ticked/ not filled) are true and correct in all respects and not in conflict with the declaration mentioned in any part of our bid /any other document. In case of contradiction, the confirmation given herein by the bidder shall prevail over the declaration/ statement/ confirmation given in other places by the Bidder.

We also declare that in case, at a later date, if the above declaration(s) / confirmation(s) submitted in our bid are found to be false, bidder shall be held responsible for the same and EIL/Owner has every right to take action against the bidder / company, as deemed fit as per law of the land and provisions of RFQ Document including but not limited to forfeiture of EMD/ Bid Security and EIL/Owner's right to put our Company on Suspension/Banning list for future business with EIL/Owner.

BIDDER'S SIGNATURE WITH STAMP/SEAL

**PROPOSAL FORMS (MR)**

## **TABLE OF CONTENTS**

<b>FORM NO.</b>	<b>DESCRIPTION</b>
A	BANK MANDATE FORM
B	PRE-BID QUERIES
C	DECLARATION OF HOLIDAY LISTING
D1-D4	FORMS LINKED WITH LOCAL CONTENT AGAINST MAKE-IN-INDIA POLICY (PPP-MII)
E1	DOMESTICALLY MANUFACTURED IRON & STEEL POLICY
E2	AUTHORIZED SUPPLY HOUSES / TRADERS
E3	UNDERTAKING TOWARDS NON-DEBARMENT
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F1-F3	PROCUREMENT FROM A BIDDER FROM A COUNTRY SHARING LAND BORDER WITH INDIA
G	POWER OF ATTORNEY
H	DECLARATION IN LIEU OF EMD
I	FORMAT FOR DETAILS OF SIMILAR WORK/ITEMS
J	FORMAT FOR DETAILS OF SPECIFIC EXPERIENCE
K1	DEVIATION FORMAT (COMMERCIAL TERMS)
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L	UNDERTAKING TOWARDS PAST PERFORMANCE

**PROPOSAL FORM-A: BANK MANDATE FORM**

**BANK MANDATE FORM**

1.	Bidder Name	:	
2.	Bidder Code	:	
3.	Address of the Bidder	:	
4.	Particulars of Bank Account of Bidder	:	
a)	Name of the Bank	:	
b)	Name of the Branch and Address of the Branch	:	
c)	Branch Code	:	
d)	9-Digit MICR code Number of the Bank & Branch (As appearing in the MICR Cheque issued by the bank) (Please do not give multicity cheque book code Number)	:	
e)	Type of account (Saving Bank, Current or Cash Credit)	:	
f)	Account Number	:	
g)	RGTS/IFSC Code (11 digit)	:	
h)	NEFT Code No.	:	
5.	E-mail address of the Bidder	:	
6.	Contact Person(s) of the Bidder	:	

I/we declare that the particulars given above are correct and complete and I/we accord our consent for receiving all our payments through Electronic Mechanism.

\_\_\_\_\_  
(Signature and designation of the Authorised person(s) of Bidder)

Official seal of the Bidder

Place :

Date :

**BANK CERTIFICATION**

Certified that the particulars furnished above are correct as per our records.

Place :

Date :

\_\_\_\_\_  
Signature of the Authorised Official of the Bank  
Bank's Stamp

**PROPOSAL FORM-B: PRE-BID QUERIES**

**FOR BIDDERS' QUERIES**

<b>NAME OF ITEM</b>	:	
<b>ENQUIRY DOCUMENT NO.</b>	:	

Sl no.	Reference Clause no., Page No., Para etc.	Bidder's Query	EIL Reply
1.			
2.			
3.			
4.			

NOTE: The Pre-Bid Queries may be sent by e-mail to Contact persons as mentioned in IFB/RFQ.

**PROPOSAL FORM-C: DECLARATION TOWARDS HOLIDAY LISTING**

**DECLARATION (NOT BANNED)**

**(To be submitted along with Un-priced bid)**

(M/s. \_\_\_\_\_) hereby declare / clarify that we have not been banned or delisted/blacklisted or Put on holiday by Government or Quasi Government agencies or PSUs.

Stamp and Signature of Bidder

**Note:**

Bidders are suggested to check their banning/holiday status at CPP portal at <https://eprocure.gov.in/cppp/debarmentlistsearch> link or any other online portal available in public domain before submitting the declaration to avoid incorrect/false declaration.

This Declaration should be on the letterhead of the Bidder and should be signed by a person competent and having the power of attorney on behalf of the Bidder.

In case bidder has been banned or delisted/ blacklisted or Put on holiday by Government or Quasi Government agencies or PSUs. Bidder to provide details in following format.

Name of Agency (Government or Quasi Government agencies or PSUs)	Duration of Banning/Delisting /Blacklisting/Holiday Listing	Brief reason of Banning/Delisting /Blacklisting/Holiday Listing	Current status (as on bid submission date)

Bidders are also required to attach letter intimating Banning/Delisting /Blacklisting/Holiday Listing of bidder by Government or Quasi Government agencies or PSUs (which ever applicable) along with this declaration.

**PROPOSAL FORM-D1: (COMPLIANCE TO PPP-MII POLICY)**

**SELF CERTIFICATION BY BIDDER UNDER PPP-MII ORDER, 2017**

To  
M/s \_\_\_\_\_ *<Insert name of Client>*

**NAME OF WORK / ITEM:  
TENDER /RFQ NO. :**

Dear Sir,

We, M/s \_\_\_\_\_ *<Name of Bidder>* hereby confirm that we meet the mandatory minimum requirement of Local Content (LC) for **Class-I local supplier / Class-II local supplier** *(strike out which is not applicable)* under Public Procurement (Preference to Make in India), Order 2017 (PPP-MII, 2017) and

The Item-wise **LC is minimum** \_\_\_\_\_ **% for all items on individual basis**

The details of the location(s) at which the local value addition is/shall be made, is/ areas under:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

We confirm compliance of Public Procurement (Preference to Make in India) (PPP-MII) Order 2017, vide Order No P-45021/2/2017-PP(BE-II)-Part-4) Vol.II and its subsequent Amendments.

We also confirm that, the imported items sourced locally from resellers/distributors are excluded from calculation of local content. The cost of such locally sourced imported items (inclusive of taxes) along with break up on license/royalties paid/technical expertise etc. sourced from outside India shall be submitted at the time of execution as per **proposal Form D2**.

We further confirm that in case we fail to meet the minimum local content/domestic value addition, the same shall be treated as false information and Owner reserves the right to take appropriate action for debarment, Penalty after award etc. as per provision of the PPP-MII Order, 2017 and its subsequent Amendments and as more specifically mentioned in the Bidding/ RFQ document.

We also confirm that we are not debarred by any other procuring entity (GOI/PSU/PSE etc.) or

Our debarment period is completed as on \_\_\_\_\_ *<insert date>*, and as such we are eligible to avail purchase preference under this Order.

**(## Strike out which is not applicable)**

\_\_\_\_\_  
Signature of Bidder

Place:

Name :

Date:

Designation

Seal :

Proposal Forms (MR)

**PROPOSAL FORM-D2: (COMPLIANCE TO PPP-MII POLICY)**

**DETAILS OF IMPORTED COMPONENTS SOURCED FROM  
RESELLERS/DISTRIBUTORS EXCLUDED UNDER LOCAL CONTENT**

RFQ/TENDER No:

ITEM/WORKS DESCRIPTION:

S. No	Cost component	Cost in INR (Refer Note-2)
a.	Locally-sourced imported items from resellers/distributors (inclusive of taxes)	i. ii. iii. iv.
b.	License/Royalties paid/ Technical Expertise cost etc. for the items sourced from outside India i. License ii. Royalties Paid iii. Technical Expertise Cost iv. other	i. ii. iii. iv.
DETAILS OF ITEMS SOLD BY BIDDER AS RESELLER		
c.	Details of Items	OEM Certificate for country of origin
	i. ii. iii. iv.	i. ii. iii. iv.

**Note –**

1. For contracts involving supply of multiple items, weighted average of all items to be taken while calculating the local content.
2. As regards cases where currency for above is other than Indian Rupee, exchange rate prevailing on the Bid Due Date shall be considered for the calculation of Local Content.
3. Bidder to enclose OEM Certificate for country of origin as specified in S. No (c) above.

\_\_\_\_\_  
Signature of Bidder

Place:

Name :

Date:

Designation

Seal :

**PROPOSAL FORM-D3: (COMPLIANCE TO PPP-MII POLICY)**

**(FOR CLASS-I LOCAL SUPPLIER/ CLASS-II LOCAL SUPPLIER HAVING VALUE OF  
PROCUREMENT MORE THAN INR 10 CRORE)  
CERTIFICATE UNDER PPP-MII ORDER, 2017 TOWARDS MANDATORY MINIMUM  
LOCAL CONTENT**

To  
M/s \_\_\_\_\_ <Insert name of Client>

**NAME OF WORK / ITEM:  
TENDER /RFQ NO.:**

Dear Sir,

We, \_\_\_\_\_, the Statutory Auditor or Cost Auditor of the Company (in case of Companies) or are a practicing Cost Accountant or practicing Chartered Accountant (in respect of supplier other than companies) of M/s. \_\_\_\_\_ <Name of Bidder>, hereby certify that as per definition specified in above policy, M/s. \_\_\_\_\_ <Name of Bidder> is a Class-I Local Supplier / Class-II Local Supplier <as applicable>

We further confirm that M/s \_\_\_\_\_ <Name of Bidder> meet the mandatory minimum Local content requirement specified for Class-I Local supplier/ Class-II Local supplier <as applicable> under Policy for Public Procurement (Preference to Make in India), Order 2017 (PPP-MII) for their offer for the abovementioned Work/ Item and shall have local content of \_\_\_\_\_% .

The details of the location(s) at which the local value addition is/shall be made, is/ areas under:

.....  
.....

We confirm compliance of Public Procurement (Preference to Make in India) (PPP-MII) Order 2017, vide Order No P-45021/2/2017-PP(BE-II)-Part-4)Vol.II and its subsequent Amendments.

We also confirm that, the imported items sourced locally from resellers/distributors are excluded from calculation of local content. The cost of such locally sourced imported items (inclusive of taxes) along with break up on license/royalties paid/technical expertise etc. sourced from outside India is enclosed as **proposal Form D4**.

We also confirm that M/s \_\_\_\_\_ <Name of Bidder> is not debarred by any other procuring entity (GOI/PSU/PSE etc.).

OR

M/s \_\_\_\_\_ <Name of Bidder>'s debarment period is completed as on \_\_\_\_\_ <insert date>, and as such M/s \_\_\_\_\_ <Name of Bidder> is eligible to availed purchase preference under this Order.

**## (Strike out which is not applicable)**

\_\_\_\_\_  
Signature of certificate issuing authority

Place:

Name:

Date:

Name of Audit Firm:

Designation

Seal :

**PROPOSAL FORM-D4: (COMPLIANCE TO PPP-MII POLICY)**

**DETAILS OF IMPORTED COMPONENTS SOURCED FROM  
RESELLERS/DISTRIBUTORS EXCLUDED UNDER LOCAL CONTENT**

RFQ/TENDER No:  
ITEM/WORKS DESCRIPTION:

S. No	Cost component	Cost in INR (Refer Note-2)
a.	Locally-sourced imported items from resellers/distributors (inclusive of taxes)	i. ii. iii.
b.	License/Royalties paid/ Technical Expertise cost etc. for the items sourced from outside India i. License ii. Royalties Paid iii. Technical Expertise Cost iv. Other	i. ii. iii. iv.
DETAILS OF ITEMS SOLD BY BIDDER AS RESELLER		
c.	Details of Items	OEM Certificate for country of origin
	i. ii. iii.	i. ii. iii.

**Note –**

1. For contracts involving supply of multiple items, weighted average of all items to be taken while calculating the local content.
2. As regards cases where currency for above is other than Indian Rupee, exchange rate prevailing on the Bid Due Date shall be considered for the calculation of Local Content.
3. Bidder to enclose OEM Certificate for country of origin as specified in S. No (c) above.
4. The above formats are indicative, the statutory auditor/Cost auditor/Chartered Accountant/ Cost Accountant can modify the format without changing the intent of certification.

\_\_\_\_\_  
Signature of certificate issuing authority

Place:

Name:

Date:

Name of Audit Firm:

Designation

Seal:

Proposal Forms (MR)

**PROPOSAL FORM-E1: (AFFIDAVIT TOWARDS COMPLIANCE WITH DMI&SP)**

**Item / Works:**

**RFQ/Bidding Document no:**

Form-1

Affidavit (Notarized)of Self-Certification for Compliance with Melt & Pour Requirements (Appendix-A) and/or Domestic Value Addition Requirements (Appendix-A & Appendix-B\*)

\*For Appendix-B capital goods, this affidavit must accompany the statutory auditor's / cost auditor's / CA certificate, as mandated under the policy.

I, \_\_\_\_\_, Resident of \_\_\_\_\_, being the authorized signatory of M/s \_\_\_\_\_, do hereby solemnly affirm and declare as under:

1. I have read and understood the Domestically Manufactured Iron & Steel Products (DMI&SP) Policy, 2025, issued vide Notification No. \_\_\_\_\_ dated \_\_\_\_\_. I agree to abide by all terms and conditions of the said policy and the tender in which this affidavit is submitted.

2. This affidavit pertains to the following iron & steel product(s)/capital good(s):-

Name of product (s):.....

HS Code (s):.....

Appendix classification: Appendix-A / Appendix-B (select as applicable)

Procuring agency: .....

3. Melt & Pour - Applicable only for Appendix-A items with Melt & Pour condition  
- I hereby declare that the above product(s) satisfy the Melt & Pour in India requirement as notified in Appendix-A. Specifically: The steel was melted and poured in India.

- The first solid shape (slab/billet/ingot/other) was produced at the following location(s): as specified below / as per Form-1A (strike through which is "Not Applicable").

Steelmaking facility: .....

Location: .....

Heat numbers:.....

Batch details: .....

- I undertake to produce mill test certificates, heat records, and any other documentary proof to substantiate this declaration whenever required by the procuring agency. (If not applicable, write "Not Applicable".)

4. Domestic Value Addition - Applicable for Appendix-A DVA items and Appendix-B capital goods:

Proposal Forms (MR)

- I hereby declare that the Domestic Value Addition (DVA) for the product(s) is: \_\_\_\_\_% / as per Form-1A (strike through which is "Not Applicable"). The DVA has been computed as per DPIIT guidelines and the formula specified in the DMI&SP Policy, 2025.
- 4A. For Appendix-B Capital Goods (Mandatory): A certificate issued by the statutory auditor / cost auditor / chartered accountant is enclosed herewith, confirming the DVA of the capital good package in accordance with the policy. (If Appendix-A item only, strike this clause out.)
5. I confirm that: All information furnished is true and correct. All input steel costs, imported content, and domestic content calculations have been verified. All manufacturing, purchase, and pricing records are available for examination.
- If any information is found incorrect or misleading: The procuring agency may disqualify me / my firm from Government tenders as per the procuring agency norms. I agree to pay all assessment costs and penalties, including forfeiture of EMD, as per policy and tender conditions.
6. I undertake to maintain the relevant records, and make them available to any statutory authority.
7. Declaration: I do hereby declare that the statements made above are true to the best of my knowledge and belief. I understand that any misrepresentation shall attract penalties under the DMI&SP Policy, applicable laws, and tender conditions.

For and on behalf of M/s \_\_\_\_\_

(Authorised Signatory)

(Place & Date)

Note: Bidder may submit information sought against clause no 2, 3 and 4 in Form-1A if required. In that case, Form-1A also shall be part of Affidavit.

**FORM-1A**

(Applicable for the iron and Steel products specified in Appendix-A only)

<b>BIDDER:</b>							
<b>TENDER / RFQ NO:</b>							
<b>PROCURING AGENCY:</b>							
<b>APPENDIX CLASSIFICATION:</b>		Appendix-A					
MR Item No	Name of product (s):	HS Code (s)	Steelmaking facility:	Location:	Heat numbers	Batch details:	Domestic Value Addition (DVA) for the product(s) in %.
shall be referred from MR		These columns shall be filled for items with required condition as "Melt & Pour"					This column is applicable for items "condition" with specific DVA.
							.....%
							.....%
							.....%
							.....%
							.....%

Note –

- a. Bidder to refer "Condition" and "Domestic Value Addition" specified in Appendix-A while certification of the above Form-1 and Form-1A.
- b. Form-1A shall form part of Affidavit (Form-1)

**PROPOSAL FORM-E2: (AUTHORIZED SUPPLY HOUSES/TRADERS)**

**(to be submitted in Bidder's letter head)**

[for Bidders who are selling agents/authorized distributors/authorized dealers/authorized supply houses]

**Item:**

**Bidding Document no:**

This has reference to "Policy for providing Preference to Domestically Manufactured Iron & Steel Products in Government Procurement" issued by Ministry of Steel, Govt. of India, vide their notification "The Gazette of India, Extraordinary Part -..... dated..... including its amendments thereafter (if any)".

We confirm:

- that we will comply the Policy for providing Preference to Domestically Manufactured Iron & Steel Products in Government Procurement" issued by Ministry of Steel, Govt. of India.
  
- that we will submit authorization certificate issued by the domestic manufacturer at the time of delivery of related iron and steel products required under the enquiry document.

Sign & Stamp of bidder

**PROPOSAL FORM-E3: (UNDERTAKING TOWARDS NON-DEBARMENT)**

**Declaration  
(On Bidder's Letterhead)**

Works:

Bidding Document no:

We hereby declare that we have not been debarred by any procuring entity for violation of the *Preference to Domestically Manufactured Iron & Steel Products (DMI&SP) Order*.

We further confirm that in case of any debarment by any procuring entity for violation of the said Order, we shall not be eligible for preference under the said Order for procurement by any other procuring entity for the duration of such debarment, which shall take effect prospectively from the date it comes to the notice of the concerned procuring entity.

Authorized Signatory: \_\_\_\_\_

Name & Designation: \_\_\_\_\_

Date: \_\_\_\_\_

Seal: \_\_\_\_\_

**PROPOSAL FORM-E4: (DECLARATION OF NON-APPLICABILITY OF DMISP POLICY)**

**(to be submitted in Bidder's letter head)**

**UNDERTAKING ON LETTERHEAD**

**Item / Works:**

**Bidding Document no:**

This has reference to "Policy for providing Preference to Domestically Manufactured Iron & Steel Products (DMI&SP) in Government Procurement" issued by Ministry of Steel, Govt. of India, vide their notification "The Gazette of India, Extraordinary Part ..... dated ..... including its amendments thereafter (if any)".

We confirm that, we have understood the scope and terms & conditions of above mentioned DMI&SP Policy and also confirm that, based on the Prices quoted by us for each individual item, DMI&SP Policy is not applicable for the following items –

Where evaluation is on Item wise basis	
S. No	MR Item No
1	
2	
3	

Where evaluation is on Group wise basis		
S. No	Group	Item no of the respective group
1		
2		
3		

Further, in case at any stage before or after award, if it is observed by the EIL/OWNER the value of the above items is more than INR 5 Lakhs (Excluding Freight and GST) it shall be construed as the false/wrong declaration and procuring entity is entitled to take penal action as per provision of Bidding Document.

Sign & Stamp of Bidder

**PROPOSAL FORM-F1: (SHARING LAND BORDER - AS PER ANNEXURE-IV TO ITB)**

**BIDDER'S UNDERTAKING**  
**(On Company's Letter Head)**

To,

M/s Hindustan Petroleum Corporation Limited (HPCL)/ Engineers India Limited (EIL)

**BIDDING DOCUMENT NO.:**

**ITEM:**

"I have read the clause regarding restrictions on procurement from a Bidder of a country which shares a land border with India; I hereby certify that, Bidder M/s \_\_\_\_\_ (Name of the Bidder) is:

**[tick either of the two options below and not to write Not Applicable]**

i).	Not from such a country	[       ]
ii).	If from such a country, has been registered with the Competent Authority	[       ]

**Notes:**

- a) Bidder to tick appropriate option (√) in either i) or ii) above)
- b) In case of sl. no. ii) above, Bidder to attach evidence of valid registration by the Competent Authority.

I hereby certify that the Bidder fulfills all requirements in this regard and eligible to be considered.

Place :

Date :

Signature (#):

Name :

Designation :

Seal :

**(#) Undertaking shall be signed by the authorized signatory of the Bidder.**

**PROPOSAL FORM-F2: (SHARING LAND BORDER - AS PER ANNEXURE-IV TO ITB)**

**BIDDER'S UNDERTAKING IN CASE OF SUB-CONTRACTING IN WORK CONTRACTS**

**(On Company's Letter Head)**

To,

'M/s Hindustan Petroleum Corporation Limited (HPCL)/ Engineers India Limited (EIL)

**BIDDING DOCUMENT NO.:**

**ITEM:**

"I have read the clause regarding restrictions on procurement from a Bidder of a country which shares a land border with India and on sub-Contracting to Contractors from such countries; I hereby certify that, Bidder M/s \_\_\_\_\_ (Name of the Bidder) is:

**[tick either of the two options below and not to write Not Applicable]**

i).	Not from such a country	[       ]
ii).	If from such a country, has been registered with the Competent Authority and will not sub-Contract work to a Contractor from such countries unless such Contractor is registered with the Competent authority	[       ]
<b>Notes:</b> a) Bidder to tick appropriate option (✓) in either i) or ii) above) b) In case of sl. no. ii) above, Bidder to attach evidence of valid registration by the Competent Authority.		

I hereby certify that the Bidder fulfills all requirements in this regard and eligible to be considered.

Place :

Date :

Signature (#):

Name :

Designation :

Seal :

**(#) Undertaking shall be signed by the authorized signatory of the Bidder.**

**PROPOSAL FORM-F3: (SHARING LAND BORDER - AS PER ANNEXURE-IV TO ITB)**

**BIDDER'S UNDERTAKING IN CASE OF TRANSFER OF TECHNOLOGY (ToT)  
ARRANGEMENT**

**(On Company's Letter Head)**

To,

'M/s Hindustan Petroleum Corporation Limited (HPCL)/ Engineers India Limited (EIL)

**BIDDING DOCUMENT NO.:**

**ITEM:**

"I have read the clause regarding restrictions on procurement from a Bidder having Transfer of Technology (ToT) arrangement. Bidder M/s\_\_\_\_\_ (Name of the Bidder), hereby certify that,

**[tick either of the two options below and not to write Not Applicable]**

i).	Bidder does not have any ToT arrangement requiring registration with the competent authority	[       ]
ii).	Bidder has valid registration to participate in this procurement	[       ]
<b>Notes:</b> a) Bidder to tick appropriate option (✓) in either i) or ii) above) b) In case of sl. no. ii) above, Bidder to attach evidence of valid registration by the Competent Authority.		

I hereby certify that the Bidder fulfills all requirements in this regard and eligible to be considered.

Place :

Date :

Signature (#):

Name :

Designation :

Seal :

**(#) Undertaking shall be signed by the authorized signatory of the Bidder.**

**PROPOSAL FORM-G: POWER OF ATTORNEY**

[To be submitted on Indian Non-Judicial Stamp Paper as per Indian Stamp Act, 1899 with Minimum of INR 100/- by Indian Bidders, OR, as per applicable Laws in Bidder's Country in case of Foreign Bidder as on the date of Affidavit]

**Bidding Document No:**  
**Name of Item:**

I, Mr./Mrs./Miss \_\_\_\_\_ <Insert Full Name>, S/o/D/o of Mr. \_\_\_\_\_ <Insert Father's Name>, working as \_\_\_\_\_ <Insert present Designation> in the Company/Firm \_\_\_\_\_ <Insert full name of Company/Firm>, having \_\_\_\_\_ its \_\_\_\_\_ registered \_\_\_\_\_ office \_\_\_\_\_ at \_\_\_\_\_ <Insert full address of Company with Country Name> and working Office address at \_\_\_\_\_ <Insert full working office address with Country Name, in case different from registered office>, do hereby constitute, appoint and authorize Mr./Mrs./Miss \_\_\_\_\_

(Name and residential address), S/o/D/o Mr. \_\_\_\_\_ <Insert Father's Name>, working as \_\_\_\_\_ <Insert present Designation> in the Company/Firm and whose signature is attested below as the Attorney of the Company/ Firm to do in the name and on behalf of the Company/Firm all or any of the acts, deeds or things necessary in connection with or incidental to our Bid for the subject Enquiry Document, including but not limited to the signing and submission of application / proposal, participating in the meetings, responding to queries, submission of information / documents and generally to represent us in all the dealings with EIL or any person, in connection with the works, without any prejudice, limitations and exceptions.

This POA shall be valid till the completion of the entire Bidding process, and in case the work is awarded to our Company, till the complete discharge of all the contractual obligations and execution of the Works/Orders or till Completion Certificate (unconditional) is issued by the OWNER or till the settlement of all disputes, if any, whichever is later, unless otherwise replaced with Separate Power of Attorney in due course, in which case all responsibilities, obligations and liabilities with respect to this POA shall be construed to be seamlessly transferred to the newly appointed POA Holder.

<Signature with date and name of authorized signatory being given Power of Attorney>  
<Signature with date and name of the Authorized Signatory for the Company giving POA>

<Seal of Firm/ Company>

**PROPOSAL FORM-H: DECLARATION IN LIEU OF EMD**

**DECLARATION IN LIEU OF EMD**

We ( \_\_\_\_\_ ) hereby declare that if we withdraw or modify our Bid during the period of validity, or if we are awarded the order and we fail to sign the order, or to submit a performance security before the deadline defined in the bidding document / LOA / Purchase, we will be suspended for a period of one year from being eligible to submit Bids/ Proposals for contracts with the HPCL/EIL.

**Stamp and Signature of Bidder**

**Note:**

- a) For bidders who are exempted from submission of EMD, Non-submission of this declaration shall lead to rejection of bid.

**PROPOSAL FORM-I: DETAILS OF PAST EXPERIENCE**

**FORMAT FOR DETAILS OF SIMILAR WORK/ITEMS DONE IN THE PAST AS PER REQUIREMENT OF BQC**

SL. NO.	DESCRIPTION OF WORK	POSTAL ADDRESS OF CLIENT & NAME OF OFFICER IN CHARGE	CONTRACT VALUE	STARTING DATE	SCHEDULED COMPLETION DATE	ACTUAL COMPLETION DATE	REASONS FOR DELAY, IF ANY
1.							
2.							
3.							

**FORM-J: DETAILS OF SPECIFIC EXPERIENCE**

**EXPERIENCE DETAILS**

Bidder shall furnish their experience details with reference to the work, which pre-qualify them in line with Experience stated in Bidder's Qualification Criteria (BQC)

<b>S no.</b>	<b>Description</b>	<b>Details</b>
1.	Name of Project, Location of work executed	
2.	Detailed Description of work with associated facilities awarded to the bidder	
3.	Contract Value	
	a) Awarded	
	b) Final Completed	
	c) Quantity of work executed	
4.	Name of Owner, Postal Address  Contact person: Phone: E-mail:	
5.	Name of Owner's consultant, if any, Postal Address  Contact person: Phone: E-mail:	
6.	Completion dates	Date of award:  Effective Date of contract:  Start date:  Scheduled completion:  Actual completion:
7.	Whether following documents enclosed	Copy of work order / notification for award specifying the contract value and scope of work:   Copy of proof of completion / Completion certificate:

Note: In case of bidder furnishes multiple contracts for qualifications, above format shall be furnished separately for each contract (separately filled in for each job referred in this form).

**FORM-K1: DEVIATION FORMAT (COMMERCIAL TERMS)**

SI no.	Reference Clause no., Page No., Para etc.	Bidder's Deviation	Remarks / Reasons
1.			
2.			
3.			

Note:

- a) Bidder shall submit their deviations in this format only. Deviation submitted elsewhere shall not be given any cognizance.
- b) Bidder shall refer the rejection criteria mentioned in the Instruction to Bidders.
- c) In case bidder seeks price implication on account of withdrawal of deviations, such bid shall be rejected

**FORM-K2: DEVIATION FORMAT (TECHNICAL TERMS)**

Sl no.	Reference Spec/Std. no., Clause no., Page No., Para etc.	Bidder's Deviation	Remarks / Reasons
1.			
2.			
3.			

Note:

- a) Bidder shall submit their deviations in this format only. Deviation submitted elsewhere shall not be given any cognizance.
- b) Bidder shall refer the rejection criteria mentioned in the Instruction to Bidders.
- c) In case bidder seeks price implication on account of withdrawal of deviations, such bid shall be rejected

**FORM-K2:**

DELETED

**FORM-L: DECLARATION TOWARDS PAST PERFORMANCE**

**DECLARATION TOWARDS PAST PERFORMANCE**

We ( \_\_\_\_\_ ) hereby declare that we don't have records of poor performance with HPCL during the last five years, as on the bid due date, such as abandoning the work, rescission of the contract for reasons which are attributable to non-performance of the contractor, inordinate delays in completion, consistent history of litigation resulting in awards against the contractor or any of the constituents, or financial failure due to bankruptcy, (The rescission of a contract of venture JV on account of reasons other than non- performance, such as the most experienced partner (major partner) of JV pulling out) and so on.

**Stamp and Signature of Bidder**



Job Number: C068  
Instructions to Bidders



Sheet 1 of 25

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# INSTRUCTION TO BIDDERS (MR\_CPPP PORTAL)



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## 1.0 COST OF BIDDING

The Bidder shall bear all costs associated with the preparation and submission of the bid, and Owner/Consultant will in no case, be responsible or liable for these costs, regardless of the conduct or outcome of the bidding process.

## 2.0 CORRUPT AND FRAUDULENT PRACTICES

2.1 The Owner requires that Bidders/ Vendors/ Contractors observe the highest standard of ethics during the award/ execution of Contract. "Fraudulent Practice" means a misrepresentation of facts in order to influence the award of a Contract to the detriment of the Owner, and includes collusive practice among bidders (prior to or after bid submission) designed to establish bid prices at artificial non-competitive levels and to deprive the owner of the benefits of free and open competition.

2.2 The owner will reject a proposal for award if it determines that the bidder recommended for award has engaged in fraudulent practices in competing for the Contract in question.

2.3 Bidder is required to furnish the complete and correct information/ documents required for evaluation of their bids. If the information/ documents forming basis of evaluation is found to be false/ forged, the same shall be considered adequate ground for rejection of bids and forfeiture of Bid Security.

2.4 In case, the information/ document furnished by the Bidder/ Vendor/ Contractor forming basis of evaluation of his bid is found to be false/ forged after the award of the contract, Owner shall have full right to terminate the contract and get the remaining job executed at the risk & cost of such Bidder/ Vendor/ Contractor without any prejudice to other rights available to Owner under the contract such as forfeiture of CPBG/ Security Deposit, withholding of payment etc.

2.5 In case, this issue of submission of false documents comes to the notice after execution of work, Owner shall have full right to forfeit any amount due to the Bidder/ Vendor/ Contractor along with forfeiture of CPBG/ Security Deposit furnished by the bidder/vendor/ contractor.

Further, such bidder/ vendor/ contractor shall be put on Suspension / Banning List of EIL / owner debarring them from future business with EIL and /or Owner for a time period, as per the prevailing policy of Owner / EIL. **GUIDELINES FOR HOLIDAY LISTING (BANNING OF BUSINESS DEALING), with HPCL are available on HPCL website <https://www.hindustanpetroleum.com/purchase-procurement> . Procedure for Suspension / banning of business dealings with EIL is available on EIL's corporate website [www.engineersindia.com](http://www.engineersindia.com) .**

## 3.0 CARTEL FORMATION

3.1 In case any bidder is found to be involved in cartel formation, his bid will not be considered for evaluation / placement of order. Such bidder will also be debarred from bidding in future.

## 4.0 ELIGIBILITY CRITERIA

4.1 A firm which is not a PSU or an associate or a joint venture of a PSU and which has been engaged to provide goods or works for a project and any of its affiliates will be disqualified from providing consultancy services for the same project. Conversely, a firm which is not a PSU or an associate or a joint venture of a PSU, hired to provide consultancy services for the preparation or implementation of a project, and any of its affiliates, will be disqualified from subsequently providing goods or works or services related to the initial assignment for the



same project.

Consultants or any of their affiliates who are not PSUs or an associate or a joint venture of a PSU will not be hired for any assignment, which by its nature, may be in conflict with another assignment of the consultants.

- 4.2 It is clarified that if one or more affiliates are submitting bid, it shall not be considered as multiple bids submitted by affiliates as long as different affiliates quotes for different item/schedule/group. Such affiliate bidders shall ensure that in no case multiple bids should be submitted by different affiliates against a single item/schedule/group. In case two or more affiliates quote for same item/schedule/group, then anyone or all such bids shall be liable for disqualification.

“Affiliate” of a Party shall mean any company or legal entity which:

- a) controls either directly or indirectly a Party, or
  - b) which is controlled directly or indirectly by a Party; or
  - c) is directly or indirectly controlled by a company, legal entity or partnership which directly or indirectly controls a Party. “Control” means actual control or ownership of at least a 50% voting or other controlling interest that gives the power to direct, or cause the direction of, the management and material business decisions of the controlled entity.
- 4.3 In case of Limited Competitive Bidding, only the firm/company(ies) to whom the Bidding Document has been issued are eligible to bid. Bidder's Net worth as per their audited annual financial results in the last financial year shall be positive. Bidders with negative net worth will not be considered barring PSUs approved by Owner.
- 4.4 All eligible bidders meeting the eligibility criteria as defined in this Instruction to Bidders (ITB) and NIT (wherever applicable) can participate in the tender.
- 4.5 A firm determined non-performing by the Owner shall not be eligible to bid during the period so determined.
- 4.6 Even if a bidder meets the eligibility criteria and BQC (wherever applicable), he shall be subject to disqualification if he or any of the constituent partners is found to have:
- a) made misleading or false representations in the forms, statements, affidavits and attachments submitted in proof of the qualification requirements; and/ or;
  - b) records of poor performance with HPCL during the last five years, as on the date of application, such as abandoning the work, rescission of the contract for reasons which are attributable to non-performance of the vendor, inordinate delays in completion, consistent history of litigation resulting in awards against the vendor or any of the constituents, or financial failure due to bankruptcy, (The rescission of a contract of venture JV on account of reasons other than non- performance, such as the most experienced partner (major partner) of JV pulling out) and so on.
- 4.7 Bidder should not be under liquidation, court receivership or similar proceedings. Bidder shall submit an undertaking in Company's letterhead as per the Proposal Form enclosed in the Bidding Document.
- 4.8 The Bidders/ Agencies who are on Holiday/Negative list/Suspension/Banning list of HPCL/MoPNG/EIL as on final due date of submission of bid/date of unpriced bid opening/ during the process of evaluation of the bids, the offers of such bidders shall not be considered for bid opening/evaluation/Award. Bidder shall refer **GUIDELINES FOR HOLIDAY LISTING**



### **(BANNING OF BUSINESS DEALING), with HPCL.**

Similarly, if a bidder is qualified based on engaging a sub-Contractor/sub-vendor who meets stipulated Bidder Qualification Criteria, in case such a sub-Contractor/sub-vendor is on Holiday/ Negative list/suspension/banning of HPCL/EIL on due date of submission of bid / during the process of evaluation of the bids, the offer of such a bidder shall not be considered for bid opening/evaluation/Award.

- 4.9 The provision of **clause no 4.6, 4.7 & 4.8** shall also be applicable for manufacturer of any item for which bid is submitted by authorized supplier (If any).
- 4.10 DELETED.
- 4.11 PROCUREMENT FROM A BIDDER FROM A COUNTRY SHARING LAND BORDER WITH INDIA:
- Department of Expenditure (Ministry of Finance) of Government of India through OM no. 6/18/2019-PPD dated 23.07.2020 & 24.07.2020 (Public procurement no. 1, 2 & 3) has issued the guidelines regarding procurement from bidders from a country or countries sharing Border with India. These guidelines are available on the website of DoE (<https://doe.gov.in/>).
  - Policy details are attached as per **Annexure-2 to ITB**.
  - Bidder shall submit the declarations towards compliance with the policy as per attached proposal forms.

### **4.12 ALTERNATIVE OFFER/MULTIPLE BIDS**

A bidder (i.e., the bidding entity) shall, on no account submit more than one bid (either directly or indirectly). In case a bidder submits more than one bid, all bids submitted by such bidder shall stand rejected.

Alternative priced bids are not acceptable. A bidder who submits alternative bids will cause all alternative bids to be disqualified.

## **5.0 ACKNOWLEDGEMENT**

- 5.1 Within 5 days of issuing of Enquiry Document, bidder shall acknowledge and confirm his intention to bid for the requested item / work on EIL website <http://tenders.eil.co.in>.
- 5.2 Bidders should respond to this enquiry either by submitting their bids or by explaining the reason for non-submission of the offer. In case there is no response either way continuously, the bidder shall be liable for suitable action including review of their enlistment with EIL for that particular item.

## **6.0 BIDDING DOCUMENT**

- 6.1 Details of the Bidding Document can be viewed / downloaded from the following websites:

- **E-Tendering platform/Portal: CPPP portal**

<https://eprocure.gov.in/eprocure/app>

- Bidders are required to upload the techno-commercial offer along with BQC related documents (for Open enquiries) and EMD/Bid security (if applicable) at the above referred E-Tendering Portal. Bids through any other mode shall not be accepted.
- All updates, amendments, Corrigendum including Bid time extension, clarifications etc. (if any) will be uploaded / posted in the above referred E-Tendering Portal only. There will not be any publication of the same through newspapers or any other media.



Bidders should regularly visit this portal to keep themselves updated.

- The information of issuance / publication of Bidding Document has also been hosted on website <https://tenders.eil.co.in/newtenders/> and/or HPCL's portal <https://www.hindustanpetroleum.com> .

- 6.2 The bidder is expected to examine all instructions, forms, terms and specifications in the Bidding Document. The Request for Quotation (RFQ) / Notice Inviting Tender (NIT) together with all its attachments thereto, shall be considered to be read, understood and accepted by the bidder, unless deviations are specifically stated seriatim by the bidder in the relevant format as per instructions given in the **clause 23.0**. Failure to furnish all information required by the bidding document or submission of a bid not substantially responsive to the Bidding Documents in every respect will be at bidder's risk and may result in the rejection of his bid.

The bidder's scope of supplies as specified in the Material Requisition shall be in Strict compliance with the scope detailed therein and in the Bidding Document.

## 7.0 SITE VISIT

- 7.1 Bidder is advised to visit and examine the site, its surroundings and familiarize himself with the existing facilities and environment, and collect all other information which he may require for preparing and submitting the bid and entering into the Contract. Claims and objections due to ignorance of existing conditions or inadequacy of information will not be considered after submission of the Bid and during implementation.
- 7.2 Any loss to the property / life of the bidder/ bidder's representative due to bidder/ bidder's representative negligence shall be the Bidder's responsibility. Bidder shall keep Owner/Consultant indemnified from any legal/financial consequences arising there from.

## 8.0 PRE-BID MEETING

- 8.1 Pre-Meeting shall be held as per date and time as mentioned in the NIT / RFQ cover letter.
- 8.2 Bidder shall upload the pre-bid queries on above referred e-procurement portal within the cut off date specified in the portal. Post cut off date bidder shall not be able to upload their queries on the portal. EIL/Owner reserves the right not to entertain the queries raised through email / any other mode. Reply to Pre-Bid Queries shall be hosted on E-Tendering Portal.
- 8.3 Bidders in their own interest are advised to take part in the pre-bid meeting by deputing their competent personnel. This will help bidder not only to cut short of the evaluation time leading to requirement of shorter bid validity but also enable them to submit their best prices based on the clear techno-commercial scope.
- 8.4 Pre-bid discussion shall be confined to techno-commercial discussions and site appraisals and there shall be no revision/discussion to Bidder Qualification Criteria.

## 9.0 AMENDMENT OF BIDDING DOCUMENT

- 9.1 At any time prior to the bid due date, the Owner/Consultant may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective Bidder, modify the Bidding Document by issuing amendment (also named as Addendum/Corrigendum). Any amendment thus issued shall be part of the Bidding Documents.
- 9.2 In case bidder has submitted the online bid before corrigendum, such bidder shall be required to modify /edit the already submitted bid before Bid due date/extended due date, whichever is later. In case of bidder submitted the bid without compliance /confirmation /acceptance to corrigendum, he shall not be allowed to revise the bid price /rates on account of



compliance/acceptance /confirmation to corrigendum. Such bidder may be given opportunity during evaluation to accept/confirm compliance to corrigendum without revision in rates and taxes, failing which the bid shall be rejected at the sole discretion of the Owner/Consultant.

- 9.3 The Owner/Consultant may, at its discretion, extend the date of submission of Bids in order to allow the Bidders a reasonable time to furnish their most competitive Bid taking into account the amendments issued.

## 10.0 LANGUAGE OF BID

- 10.1 The bid prepared by the Bidder and all correspondence/ drawings and documents relating to the bid exchanged by Bidder and the Owner/Consultant shall be written in English language, provided that any printed literature furnished by the Bidder may be written in another language so long as accompanied by an English translation, in which case, for the purpose of interpretation of the bid, the English translation shall govern.
- 10.2 In case any of the supporting documents (either technical or financial) are not in English language, then the English translation copy of the same shall also be furnished duly certified, stamped and signed by any one of the following authorities:
- Indian Embassy in Bidder's country, or
  - Bidder's Embassy in India
  - local Chamber of Commerce of Bidder's country.

## 11.0 POWER OF ATTORNEY

### [Applicable for Open bidding / NIT]

Bids shall be digitally signed and submitted on E-Tendering Portal by the authorized signatory of the bidder. Bidder shall submit a Power of Attorney in the name of such authorized signatory(ies) as per proforma attached in the **Proposal Form**. Requirements for submitting the POA shall be as follows:

- 11.1 Company: Bidder shall submit a specific Power of Attorney for the tender in the name of authorized person. Alternatively, in case Bid signatory has General Power of Attorney or has the power as per their Board resolution, the same shall be submitted duly certified by Notary Public or CEO/CFO/Company Secretary (CS)/Member of Board of Directors. In case, Bid is signed by CEO/CFO/CS/any member of board of Directors, no separate POA is required, provided the documentary evidence of their being CEO/CFO/CS/any member of board of Directors is reflected in the MOA/AOA/Financial Statements, else submitted separately in the Bid.
- 11.2 Partnership Firm: In such case,
- Bid can be signed by all the partners of the Firm and in such case no separate POA is required; OR
  - Bid can be signed by any of the Partner(s) holding Power of Attorney as specified in the Partnership Deed; OR
  - Bid can be signed by an authorized person and shall submit a specific POA for the tender duly signed by all the Partners.

Bidder shall submit the copy of Partnership Deed.

- 11.3 Limited Liability Partnership (LLP) Entity: Bid shall be signed by the person holding Power of



Attorney as per the registered LLP Agreement for the Firm, OR, has the power as per their Board resolution, OR, a specific POA for the tender duly signed by all the LLP Partners.

Bidder shall submit (i) a copy of LLP Agreement, and (ii) a copy of Certificate of Incorporation.

11.4 Proprietorship: Proprietor shall sign the Bid.

Bidder shall also submit a copy of (i) PAN card and (ii) Bank Mandate Form, duly certified by the Bidder's Banker.

11.5 For Indian Bidder, POA shall be on non-judicial stamp paper of minimum value of INR 100/- and duly Notarized by a Notary Public in India.

11.6 Specific POA issued for the tender shall confirm that the authorized signatory have been authorized to do in the name and on behalf of the Company/Firm all or any of the acts, deeds or things necessary in connection with or incidental to the Bid submitted by the bidder for the subject Enquiry Document, including but not limited to the signing and submission of bid, participating in the meetings, responding to queries, submission of information / documents and generally to represent us in all the dealings with EIL or any person, in connection with the works, without any prejudice, limitations and exceptions till the completion of the bidding process.

**12.0 EARNEST MONEY DEPOSIT/BID SECURITY**

**[Applicable for Open bidding / NIT]**

12.1 Bidder shall submit the Bid Security [also known as Earnest Money Deposit (EMD)] for amount as specified in the Notice Inviting Tender (NIT) / Request For Quotation (RFQ) along with their bid. Any bid not accompanied by the requisite bid security shall be rejected as non-responsive in accordance with provisions of the Bidding Document.

12.2 The Bid Security having validity for a period of 45 (forty-five) days beyond the final bid validity period may be submitted as follows:

- In the form of Bank Guarantee (as per **Annexure 2E to ITB**) from any Bank out of the list of acceptable banks (attached as Annexure to SCC). Bidders shall submit SFMS confirmation along with BG, as per details specified in SCC. In case bidder is submitting e-BG against Bid security, bidder to select applicable format for Bank guarantee as per formats provided in tender. Furthermore, if an e-BG is issued in favour of the Corporation, Bidder shall follow the instructions, as specified in **Annexure – 1A to SCC**; or
- Insurance Surety Bond (as per **Annexure 2K to ITB**) from Insurance Regulatory and Development Authority of India (IRDAI) regulated Insurance Company.

12.3 Bidder shall upload the scanned copy of EMD along with the e-bid. **SWIFT payment acknowledgement message/ Cheque/ Cash shall not be acceptable.**

**HPCL's Bank Account details are as under:**

Beneficiary Name	Hindustan Petroleum Corporation Limited
Name of Bank	ICICI Bank
Bank Branch	163 H.T. PAREKH MARG, CHURCHGATE, MUMBAI – 400020
IFSC Code	ICIC0000393

12.4 Exceptions

The following categories of bidders are exempted from EMD (Bid Security):



- a) Public Sector Enterprises
- b) Vendors registered as Micro / Small Enterprises (MSEs) (except Traders)
- c) Start-ups as recognized by Department for Promotion of Industry and Internal Trade (DPIIT) – for this purpose bidder shall submit certificate issued by DPIIT.
- d) DELETED

For this purpose, in the event of the bidder being a Public Sector Enterprise, a declaration to that effect and in the case of Vendors registered as MSEs, a copy of the relevant registration certificate or other such document specified by Government of India (currently Udyam Registration Certificate) to be submitted.

12.5 In cases of EMD exemption, Bidders shall sign a Bid securing declaration (as per **Proposal Form**) accepting that if they withdraw or modify their Bids during the period of validity, or if they are awarded the contract and they fail to sign the contract, or to submit a performance security before the deadline defined in the request for bids/ request for proposals document, they will be suspended for a period of one year from being eligible to submit Bids/ Proposals for contracts with the Owner. If Bid declaration is not given, such bids shall be rejected. In addition, EIL may take suitable action as per Holiday / Banning policy of EIL.

12.6 A bidder's bid security will be forfeited if the bidder

- a) withdraws or amends its/ his Bid/Offer;
- b) impairs or derogates from the Bid/Offer in any respect within the period of validity of the Bid/Offer;
- c) If the bidder does not accept the correction / loading as per bid terms of his bid price during evaluation; and
- d) If the successful bidder fails to sign the contract or furnish the required performance security within the specified period.
- e) Any other provisions, as specified in the bidding document

12.7 Refund of EMD

Bid securities of the unsuccessful bidders shall be returned at the earliest at the earliest latest by the 30th day after the award of the contract. Bid security shall be refunded to the successful bidder on receipt of a performance security. However, in case of two packet or two stage bidding, bid securities of unsuccessful bidders during first stage i.e. technical evaluation etc. shall be returned within 30 days of declaration of result of first stage i.e. technical evaluation etc.

EMD shall be refunded to other than lowest evaluated bidder(s), immediately upon placement of LOA/Purchase Order. In case of delay in finalization of Order, EMD may be refunded by the Procurement Authority to other than the lowest evaluated bidder(s). In case, more than one order is required, EMD of such bidders may be retained.

### 13.0 INTEGRITY PACT (IP)

13.1 The Integrity Pact duly pre-signed by the authorized official of HPCL is enclosed with the Bidding Document as per proposal Form.

13.2 Pre-signed Integrity Pact shall be returned by the bidder along with technical bid, duly signed by the same signatory who signs the bid i.e. who is duly authorized to sign the bid. All the pages of the Integrity Pact shall be duly signed by the same signatory.

13.3 Integrity Pact shall be signed by the authorised signatory of the bid.



- 13.4 Bidder's failure to return the Integrity Pact along with the bid, duly signed, shall lead to rejection of such bid. However, in case EIL/Owner resort to post bid Techno-commercial clarifications, may give one chance to bidder to submit the signed copy of IP.
- 13.5 The Integrity Pact duly signed by the authorized official of HPCL and the Vendor, will form part of the contract / supply order.
- 13.6 If the Bidder has been disqualified from the bidding process prior to the award of contract according to the provisions under Integrity Pact, HPCL shall be entitled to demand and recover from bidder Liquidated damages amount by forfeiting the EMD/Bid security (Bid Bond) as per provisions of Integrity Pact.
- 13.7 If the contract has been terminated according to provisions of the Integrity Pact, or if HPCL is entitled to terminate the contract according to provisions of Integrity Pact, HPCL shall be entitled to demand and recover from the vendor liquidated damages amount by forfeiting the Performance Bank Guarantee / Security Deposit as per Integrity Pact.
- 13.8 The details of Independent External Monitors (IEMs) are as follows:
- Shri. Rajesh Ranjan Email: [rajeshranjan2@gmail.com](mailto:rajeshranjan2@gmail.com)
  - Shri. Bhagwan Shankar, Email: [bhagwan.shankar1@gmail.com](mailto:bhagwan.shankar1@gmail.com)
  - Capt. Anoop Kumar Sharma, Email: [anoop21860@gmail.com](mailto:anoop21860@gmail.com)
- C/o The Company Secretary, HPCL, 6thFloor, Petroleum House, 17, Jamshedji Tata Road, Church gate, Mumbai 400020.

#### 14.0 BID PARTS

- 14.1 Bid shall be submitted in two parts i.e. un priced bid and price bid. Bidders shall be required to submit the complete bid online. However, the physical document (mentioned under **clause 15.2.1** shall be submitted in original in the tender box by the bid due date/extended due date and time.

#### 15.0 DOCUMENTS COMPRISING THE BIDS, SUBMISSION AND OPENING OF BIDS

- 15.1 No Physical Bids / Offers shall be permitted. Bidders are required to upload the Bid/offer along with all supporting documents including Priced Bid on E-Tendering Portal only and the offers/Bids submitted online through this Portal shall only be considered for evaluation and ordering.
- 15.2 The bid prepared by the Bidder shall comprise the following components:
- 15.2.1 Physical Documents in original:
- Bid Security / EMD – **(applicable in case of Open Bidding / NIT).**
  - Power of Attorney in favour of bidder's authorized representative signing the Bidding Document – **(applicable in case of Open Bidding / NIT).**
  - Affidavit of Self certification regarding Domestic Value Addition in Iron & Steel Products, if furnished by bidder as per provisions of enquiry document – **for applicability refer RFQ covering letter / NIT / Bid Data Sheet (BDS).**

Physical documents to be submitted at following address on or before Bid due date and time.

Engineers India Limited



EI Bhawan, 1, Bhikaji Cama Place,  
Dak Receipt Section, Ground Floor  
New Delhi - 110066

Attention: Amit Kr Gupta, DGM (SCM-C&P), 2<sup>nd</sup> Floor, Job no. C068

The sealed envelope containing above documents shall be super scribed with Tender no, Due date and name of the Job.

#### 15.2.2 UNPRICED BID (PART-I): **TECHNO-COMMERCIAL/ UNPRICED BID**

- a) Offer Covering letter (in bidder's letter head)
- b) Agreed Terms & Conditions, duly filled in & signed along with requisite Proposal forms / Annexures.
- c) Documentation against Bidder Qualification Criteria (Technical) as per NIT – **(applicable in case of Open Bidding / NIT).**
- d) **in case of Open Bidding / NIT:** Complete Audited Annual Financial Year Report including auditor report, Balance Sheet, Profit & Loss Account Statement and all other schedules for the preceding three financial year.

**Or**

- in case of Limited Enquiries:** Complete Audited Annual Financial Year Report including auditor report, Balance Sheet, Profit & Loss Account Statement and all other schedules for the immediate preceding (latest) financial year
- e) Details of Similar Work/Items as per **Proposal Form-I.**
  - f) All technical documents required as per Material Requisition.
  - g) Unpriced copy of price schedule format, duly indicating “Quoted” in place of prices.
  - h) Priced copy of 2 year O&M Spares, CIF details (in percentage), as per relevant format
  - i) Any other information required in the RFQ/ Bidding Documents or considered relevant by the Bidder.

#### 15.2.3 PRICED BID (PART-II):

- a) Prices (which are part of price evaluation) to be uploaded in appropriate folder on E-Tendering Portal in line with provisions of bidding document. In case a bidder submits such prices in un-priced part, no cognizance shall be given to the same.
- b) No corrections, conditions, additions, deletions or modifications in Price Part are permitted.
- c) No stipulation, deviation, terms & conditions, presumption, basis etc. shall be stipulated in Price Part of the Bid (other than required as per the provisions of Bidding Document). In case of any conditions stipulated in price bids are in deviation to terms & conditions as stipulated in unpriced bids, then the bids of such bidders shall be summarily rejected and shall not be considered for further evaluation. Evaluation of the bids shall be carried out excluding such bidder(s).
- d) **TECHNICAL UTILITY GUARANTEE CONSUMPTION FIGURES** (e.g. guaranteed Power Consumption) :



Bidder shall refer instructions for submitting Technical Utility Guarantee Figures enclosed with Bid Data Sheet. Bid shall be summarily rejected in case of bidder does not submit the Guaranteed Utility Consumption Figure, as per instructions given in the Bid Data Sheet.

## 16.0 BID PRICES

- 16.1 Bidder to quote firm prices in e-procurement portal. Quoted rates shall be considered as final. No price change is allowed after bid due date.
- 16.2 Quoted prices shall be all-inclusive for the entire scope of items/work as per MR but excluding applicable GST. GST shall be quoted extra.
- 16.3 The supply price shall be inclusive of Transportation charges upto designated delivery location, all the taxes & duties but excluding applicable GST. However, wherever separate BOQ is provided for the Transportation charges, the same shall be quoted separately.
- 16.4 The charges towards Site work, supervision services, PWAMC, training, extended warranty, 3D modelling & hazop study (as applicable) shall be quoted all inclusive including taxes & duties but excluding applicable GST. GST shall be quoted extra.
- 16.5 The bidder shall submit the prices for components giving CIF value of Import and included in bid price, 02 years spares for normal operation (where applicable), Unit Rates for addition / deletion etc. (which are not part of evaluation), as per Annexure of price break up in the un-priced bid. However, wherever pre-filled unit rates of addition / deletion are provided along with the Enquiry Document, the same shall be applicable and bidder shall not furnish separate prices.
- 16.6 Price quoted by the Bidder, shall remain firm & fixed until completion of the contract and will not be subject to any variation, except statutory variation in taxes, duties & levies pursuant to relevant provisions of Special Conditions of Contract (**Annexure to SCC**).
- 16.7 The Bidder shall quote the price for item in the Price Schedule after careful analysis of cost involved for the performance of complete work considering all parts of the RFQ/Bidding Documents. In case, any activity though specifically not covered but is required to complete the work as per scope of work, scope of supply, specifications, standards, drawings, GTC-Supply, SCC or any other part of RFQ/Bidding Document, the prices quoted shall deemed to be inclusive of cost incurred for such activity.
- 16.8 Bidder to consider Merit rate of custom duty for their import content. Bidder shall ascertain the applicable merit rate of customs duty and shall be solely responsible towards applicability and correctness of such rates. The Bidder(s) must indicate quantity, CIF value & rate of custom duty considered in the Price Schedule.

## 17.0 BID DUE DATE AND TIME

- 17.1 Bid is required to be submitted through E-Tendering Portal only on or before the Bid submission date and time.
- 17.2 The Owner/Consultant may, at its discretion, on giving reasonable notice at E-Tendering Portal, extend the bid due date, in which case all rights and obligations of the Owner/Consultant and the Bidders, previously subject to the bid due date, shall thereafter be subject to the new bid due date as extended, which shall be treated as final bid due date.
- 17.3 Request for extension of Bid/Offer submission due date, if any, shall be considered at the sole discretion of Owner/Consultant. However, Owner/Consultant reserves the right not to entertain any request for extension received within two (2) days of bid submission due



date/time.

## 18.0 LATE BIDS / UNSOLICITED BIDS

- 18.1 Bids must be submitted online in E-Tendering Portal. Bids submitted through any other mode shall not be considered for opening / evaluation / award and shall be rejected.
- 18.2 E-tendering portal shall close immediately after the deadline for submission of bid.
- 18.3 Unsolicited Bids or Bids being submitted to address other than one specifically stipulated in the Bid documents will not be considered for opening / evaluation / award.

## 19.0 PERIOD OF VALIDITY OF BIDS

- 19.1 Bids shall be kept valid for a period as specified in the NIT/RFQ Cover Letter from the final bid due date. A bid valid for a shorter period shall be considered as non-responsive and liable for rejection.
- 19.2 No bid shall be allowed to be withdrawn in the interval between the deadline for submission of bids and the expiration of the period of bid validity specified by the Bidder. Withdrawal of a bid during this interval shall result in the forfeiture of Bidder's EMD/Bid security and further action as per corporation (OWNER) policy. In addition, EIL may take suitable action as per Holiday / Banning policy of EIL.
- 19.3 Notwithstanding above, the Owner/Consultant may solicit the Bidder's consent to an extension of the period of bid validity. The request and the responses thereto shall be made in writing. If the Bidder agrees to the extension request, the validity of Bank Guarantee towards EMD (if applicable) shall also be suitably extended. However, bidders agreeing to the request for extension of validity of bid will not be permitted to modify the bid. In case a Bidder refuses to extend its Bid Validity, the Bid Security / EMD (if applicable) of such bidder shall not be forfeited.

## 20.0 MODIFICATION AND WITHDRAWAL OF BIDS

- 20.1 The Bidder may modify or withdraw his bid after the bid's submission but prior to the due date & time (including extensions, if any) of submission of bids. No bid shall be modified subsequent to the bid due date & time.
- 20.2 Bidder(s) to note that unsolicited price changes (including changes in taxes, duties mentioned & their applicability) after submission of bid shall not be allowed. In case any bidder gives unsolicited revised prices/price implication, his bid shall be rejected and EMD/ Bid security submitted by the bidder shall be forfeited, however, any unilateral rebate shall be dealt as per **Clause no. 25.0 of ITB**.
- 20.3 The Bidder shall not be entitled during the bid validity period as mentioned above, without the consent in writing of the Owner to revoke or cancel its bid or to vary the bid given or any term thereof. In case of Bidder revoking or cancelling its bid without the consent of the Owner/Consultant in writing, the Owner/Consultant shall forfeit the Bid Security furnished by Bidder.
- 20.4 No new deviation will be accepted from bidder after bid due date & time. In case bidder submits new deviation, his bid will be rejected. At the sole discretion of the owner bidder may be given opportunity to withdraw the deviation and in case the same is not withdrawn by the bidder, the offer of the bidder shall be rejected and EMD submitted shall be forfeited.



## 21.0 OPENING OF PRICED / UN-PRICED BIDS

- 21.1 Unpriced bid shall be opened by OWNER/CONSULTANT on the date and time specified in E-tender portal. Date & time for opening of price bids shall be advised later to only techno-commercially accepted bidders.
- 21.2 In case of e-tender, the bids shall be opened online and bidders shall be able to view details by logging in E-Tendering Portal. Physical presence of bidders at EIL/HPCL's office is not required for witnessing bid opening. The e-Bid opened online shall be deemed considered as public opening.

## 22.0 BID CURRENCY AND PAYMENT

- 22.1 Bidder to submit their Prices in Indian Rupees only. Payment shall be made in Indian Rupees only.

## 23.0 EVALUATION OF UN-PRICED BIDS / CLARIFICATION OF BIDS

- 23.1 Unresponsive Bids: Bids that do not meet the basic requirements specified in the bid documents are to be treated as unresponsive (both during Techno-commercial evaluation and Financial Evaluation in case of Two Envelope bidding) and ignored/rejected. All Bids received will first be scrutinized to see whether the Bids meet the basic requirements as incorporated in the Bid document and to identify unresponsive Bids, if any. Unresponsive offers may not subsequently be made responsive by correction or withdrawal of the non-conforming stipulation. Some important points on the basis of which a Bid may be declared as unresponsive and be ignored during the initial scrutiny are:
- The Bid is not in the prescribed format or is unsigned or not signed as per the stipulations in the bid document;
  - The required EMD has not been provided or exemption from EMD is claimed without acceptable proof of exemption;
  - The bidder is not eligible to participate in the bid as per laid down eligibility criteria;
  - The bid departs from the essential requirements specified in the Bidding Document; or
  - Against a schedule in the list of requirements in the Bid enquiry, the Bidder has not quoted for the entire requirement as specified in that schedule
- 23.2 To assist in the examination, evaluation and comparison of Unpriced bids, the Owner/Consultant may, at its discretion, ask the Bidder clarifications on the bid. The request for such clarifications and the response thereto shall be in writing and shall be binding on the bidder.
- 23.3 Bidder(s) to note that Price changes against Technical/Commercial clarification, if any, in line with terms & conditions of enquiry documents are not allowed. In case, any bidder gives revised prices/price implications against such clarification, it would amount to unsolicited post bid modification by the bidder and action shall be taken by the Owner/Consultant as per clause **"MODIFICATION AND WITHDRAWAL OF BIDS"** mentioned above. However, the Owner/Consultant reserves the right to seek cost implication/revised rates from all the vendors in case of a revision in technical specification/scope of job is carried out by Owner/Consultant.
- 23.4 In case of different rates of GST quoted by Bidder, payment of taxes and evaluation of bids shall be done as follows:
- 23.4.1 For registered bidders:



- a) Cases where input credit of GST is not available (GST is added for evaluation)
- In case bidder's quoted GST rate is different than the applicable correct GST rate: The GST rate as quoted by bidder shall be corrected to applicable correct GST rate. Evaluation shall be done with applicable correct GST rate. Further, in case bidder becomes successful, order shall be placed with applicable correct GST for payment.
- b) Cases where input credit of GST is available (GST is not added for evaluation)
- Prices shall be evaluated based on basic quoted prices without adding GST. However, in case bidder becomes successful, order shall be placed with applicable correct GST rate for payment.

23.4.2 For Unregistered bidder under GST:

- Supply where reverse charge needs to be paid: GST liability will be borne and paid by HPCL for unregistered bidders. Hence, the bid of unregistered bidders shall be loaded with applicable GST (wherever input credit of GST is not available) for evaluation purpose only. The bidder shall not quote for GST in the bid. Even if such bidders quote any GST rate, the same shall not be considered for evaluation purpose. Applicable GST shall be paid directly to statutory authorities by HPCL.

23.5 Bidders are requested to accept Bidding terms/conditions in totality and should not take any deviations. In case deviations to Bidding terms/conditions are unavoidable, the same should be mentioned in the deviation format available under proposal forms attached with the bidding document. Deviations mentioned elsewhere shall not be considered by Owner/Consultant.

23.6 In case any deviation sought by bidder is accepted by Owner, Owner reserves the right to suitably load the bidder for evaluation purpose only.

23.7 Non acceptance of commercial terms and conditions may result in rejection of the offer, or suitable commercial loading as tabulated below. Loading shall be carried out on FOT Site prices.

23.7.1 Payment terms at variance with RFQ (which are not interest bearing), will not be permitted. In case a bidder insists for advance payment against FOA / PO, the offer shall be rejected. However, if a Bidder insists for differential payment terms against various milestones, the same shall be loaded SBI's MCLR + 2% prevailing on the date of bid due date for the relevant period as under:

S no.	Milestone	:	Period of loading
i.	Drawing approval	:	80% of the delivery period
ii.	Order on sub-Vendors	:	75% of the delivery period
iii.	Receipt of raw material at Vendor's works	:	50% of the delivery period
iv.	%age payment against dispatch Documents/ through bank instead receipt & acceptance at Site (Specified in RFQ)	:	Interest for Three month
Note: In case of payment through bank, all bank charges shall be to Supplier's			



	account. In case supplier insists for bank charges to respective account then, it shall result in additional loading of prices @ 0.9% on FOT Site basis.		
v.	% age payment against dispatch document instead of Final document as per Purchase Requisition (Specified in RFQ)	:	Interest for One month
vi.	%age payment against receipt of material at site instead acceptance of material at site (Specified in RFQ)	:	Interest for Three month

Note: Period for any other stage shall be suitably decided by EIL/Owner, at the time of evaluation.

**23.7.2 PRICE REDUCTION SCHEDULE (APPLICABLE @ 0.5% TOV ~ 5% TOV) FOR DELAYED DELIVERY:**

S no.	Milestone	:	Loading
i.	X% TOV in place of 5% TOV (less than 5%)	:	(5-X)% loading on FOT site prices
ii.	Any other	:	(5)% loading on FOT site prices

**23.7.3 Price Variation**

S no.	Milestone	:	Loading
i.	Firm Prices	:	No Loading
ii.	In case of Price Variation Formula with ceiling	:	Loading by ceiling %age offered
iii.	No formula and/or no ceiling specified by the bidder	:	Offer shall be rejected

**24.0 REJECTION CRITERIA**

24.1 Bidder's Bid shall be considered non-responsive and rejected if bidder deviates from the under mentioned provisions of Bidding Documents / specifies non acceptance of bidding provisions as mentioned below:

- i) Non submission of Bid Security (EMD) (if applicable) / Non-submission of Declaration in lieu of EMD exemption
- ii) Integrity Pact (if applicable) - Non-submission of duly signed Integrity Pact (in the format provided in the tender)
- iii) Security Deposit / Retention Money/Contract Performance Guarantee



- iv) Bid validity shorter than specified
- v) Force Majeure
- vi) Defect Liability Period / Guarantee / Warranty period
- vii) Deleted
- viii) Demand of Advance Payment against placement of order
- ix) Workability clause
- x) Completion Period / Time Schedule / Delivery Period
- xi) Supplier's Liability as per clause 28.0 of GTC-Supply
- xii) Financial Bid Evaluation / Award Criteria as clause 28.0 of ITB
- xiii) Unsolicited Price Increase after bid submission due date / extended due date, however, any unilateral rebate shall be dealt as per provision of Tender Document.
- xiv) Advance along with LOA/PO, Payment through bank and L/C to Indian bidders.
- xv) Non-Submission of declaration towards banning/holiday listing / delisting from Government or Quasi Government agencies or PSUs or Misrepresentation of facts/ fraudulent practices.
- xvi) Non-acceptance to participate in Reverse Auction, wherever RA is applicable
- xvii) Non-compliance to addendum/corrigendum, issued before bid due date.
- xviii) Failure in meeting the Bidder Qualification Criteria if applicable (relevant clause of NIT).
- xix) Compliance to Domestically Manufactured Iron & Steel Policy as per format given in the tender, wherever applicable.

Bids not complying to tender terms pertaining to above **Sr. No. 24.1 i)** shall be rejected out rightly. For other points, HPCL/Consultant reserve the right to provide opportunity to the bidder to withdraw the deviation without revision in quoted prices or submit the missing document / information. In case bidder fails to withdraw the deviation within the date & time specified by HPCL/Consultant, the bid shall be rejected.

- 24.2 Even if a bidder meets the eligibility criteria and BQC (wherever applicable), he shall be subject to disqualification if he or any of the constituent partners is found to have:
- a) made misleading or false representations in the forms, statements, affidavits and attachments submitted in proof of the qualification requirements; and/ or;
  - b) Records of poor performance with HPCL during the last five years, as on the date of application, such as abandoning the work, rescission of the contract for reasons which are attributable to non-performance of the Contractor, inordinate delays in completion, consistent history of litigation resulting in awards against the Contractor or any of the constituents, or financial failure due to bankruptcy, (The rescission of a contract of venture JV on account of reasons other than non- performance, such as the most experienced partner (major partner) of JV pulling out) and so on.
- 24.3 Failure in getting document verified (submitted by bidder against qualification criteria mentioned in tender) with original documents/verification through the document issuing authority shall lead to rejection of the bid.



- 24.4 A bid with incomplete scope of supply and/or which does not meet the technical requirements as specified in the bid document shall be considered as non-responsive and rejected.
- 24.5 In case bidder is on the holiday list/Banned/Blacklisted/Delisted by any Government or Quasi Government agencies or PSUs, his offer may be rejected at the sole discretion of Owner.
- 24.6 Non-acceptance of commercial terms and conditions may result in rejection of offer.
- 25.0 UNSOLICITED REBATE**
- 25.1 If a bidder offers a rebate unilaterally after the closing date and time of the bid (suo-moto decrease in price), it will not be taken into account for evaluating purposes, but if that bidder emerges as the lowest evaluated, the rebate offered will be taken into account and shall be binding on the bidder for award of work.
- 26.0 CONTACTING THE OWNER/OWNER'S CONSULTANT**
- 26.1 From the time of the bid opening to the time of the Contract award, if any bidder wishes to contact the Owner/Consultant for any matter relating to the bid it should do so in writing.
- 26.2 Any efforts by a Bidder to influence the Owner/Consultant during bid evaluation, bid comparison or contract award decisions may result in the rejection of the Bidder's bid.
- 27.0 OWNER'S RIGHT TO ACCEPT ANY BID AND TO REJECT ANY OR ALL BIDS**
- 27.1 Owner reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids, at any time prior to award of order, without thereby incurring any liability to the affected Bidder or Bidders or; any obligations to inform the affected Bidder or Bidders of the ground for the Owner's action.
- 27.2 The submission of any bid connected with these documents and specifications shall constitute an agreement that the Bidder shall have no cause for action or claim, against the Owner/ Owner's for rejection of his bid. The Owner shall always be at liberty to reject or accept any bid or bids at his sole discretion and any such action will not be called into question and the Bidder shall have no claim in that regard against the Owner.
- 27.3 Though Owner/Consultant reserves the right to reject any or all Bids/Offer received and such decision is final, in case tender is required to be cancelled after opening of priced bid and identification of L1 vendor, communication may be sent to L1 vendor conveying reasons for cancellation of tender.
- 28.0 FINANCIAL BID EVALUATION / AWARD CRITERIA**
- 28.1 Refer Notice Inviting Tender / RFQ / BDS for detailed award criteria.
- 28.2 **Workability Clause:** Wherever the bid price, in combination with other elements of the Bid, raises material concerns to Owner as to the capability of the bidder to perform the contract at the offered price. Procuring Entity in such cases may seek written clarifications from the bidder, including detailed price analyses of its bid price in relation to scope, schedule, allocation of risks and responsibilities, and any other requirements of the Bidding Document. If, after evaluating the price analyses, Owner determines that the bidder has substantially failed to demonstrate its capability to deliver the contract at the offered price, the Owner may reject the bid/proposal and the enquiry shall be refloated.
- 29.0 MICRO OR SMALL ENTERPRISES**



- 29.1 Ministry of Micro, Small & Medium Enterprises, under section 11 of MSMED Act 2006, vide Gazette Notification no. 503 dated 26.03.2012, notified the Public Procurement Policy (PPP), 2012 for facilitating the promotion and development of Micro and Small Enterprises (MSE) in Government Procurement. The detailed policy along with its subsequent amendments till date can be viewed and downloaded from the website of Ministry of Micro, Small & Medium Enterprises. This policy shall be applicable for this Enquiry.
- 29.2 In case of an upward change in terms of investment in Plant and Machinery or Equipment or Turnover or both, and consequent re-classification, an enterprise shall continue to avail of all nontax benefits of the category (Micro or Small or Medium) it was in before the re-classification, for a period of three years from the date of such upward change.
- Non-tax benefits include benefits of various schemes of the Government, including Public Procurement Policy, Delayed Payments, etc.
- 29.3 Under Micro and Small Enterprises (MSE) category, only manufacturers for goods and service providers for services, who are holding valid UDYAM Registration, are eligible for exemption from EMD and purchase preference. Traders are excluded from the purview of this Policy.
- 29.4 UDYAM certificate submitted by the MSE bidder in the unpriced bid, for claiming EMD Exemption/Purchase Preference, will be verified online at UDYAM Portal, at the time of unpriced bid opening. The Online status of the MSE certificate at the UDYAM Portal on the date of unpriced bid opening will be treated as the final status.
- 29.5 For purchase preference for manufacturers following additional supporting documents to be submitted along with unpriced Bid:
- Additional Documents in the name of the bidder, as a proof of being a manufacturer of the Tendered item, to be submitted by bidder - Factory registration certificate, Central Government certificate, State Government certificate, ISO certificates, ASME/R-Stamp/U-Stamp/third party government authorized agency certificate for manufacturing facilities related to manufacturing of quoted item for this tender etc.
- In case no documents are submitted with unpriced bid, a query will be sent to bidder for submission of above documents after opening of unpriced bid. In case no documents are submitted by bidder / documents submitted does not prove that bidder is a manufacturer of Tendered item, bidder shall not be eligible for Purchase Preference.
- 29.6 Guidelines for seeking documents from MSEs:
- Bidder claiming to be a Micro or Small Enterprises (MSEs) must be registered on Udyam Registration portal having valid "Udyam Registration Certificate".
  - The Udyam registration certificate shall be verified from Gol Udyam registration portal (present web address is <https://udyamregistration.gov.in> ).The status of the MSE Bidder as on the date of Unpriced Bid opening shall be considered for benefits defined in the Bidding Document under the Purchase Preference Policy for MSEs, 2012.
  - In case a MSE bidder has submitted Udyam Registration Certificate, the same shall be accepted provided the details of the same could be verified from the Government Udyam Registration portal, as applicable.
  - No verification of bidder's status as Micro or Small Enterprises from the financial statement of bidders shall be required.
  - In case, a MSE bidder doesn't submit the MSE document or submits invalid document



or, such bidders shall not be considered for providing the benefits under MSE Policy.

- vi) In case at any stage, if it is found the bidder has claimed / availed the benefits by providing false/forged details, their bid shall be rejected and bidder shall be placed on suspension/ banning. However, if this is found after order placement, bidder shall also be liable for encashment of PBG. Bidder's organization is responsible for any and all actions of their employees. Any claims seeking to pin point/shift the blame on any employee and consequently attempting to absolve the bidder's organization will not be entertained.

29.7 **MSEs registered as a Trader (major Activity) cannot avail the benefits of the said policy.** MSMEs under such categories are eligible only for availing Priority Sector Lending benefits, as per policy.

29.8 Preference to Micro & Small Enterprises:

- a) Bidder shall submit the documentary evidence of being MSE on the E-Tendering portal, failing which bidder shall not be given purchase preference.
- b) **Deleted**
- c) Evaluation methodology for Purchase Preference:
- i) The owner reserves the right to allow Micro & Small enterprises as well as MSEs Owned by SC/ST entrepreneur and MSEs Owned by Women, purchase preference as admissible under the prevailing procurement policy for MSEs.
- ii) The quantity against the item(s) of MR may be split to enable ordering of 25% quantity against the item(s) of MR to MSEs bidder within the price range of L1 bidder's evaluated price + 15% subject to their matching L1 bidder's price, inline with purchase preference as admissible under the prevailing procurement policy for MSEs. Accordingly, the quoted prices against various items of MR shall remain valid in case of splitting of quantities of the items in view of the same.
- iii) Out of this 25% from MSEs, 4% is to be from MSEs owned by SC/ ST entrepreneurs. However, in event of failure of MSEs owned by SC/ ST entrepreneurs to participate in the bidding process or meet the tender requirements and L1 price, this 4% will be met from other MSEs.
- iv) Additionally, out of this 25% from MSEs, 3% is to be from MSEs owned by Women. However, in event of failure of MSEs owned by Women to participate in the bidding process or meet the tender requirements and L1 price, this 3% will be met from other MSEs.
- v) While granting purchase preference as above, procurement of goods through MRs may include certain small work, or some services, which are incidental or consequential to supply of such goods such as transportation, insurance, installation, commissioning, training & maintenance.

Clarification:

- In case where quantity against a line item cannot be split (i.e., minimum 25% to MSEs) or items with single quantity or in grouped item, the complete line item/ group shall be awarded on MSE bidder within the price range of L1 bidder's evaluated price + 15% subject to their matching L1 bidder's price.
- In case, quantity(ies) against an item/ group cannot be split among MSEs owned by SC/ ST entrepreneurs, MSEs owned by Women and non- SC/ ST or



non-women MSE entrepreneurs, first opportunity shall be given to MSEs owned by Women than to MSEs owned by SC/ ST entrepreneurs and lastly to other MSEs, within the price range of L1 non-MSE bidder's evaluated price + 15%.

**30.0 PROVISION REGARDING POLICY TO PROVIDE PURCHASE PREFERENCE (LINKED WITH LOCAL CONTENT) AGAINST MAKE-IN-INDIA POLICY (PPP-MII)**

30.1 MoPNG vide File No FP-20013/24/2017-FP-PNG(E-17013) dated 21.08.2024 has forwarded revised Public Procurement (Preference to Make in India) (PPP-MII) Order 2017, issued by DPIIT vide Order No P-45021/2/2017-PP(BE-II)-Part-(4)Vol.II dated 19.07.2024, and as amended time to time; shall be applicable for this enquiry. Bidder can download the Policy document including its amendments from the website of "Department for Promotion of Industry and Internal Trade" (presently <https://dpiit.gov.in/>).

30.2 Whether only Class-I Local Supplier is eligible or both Class I & Class-II Local Supplier (for definition, refer order) are eligible to bid; bidder to refer NIT/LIB cover letter. Purchase Preference is available only to Class I Local Supplier.

30.3 At the bidding stage:

The 'Class-I local supplier' / 'Class-II local supplier' / 'Non-Local Suppliers' shall be required to indicate percentage of local content & details of the location(s) of the local value addition, and also provide self-certification **as per proposal Form-D1** along with their bid.

30.4 During execution stage:

For all contracts up to INR 10 Crore Contractor/ Supplier shall submit **proposal Form-D2**. However, for contracts above INR 10 Crore, the Bidder shall be required to submit local content certification **as per proposal Form-D3 & D4** duly certified by Statutory Auditor or Cost Auditor (in the case of companies) or from a Practicing Cost Accountant or Practicing Chartered accountant (in respect of contractors/suppliers other than companies). For cases where it is not possible to provide such certification, the Contractor / supplier is permitted to provide the certificate after completion of contract but not later than submission of Final Bill. In that case, an amount equivalent to 10% of invoice value shall be retained from each invoice till submission of **proposal Form-D3 & D4**.

30.5 In case the Contractor/Supplier submit False declarations and/or does not meet the stipulated local content requirement and the category of the Contractor/ Supplier changes from Class-I to Class-II/Non-local or from Class-II to Non-local, default and penalty actions shall be taken as per the provisions of Public Procurement (Preference to Make in India) (PPP-MII) Order 2017 and its subsequent amendments.

**31.0 CONCURRENT APPLICATION OF PUBLIC PROCUREMENT POLICY FOR MICRO AND SMALL ENTERPRISES ORDER, 2012 AND PUBLIC PROCUREMENT (PREFERENCE TO MAKE IN INDIA) ORDER, 2017**

31.1 In cases where purchase preference as per "PPP-2012" as well as "PPP-MII-2017" are applicable, the purchase preference shall be applicable as per Office Memorandum no. F.1/4/2021PPD dated 18.05.2023 issued by Ministry of Finance, Department of Expenditure and available on its website (<https://doe.gov.in/>).

**32.0 DOMESTICALLY MANUFACTURED IRON & STEEL PRODUCTS POLICY**

32.1 In order to give preference to domestically manufactured iron and steel products (DMI&SP) in Government procurement, Ministry of Steel in suppression of earlier Domestically Manufactured Iron & Steel Policy have issued, the policy for providing



Preference to Domestically Manufactured Iron & Steel Products (DMI&SP) by Gazette notification no. G.S.R. 904(E) dated 17-12-2025.

- 32.2 Copy of this policy and its amendments are available on website of Steel Ministry (<https://steel.gov.in/policies>).
- 32.3 Refer NIT/BDS for applicability of the Policy for this enquiry.
- 32.4 The bidder shall strictly comply with the said policy for the Iron & Steel products involved in execution of the contract, including the provisions mentioned below, and submit all requisite supporting documents as specified:-
- All bidders – including manufacturers, selling agents, authorized distributors, authorized dealers, and authorized supply houses – shall submit **Proposal Form-E1 (Form-1-Self Certification)** as part of their bid, irrespective of whether they are the manufacturer or otherwise.
  - Bidders who are selling agents/authorized distributors/authorized dealers/authorized supply houses of the domestic manufacturers of iron & steel products, covered by Appendix-A of DMI&SP policy, are eligible to bid with **Proposal Form – E1 (Form-1-Self Certification)** on behalf of the domestic manufacturers under the policy, subject to the bidder furnishing an authorization certificate issued by the domestic manufacturer at the time of delivery. In such case, Bidder shall also submit an **Undertaking as per Proposal Form-E2**.
  - A supplier debarred by any procuring entity for violation of this Order shall not be eligible for preference under this Order for procurement by any other procuring entity for the duration of the debarment. The debarment for such other procuring entities shall take effect prospectively from the date on which it comes to the notice of other procurement entities. Bidder shall submit a declaration in the bid for the above as per **Proposal Form-E3**.
  - Bidder shall submit a “Declaration of Non-Applicability of DMI&SP Policy” as per **Proposal Form-E4** if Bidder’s Quotes Price (Item wise basis) is lower than the threshold value of INR 5 Lakhs. In such case, after price bid opening, if Price of any quoted item is found more than INR 5 Lakhs, it shall be construed as the false/wrong declaration and Penal action shall be initiated against the Bidder as per provision specified below. If such a supplier/ agency happens to be the lowest bidder during price evaluation, the bid shall be rejected and the next lowest bidder shall be considered as L1.

For the purpose of this Policy, the threshold value INR 5 lakhs shall be considered on Item wise basis excluding freight and GST. In all cases where evaluation is on bottom line basis or on individual group, threshold value shall be considered on the basis of individual item of the MR / group.

**Note -**

- If a bidder does not submit above affidavit and/or undertaking (as applicable) as per format, the bid of bidder shall be rejected.



b) In case of detection of wrong declaration by the bidder of the prescribed declaration(s), the following actions shall be taken by EIL:

- After priced bid opening but before Award: - Rejection of bid and forfeiture of EMD and banning of business dealings in line with the EIL/Owner's extant policy.

After Award: - In case the Contractor/Supplier submit False declarations and/ or does not meet the Domestic Value Addition (DVA) as specified in DMI&SP Policy, penalty actions shall be taken as per the provisions of Public Procurement (Preference to Make in India) (PPP-MII) Order 2017 and its subsequent amendments, irrespective of the fact whether the Public Procurement (Preference to Make in India) (PPP-MII) Order 2017 is applicable or not in the RFQ/tender.

### **33.0 PROVISIONS IN CASE OF TIE ON E-TENDERING PORTAL**

33.1 In case, two or more acceptable bidders are found to have quoted identical lowest bid price and it is not possible to split the order on equal basis, best reduced prices shall be obtained from such tie bidders only.

### **34.0 NOTIFICATION OF AWARD**

34.1 Owner reserves the right to conduct negotiation with lowest bidder. Lowest Bidder shall attend such negotiation meeting. As a result of negotiation, Bidder may offer rebate on his earlier quoted price. If the bidder called for negotiations do not give any rebate/discount or do not attend negotiation meeting, then original quotation given by bidder shall be considered for evaluation.

34.2 Prior to the expiration of period of bid validity/extended bid validity the Owner will notify the successful Bidder in writing by e-mail / through E-Tendering Portal, that his bid has been accepted. The Notification of Award / Letter of award will constitute the formation of the Contract.

34.3 Delivery Period shall be counted from the date of notification of award (Letter of Acceptance/ Letter of Award unless otherwise specified in the Bidding Document/LOA.

34.4 Award of Contract/Order will be by way of issuing a LOA. LOA will contain price, delivery and other salient terms of bid and Bidding Document. Bidder will be required to confirm receipt of the same by returning "Copy of the LOA/Contract" duly signed and stamped by the bidder as a token of acknowledgement to Owner and Consultant.

### **35.0 ISSUE OF PURCHASE ORDER**

35.1 After the successful Bidder/Bidders (as per awards criterion) has been notified that his bid has been accepted, the Owner will issue to such Bidder/Bidders LOA. A detailed HPCL Purchase Order incorporating all the terms and conditions of Bidding Document and deviation to Bidding Document, if any, permitted by OWNER shall be issued later.

Alternatively, direct detailed Purchase Order/Contract may be issued without issuing LOA.

35.2 Within 15 days of receipt of the detailed Purchase Order, the Bidder/Bidders shall sign and return it to the Owner, as an acknowledgement of the Purchase Order. Failure on part of bidder in doing so may result in cancellation of Purchase order and further action by OWNER in line with tender terms including forfeiture of EMD/Bid security at the sole discretion of OWNER.

35.3 HPCL shall issue 2 separate POs, i.e., 1 for supply and another for AMC.



### **36.0 CLARIFICATION REQUESTS FROM BIDDERS**

36.1 Information relating to the examination, clarification, evaluation and comparison of bids, and recommendations for the award of a contract, shall not be disclosed to bidders or any other person not officially concerned with such a process until the award to the successful bidder has been announced.

From the time of bid opening to the time of contract award, no bidder shall contact the Owner on any matter related to the bid, except on request and prior written permission.

Any effort by the bidder to influence the Owner in bid evaluation, bid comparison or contract award decisions will result in the rejection of the bidder's bid.

A bidder may seek clarifications regarding the Bidding Document provisions, bidding process and / or rejections of his bid. EIL shall respond to such requests within a reasonable time.

ANNEXURE 5: AGREEMENT UNDER  
INTEGRITY PACT

AGREEMENT UNDER INTEGRITY PACT

No.  
Dated

To,

**HINDUSTAN PETROLEUM CORPORATION LIMITED**

Sub : Procurement of Bidding Documents

Ref. Tender no.

HPCL and the Bidder agree that the Notice Inviting Tender (NIT) is an offer made on the condition that the bidder will sign the Integrity Pact and the Bid would be kept open in its original form without variation or modification for a period of (state the number of days from the last date for the receipt of tenders stated in the NIT) **90** days and the making of the bid shall be regarded as an unconditional and absolute acceptance of this condition of the NIT.

We confirm acceptance and compliance with the Integrity Pact in letter and spirit. We further agree that the contract consisting of the above conditions of NIT as the offer and the submission of Bid as the Acceptance shall be separate and distinct from the contract which will come into existence when bid is finally accepted by HPCL.

The consideration for this separate initial contract preceding the main contract is that HPCL is not agreeable to sell the NIT to the Bidder and to consider the bid to be made except on the condition that the bid shall be kept open for **90** days after the last date fixed for the receipt of the bids and the Bidder desires to make a bid on this condition and after entering into this separate initial contract with HPCL.

HPCL promises to consider the bid on this condition and the Bidder agrees to keep the bid open for the required period. These reciprocal promises form the consideration for this separate initial contract between the parties.

If Bidder fails to honour the above terms and conditions, HPCL shall have unqualified, absolute and unfettered right to encash / forfeit the bid security submitted in this behalf.

Yours faithfully,

Yours faithfully

(BIDDER)

(PURCHASER)

  
अरिजीत सन्याल  
ARIJIT SANYAL  
अवधि-परियोजना विभाग  
अवधि-परियोजना विभाग  
अवधि-परियोजना विभाग  
अवधि-परियोजना विभाग

# (This agreement should be "pre-signed" by the authorised representatives of the applicable Function/SBU on behalf of HPCL at the time of invitation of tender).

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## INTEGRITY PACT

### INTEGRITY PACT

Between  
**Hindustan Petroleum Corporation Limited (HPCL)** hereinafter referred to as “**The Buyer**”,  
and  
..... hereinafter referred to as “**The Bidder/ Seller/ Contractor**”

#### Preamble

The Buyer intends to award, under laid down organizational procedures, contract for ..... The Buyer values full compliance with all relevant laws of the land, rules, regulations, economic use of resources and of fairness /transparency in its relations with its Bidder and / or Seller and / or Contractor.

In order to achieve these goals, the Buyer will appoint Independent External Monitors (IEMs) who will monitor the tender process and the execution of the contract for compliance with this Integrity

® Pact. **The details of the IEMs appointed by the Buyer are provided in the Tender Document.**

In this Integrity Pact:-

- a) The term Bidder/ Seller/ Contractor shall mean the party submitting the bid (or, as the case maybe, who enters into a contract with Buyer);
- b) For the purposes of Section 5, the term “transgression” shall mean a wrong, violation or offence of the nature specified in Section 2 of this Pact.

#### **Section 1 – Commitments of the Buyer**

1. The Buyer commits itself to take all measures necessary to prevent corruption and observe the following principles: -

- a) No employee of the Buyer, personally or through family members or intermediaries will, in connection with the tender or the execution of the contract, demand, take a promise for or accept, for self or any third person, any material or other benefit, which the person is not legally entitled to.
- b) The Buyer will during the tender process treat all Bidder / Seller / Contractor with equality and reason. The Buyer will in particular, before and during the tender process, provide to all Bidders / Sellers / Contractors the same information and will not provide to any Bidder / Seller / Contractor confidential / additional information through which any Bidder / Seller / Contractor could obtain an advantage in relation to the tender process or the contract execution.
- c) The Buyer will exclude from the process all known prejudiced persons.



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2. If the Buyer obtains information on the conduct of any of its employees, which is a criminal offense under the Indian Penal Code (IPC) or Prevention of Corruption Act (PC Act), or if there be a substantive suspicion in this regard, the Buyer will inform the Chief Vigilance Officer and in addition can initiate disciplinary actions.

## Section 2 – Commitments of the Bidder/Seller/Contractor

1. The Bidder/Seller/Contractor commit themselves to take all measures necessary to prevent corruption. The Bidder/Seller/Contractor commit themselves to observe the following principles during participation in the tender process and during the contract execution.
  - a) The Bidder/Seller/Contractor will not directly or through any other person or firm, offer, promise or give to any of the Buyer's employees involved in the tender process or the execution of the contract or to any third person any material or other benefit which he/she is not legally entitled to, in order to obtain in exchange, any advantage of any kind whatsoever during the tender process or during the execution of the contract.
  - b) The Bidder/Seller/Contractor will not enter into any undisclosed agreement or understanding with any other Bidders/Sellers/Contractors, whether formal or informal. This applies in particular to prices, specifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process.
  - c) The Bidder/Seller/Contractor will not commit any offence under the relevant IPC/PC Act; further the Bidder/Seller/Contractor will not use improperly, for purposes of competition or personal gain, or pass on to others, any information or document provided by the Buyer as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.
  - d) The Bidder/Seller/Contractor of foreign origin shall disclose the name and address of the agents /representatives in India, if any. Similarly, the Bidder/Seller/Contractor of Indian Nationality shall furnish the name and the address of the foreign owner/ holding company, if any. All payments made to Indian agents/ representatives have to be in Indian Rupees only. If Bidder/Seller/ Contractor is an Agent, then either the Agent or the Principal can bid, but not both. No Bidder/ Seller/ Contractor shall submit more than one bid. No Agent is permitted to represent more than one manufacturer either in this tender/subsequent/parallel tender for the same item.
  - e) The Bidder/Seller/Contractor will when presenting its bid, disclose any and all payments made or which is committed to or intended to be made to agents, brokers or any other intermediaries in connection with the award of the contract.
  - f) Bidder /Seller / Contractor who have signed IP shall not approach the Courts while representing the matter before the IEMs and shall await the decision of the IEMs in the matter.
2. The Bidder/Seller/Contractor will not instigate any third person to commit offences outlined above or be an accessory to such offences.



### **Section 3 –Disqualification from tender process and exclusion from future contracts, etc.**

If the Bidder/Seller/Contractor, before award of contract or during its execution, has committed a transgression through a violation of Section 2, above or in any other form such as to put their reliability or credibility in question, the Buyer is entitled to take all or any one of the following actions: -

1. To disqualify the Bidder/ Seller/Contractor from the tender process. However, the tender process with other Bidders/Sellers/Contractors will continue.
2. To terminate the contract if already signed.
3. To debar the Bidder/Seller/Contractor from participating in other /future tenders of the buyer for an appropriate period of time as per Buyer’s guidelines.
4. To inform its CVO in case of acts constituting corruption or take any other action.

### **Section 4 –Compensation for Damages**

1. If the Buyer has disqualified the Bidder/Seller/Contractor from the tender process prior to the award of contract according to Section 3, the Buyer is entitled to forfeit, demand and/or recover from Bidder/Seller/Contractor, damages equivalent to the Earnest Money Deposit/ Bid Security.
2. If the Buyer has terminated or is entitled to terminate the contract according to Section 3, the Buyer shall be entitled to demand and recover from the Bidder/Seller/Contractor liquidated damages equivalent to Performance Bank Guarantee, unless stipulated otherwise elsewhere in the Contract.

### **Section 5 – Previous transgression**

1. The Bidder / Seller / Contractor declares that no previous transgressions have occurred in the last three years with any other Company in any country conforming to the anti-corruption approach or with any Public Sector Enterprise in India or Government of India, that could justify his exclusion from the tender process.
2. If a previous transgression has occurred or if the Bidder/ Seller/ Contractor makes any incorrect statement on this subject, he can be disqualified from the tender process or contract terminated and further action can be taken as per the procedure mentioned in “Guidelines for Holiday Listing (Banning of business dealing)”. The link for the Guidelines is given in the tender documents.

### **Section 6 – Equal treatment of all Bidders / Sellers / Contractors**

1. In case of sub-contracting, the Bidder/ Seller/ Contractor shall take the responsibility of the adoption of the Integrity Pact by the sub-contractor.
2. The Buyer will enter into Integrity Pact with identical conditions as this one with all Bidders /Sellers/ Contractors.
3. The Buyer will disqualify from the tender process all Bidders / Sellers/ Contractors who do not sign this Pact or violate its provisions.

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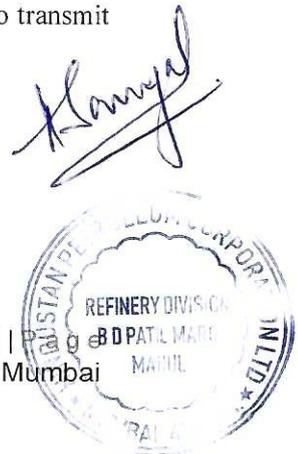


## Section 7 – Independent External Monitor

1. The Buyer has appointed competent and credible Independent External Monitors (IEMs) for this Pact after approval by Central Vigilance Commission. The task of the Monitors is to review independently and objectively, whether and to what extent the parties comply with the obligations under the Integrity Pact.
2. The Monitors are not subject to instructions by the representatives of the parties and perform their functions neutrally and independently. The Monitors shall have the right to access all contract documents whenever required. It will be obligatory for him/ her to treat the information and documents of the BIDDER/ SELLER/CONTRACTOR, as confidential.
3. The Bidder/ Seller/ Contractor accepts that the Monitors have the right to access without restriction to all project documentation of the Buyer including that provided by the Bidder/ Seller/ Contractor. The Bidder/ Seller/Contractor will also grant the Monitors, upon their request and demonstration of a valid interest, unrestricted and unconditional access to their project documentation. The same is applicable to sub-contractors.
4. The Monitor is under contractual obligation to treat the information and documents of the Bidder(s)/ Sellers/ Contractor(s)/ Sub-contractor(s) with confidentiality. The Monitors shall have no Conflict of Interest while dealing with any case or with any party. If any conflict arises, then that Monitor shall inform the C&MD of Buyer and recuse himself from that case/ matter.
5. The Buyer will provide to Monitors sufficient information about all meetings related to any complaint of violation of Integrity Pact and arrange for necessary facilities for smooth conduct of the meetings of the Monitors.
6. As soon as the Monitor notices or believes to notice, a violation of this agreement, he/she will so inform the C&MD of the Buyer and request Management to discontinue or take corrective action, or take other relevant action. The Monitor can in this regard submit non-binding recommendations. Beyond this, the Monitor has no right to demand from the parties that they act in a specific manner, refrain from action or tolerate action.
7. The Monitor will submit **the** written report to the C&MD of Buyer within **30 days** from date of reference or information to **them** by the Buyer.
8. If the Monitors have reported to the C&MD of Buyer a substantiated suspicion of an offence under relevant IPC/ PC Act, and the Buyer has not within a reasonable period of time taken action to proceed against such offence or report it to its CVO, the Monitor may also transmit this information directly to the Central Vigilance Commission.
9. The word ‘Monitor’ would include both singular and plural.

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## Section 8 – Pact Duration

The Integrity Pact shall come into force and be valid from the date it is signed by the BIDDER/ SELLER/ CONTRACTOR and shall remain valid up to 12 months after the last payment to the contractor. In case any BIDDER / SELLER /CONTRACTOR is unsuccessful, the Integrity Pact for such Bidder/Seller/Contractor shall expire after 6 months following the date of placement of Contract/ PO on the successful Bidder/Seller/Contractor.

If any claim of violation of the Integrity Pact is made/ lodged during the validity period, the same shall be binding and continue to be valid, even after the period stipulated above, unless discharged/ determined by Buyer.

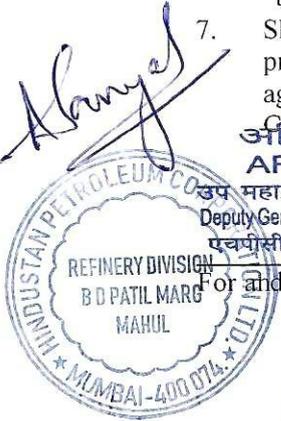
## Section 9 – Other provisions

1. The Integrity Pact is subject to Indian Law. The place of performance and jurisdiction of courts shall be in India. The Arbitration Clause in the main tender document/ contract shall not be applicable to any issue/ dispute arising out of or in relation to the Integrity Pact.
2. The actions stipulated in the Integrity Pact are without prejudice to any other legal action that may be taken in accordance with the provisions of the extant law in force relating to contracts or any civil or criminal proceedings.
- ® 3. If the BIDDER/SELLER/CONTRACTOR is a **Joint Venture**/partnership/consortium, the Integrity Pact must be signed by **authorised personnel of each of** the partners or consortium members.
4. The signatories are duly authorized to sign and bind the Buyer/ Bidder/ Contractor/ Seller. Any amendment to the Integrity Pact will be made only by a written agreement between the Parties.
5. Issues like Warranty/ Guarantee etc. shall be outside the purview of the Independent External Monitors.
6. References to singular includes the plural and vice versa. References to “them” or “themselves” shall include a reference to “it” or “itself” and vice versa.
7. Should one or several provisions of this agreement turn out to be invalid, the remainder provisions of this agreement remains valid. In this case, the parties will strive to come to an agreement as to their original intentions. This Pact shall have precedence over the Tender/ Contract document with regard to any of the provisions covered under this Pact.

अरिजित सन्याल  
ARIJIT SANYAL

उप महाप्रबंधक-परियोजना विभाग  
Deputy General Manager - Project Department  
एचपीसीएल-मु.रि. / HPCL - MR

For and on behalf of the Buyer



For and on behalf of the Bidder/  
Seller/Contractor

Date:

Name:

Designation:

Seal/ Stamp

e

No.F.7/10/2021-PPD (1)  
Government of India  
Ministry of Finance  
Department of Expenditure  
Procurement Policy Division

264-C, North Block, New Delhi.  
23.02.2023.

**Order (Public Procurement No. 4)**

**Subject: Restrictions under Rule 144(xi) of the General Financial Rules (GFRs), 2017.**

Attention is invited to Order (Public Procurement No. 1) issued vide F.6/18/2019-PPD dated 23.07.2020, Order (Public Procurement No. 2) issued vide F.6/18/2019-PPD dated 23.07.2020, Order (Public Procurement No. 3) issued vide F.6/18/2019-PPD dated 24.07.2020, Office Memorandum (OM) No. F.18/37/2020-PPD dated 08.02.2021, OM No. F.12/1/2021-PPD(Pt.) dated 02.03.2021 and OM No. F.7/10/2021-PPD dated 08.06.2021. In this regard, the following is hereby ordered under Rule 144(xi) (as amended vide OM No. F.7/10/2021-PPD dated 23.02.2023) on the grounds stated therein, in supersession to all of the above mentioned Orders/ clarifications:

**Requirement of registration:**

2. Any bidder from a country which shares a land border with India will be eligible to bid in any procurement whether of goods, services (including consultancy services and non-consultancy services) or works (including turnkey projects) only if the bidder is registered with the Competent Authority, specified in **Annexure I**.
3. Any bidder (including an Indian bidder) who has a Specified Transfer of Technology (ToT) arrangement with an entity from a country which shares a land border with India will be eligible to bid in any procurement whether of goods, services (including consultancy services and non-consultancy services) or works (including turnkey projects) only if the bidder is registered with the Competent Authority, specified in **Annexure I**.
4. The requirement of registration for cases covered by paragraph 2 above has been applicable since 23.07.2020. The requirement of registration for bidders covered by paragraph 3 above will be applicable for all procurements where tenders are issued/ published after 01.04.2023.
5. In tenders issued after 23.07.2020 or 01.04.2023, as the case may be, the provisions of requirement of registration of bidders and of other relevant provisions of this Order shall be incorporated in the tender conditions.

**Applicability:**

6. Apart from Ministries/ Departments, attached and subordinate bodies, notwithstanding anything contained in Rule 1 of the GFRs 2017, the Order shall also be applicable

- a) to all Autonomous Bodies;
- b) to all public sector banks and public sector financial institutions;
- c) to all Central Public Sector Enterprises;
- d) to all procurement in Public Private Partnership projects receiving financial support from the Government or public sector enterprises/ undertakings; and
- e) Union Territories, National Capital Territory of Delhi and all agencies/ undertakings thereof.

7. This order will not be applicable for cases falling under **Annexure II**.

**Definitions:**

8. “*Bidder*” for the purpose of the Order (including the term ‘tenderer’, ‘consultant’ ‘vendor’ or ‘service provider’ in certain contexts) means any person or firm or company, including any member of a consortium or joint venture (that is an association of several persons, or firms or companies), every artificial juridical person not falling in any of the descriptions of bidders stated hereinbefore, including any agency, branch or office controlled by such person, participating in a procurement process.

9. “*Tender*” for the purpose of the Order will include other forms of procurement, except where the context requires otherwise.

10. “*Transfer of Technology*” means dissemination and transfer of all forms of commercially usable knowledge such as transfer of know-how, skills, technical expertise, designs, processes and procedures, trade secrets, which enables the acquirer of such technology to perform activities using the transferred technology independently. (Matters of interpretation of this term shall be referred to the Registration Committee constituted by the Department for Promotion of Industry and Internal Trade, and the interpretation of the Committee shall be final.)

11. “*Specified Transfer of Technology*” means a transfer of technology in the sectors and/ or technologies, specified in paragraph 15, occurring on or after 23.07.2020.

12. “*Bidder (or entity) from a country which shares a land border with India*” for the purpose of the Order means

- (a) An entity incorporated, established or registered in such a country; or
- (b) A subsidiary of an entity incorporated, established or registered in such a country; or
- (c) An entity substantially controlled through entities incorporated, established or registered in such a country; or
- (d) An entity whose beneficial owner is situated in such a country; or
- (e) An Indian (or other) agent of such an entity; or
- (f) A natural person who is a citizen of such a country; or

(g) A consortium or joint venture where any member of the consortium or joint venture falls under any of the above

13. *Beneficial owner* for the purposes of Para 12 (d) will be as under:

(i) In case of a company or Limited Liability Partnership, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person(s), has a controlling ownership interest or who exercises control through other means.

*Explanation:-*

a. "Controlling ownership interest" means ownership of, or entitlement to, more than twenty-five per cent of shares or capital or profits of the company;

b. "Control" shall include the right to appoint the majority of the directors or to control the management or policy decisions, including by virtue of their shareholding or management rights or shareholders agreements or voting agreements;

(ii) In case of a partnership firm, the beneficial owner is the natural person(s) who, whether acting alone or together, or through one or more juridical person, has ownership of entitlement to more than fifteen percent of capital or profits of the partnership;

(iii) In case of an unincorporated association or body of individuals, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person, has ownership of or entitlement to more than fifteen percent of the property or capital or profits of such association or body of individuals;

(iv) Where no natural person is identified under (i) or (ii) or (iii) above, the beneficial owner is the relevant natural person who holds the position of senior managing official;

(v) In case of a trust, the identification of beneficial owner(s) shall include identification of the author of the trust, the trustee, the beneficiaries with fifteen percent or more interest in the trust and any other natural person exercising ultimate effective control over the trust through a chain of control or ownership.

14. "*Agent*" for the purpose of the Order is a person employed to do any act for another, or to represent another in dealings with third persons.

[Note:

i. A person who procures and supplies finished goods from an entity from a country which shares a land border with India will, regardless of the nature of his legal or commercial relationship with the producer of the goods, be deemed to be an Agent for the purpose of this Order.

ii. However, a bidder who only procures raw material, components etc. from an entity from a country which shares a land border with India and then manufactures or converts them into other goods will not be treated as an Agent.]

**Sensitive Sectors/ Technologies** (relevant only for the provisions on ToT arrangements):

15. (i) Certain sectors and technologies have been identified as sensitive from the national security point of view. The sectors listed in Schedule I to this Order are considered Category-I sensitive sectors. The sectors listed in Schedule II to this Order are considered Category-II sensitive sectors. The technologies listed in Schedule III are considered sensitive technologies.

(ii) For Category-I sensitive sectors, bidders with ToT arrangement in any technology with an entity from a country which shares a land border with India shall require registration.

(iii) For Category-II sensitive sectors, bidders with ToT arrangement in the sensitive technologies listed in Schedule III, with an entity from a country which shares a land border with India shall require registration.

(iv) In Category-II sensitive sectors, the Secretary (or an officer not below the rank of Joint Secretary to Government of India, so authorized by the Secretary) of the Ministry/ Department of the Government of India is empowered, after due consideration, to waive the requirement of registration for a particular item/ application or a class of items/ applications from the requirement of registration, even if included in Schedule III. The Ministry/ Department concerned shall intimate the Department for Promotion of Industry and Internal Trade (DPIIT) and National Security Council Secretariat (NSCS) of their decision to waive the requirement of registration. Ministries/ Departments of the Government of India are not required to consult the DPIIT/ NSCS before deciding and are only required to intimate the decision to DPIIT/ NSCS. If any point is raised by DPIIT/ NSCS, it should be considered in future procurements; ongoing procurement for which the waiver was granted need not be interrupted or altered.

16. Based on security considerations, a Ministry/ Department in a Category II sensitive sector or other Ministries/ Departments may recommend to DPIIT inclusion of any other technology in the list of sensitive technologies, either generally or for their Ministry/ Department.

#### **Sub-contracting in works contracts**

17. In works contracts, including turnkey contracts, contractors shall not be allowed to sub-contract works to any contractor from a country which shares a land border with India unless such contractor is registered with the Competent Authority. The definition of "contractor from a country which shares a land border with India" shall be as in paragraph 12 above. This shall not apply to sub-contracts already awarded on or before 23.07.2020.

[Note: Procurement of raw material, components, etc. does not constitute sub-contracting.]

## **Certificate regarding compliance**

18. An undertaking shall be taken from bidders in the tender documents (**Annexure III**) that the extant guidelines for participation in the tenders (which should include conditions for implementation of this Order) have been complied with. If such certificate given by a bidder whose bid is accepted is found to be false, this would be a ground for debarment and further legal action in accordance with law.

## **Validity of registration**

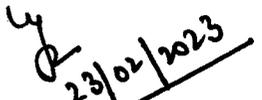
19. In respect of tenders, registration should be valid at the time of submission of bids and at the time of acceptance of bids. In respect of supply otherwise than by tender, registration should be valid at the time of placement of order. If the bidder was validly registered at the time of acceptance / placement of order, registration shall not be a relevant consideration during contract execution.

## **Government e-Marketplace (GeM)**

20. GeM shall remove non-compliant entities from GeM unless/ until they are registered in accordance with this Order.

## **Model Clauses/ Certificates**

21. Model Clauses and Model Certificates which may be inserted in tenders/ obtained from Bidders are given at Annexure-III. While adhering to the substance of the Order, procuring entities are free to appropriately modify the wording of these clauses based on their past experience, local needs etc.

  
23/02/2023  
(Kanwalpreet)  
Director(PPD)

Tel.No. 2309 3811; email: kanwal.irss@gov.in

To

1. Secretaries of all Ministries/ Departments of Government of India for information and necessary action. They are also requested to inform these provisions to all procuring entities.
2. Secretary, Department of Public Enterprises with a request to immediately reiterate these orders in respect to public enterprises.
3. Secretary, Department of Financial Services with a request to immediately reiterate these orders in respect to public sector and public sector financial institutions.
4. Secretary DPIIT with a request to take action as provided under Annexure I.
5. Chief Secretaries/ Administrators of Union Territories/ National Capital Territory of Delhi.
6. CEO/ GeM with a request to ensure implementation of this order on GeM.

**List of Category-I Sensitive sectors:**

<b>Sr.No.</b>	<b>Sector</b>
(i)	Atomic Energy
(ii)	Broadcasting/ Print and Digital Media
(iii)	Defence
(iv)	Space
(v)	Telecommunications

**List of Category-II Sensitive sectors:**

<b>Sr.No.</b>	<b>Sector</b>
(i)	Power and Energy (including exploration/ generation/ transmission/ distribution/ pipeline)
(ii)	Banking and Finance including Insurance
(iii)	Civil Aviation
(iv)	Construction of ports and dams & river valley projects
(v)	Electronics and Microelectronics
(vi)	Meteorology and Ocean Observation
(vii)	Mining and extraction (including deep sea projects)
(viii)	Railways
(ix)	Pharmaceuticals & Medical Devices
(x)	Agriculture
(xi)	Health
(xii)	Urban Transportation

**List of Sensitive Technologies:**

<b>Sr.No.</b>	<b>Sensitive Technologies</b>
(i)	Additive Manufacturing (e.g. 3D Printing)
(ii)	Any equipment having electronic programmable components or autonomous systems (e.g. SCADA systems)
(iii)	Any technology used for uploading and streaming of data including broadcasting, satellite communication etc.
(iv)	Chemical Technologies
(v)	Biotechnologies including Genetic Engineering and Biological Technologies
(vi)	Information and Communication Technologies
(vii)	Software

**Competent Authority and Procedure for Registration**

- A. The Competent Authority for the purpose of registration under this order shall be/ continue to be the Registration Committee constituted by the Department for Promotion of Industry and Internal Trade (DPIIT)\*. [This Committee was already constituted under Order (Public Procurement) No.1].
- B. The Registration Committee shall have the following members\*:
- i. An officer, not below the rank of Joint Secretary, designated for this purpose by DPIIT, who shall be the Chairman;
  - ii. Officers (ordinarily not below the rank of Joint Secretary) representing the Ministry of Home Affairs, Ministry of External Affairs, and of those Departments whose sectors are covered by applications under consideration;
  - iii. Any other officer whose presence is deemed necessary by the Chairman of the Committee.
  - iv. With effect from 01.04.2023, an officer (ordinarily not below the rank of Joint Secretary) representing the National Security Council Secretariat.
- C. DPIIT shall lay down the method of application, format etc. for such bidders as covered by the Order.
- D. On receipt of an application seeking registration from a bidder covered by Para 2 and 3 of this order, the Competent Authority shall first seek political and security clearances from the Ministry of External Affairs and Ministry of Home Affairs, as per guidelines issued from time to time. Registration shall not be given unless political and security clearance have both been received.
- E. The Ministry of External Affairs and Ministry of Home Affairs may issue guidelines for internal use regarding the procedure for scrutiny of such applications by them.
- F. The decision of the Competent Authority, to register such bidder may be for all kinds of tenders or for a specified type(s) of goods or services, and may be for a specified or unspecified duration of time, as deemed fit. The decision of the Competent Authority shall be final.
- G. Registration granted by the Competent Authority of the Government of India shall be valid not only for procurement by the Central Government and its bodies specified in para 6 of this order, but also for procurement by State Governments and their agencies/ public enterprises etc. No fresh registration at the State level shall be required.
- H. The Competent Authority is empowered to cancel the registration already granted if it determines that there is sufficient cause. Such cancellation by itself, however, will

not affect the execution of contracts already awarded. Pending cancellation, it may also suspend the registration of a bidder, and the bidder shall not be eligible to bid in any further tenders during the period of suspension.

- I. For national security reasons, the Competent Authority shall not be required to give reasons for rejection/cancellation of registration of a bidder.

[\*Note:

(i) In respect of application of the Order to procurement by/ under State Governments, all functions assigned to DPIIT shall be carried out by the State Government concerned through a specific department or authority designated by it. The composition of the Registration Committee shall be as decided by the State Government. However, the requirement of political and security clearance as per para D shall remain and no registration shall be granted without such clearance.

(ii) Registration granted by State Governments shall be valid only for procurement by the State Government and its agencies/ public enterprises etc. and shall not be valid for procurement in other states or by the Government of India and their agencies/ public enterprises etc.]

**Special Cases**

- A. In projects which receive international funding with the approval of the Department of Economic Affairs (DEA), Ministry of Finance, the procurement guidelines applicable to the project shall normally be followed, notwithstanding anything contained in this order and without reference to the Competent Authority. Exceptions to this shall be decided in consultation with DEA.
- B. This order shall not apply to procurement by Indian missions and by offices of government agencies/ undertakings located outside India.
- C. This order will not apply to bidders (or entities) from those countries (even if sharing a land border with India) to which the Government of India has extended lines of credit or in which the Government of India is engaged in development projects. Updated lists of countries to which lines of credit have been extended or in which development projects are undertaken are given on the website of the Ministry of External Affairs.
- D. Procurement of spare parts and other essential service support like Annual Maintenance Contract (AMC)/ Comprehensive Maintenance Contract (CMC), including consumables for closed systems, from Original Equipment Manufacturers (OEMs) or their authorized agents, shall be exempted from the requirement of registration.

**Model Clause/ Certificate/ Undertaking to be inserted in tenders etc.**

[While adhering to the substance of the Order, procuring entities and GeM are free to appropriately modify the wording of the clause/ certificate based on their past experience, local needs etc.

The conditions relating to specified ToT (as shown in italics) should be incorporated only in the tenders which attract the restrictions due to specified ToT.]

**A. Model Clauses for Tenders (including tenders issued manually or any electronic portal including GeM):**

I. Any bidder from a country which shares a land border with India will be eligible to bid in any procurement whether of goods, services (including consultancy services and non-consultancy services) or works (including turnkey projects) only if the bidder is registered with the Competent Authority. *Further, any bidder (including bidder from India) having specified Transfer of Technology (ToT) arrangement with an entity from a country which shares a land border with India, shall also require to be registered with the same competent authority.*

II. "Bidder" (including the term 'tenderer', 'consultant' or 'service provider' in certain contexts) means any person or firm or company, including any member of a consortium or joint venture (that is an association of several persons, or firms or companies), every artificial juridical person not falling in any of the descriptions of bidders stated hereinbefore, including any agency branch or office controlled by such person, participating in a procurement process.

III. "Bidder (or entity) from a country which shares a land border with India" for the purpose of this Order means: -

- (a) An entity incorporated, established or registered in such a country; or
- (b) A subsidiary of an entity incorporated, established or registered in such a country; or
- (c) An entity substantially controlled through entities incorporated, established or registered in such a country; or
- (d) An entity whose beneficial owner is situated in such a country; or
- (e) An Indian (or other) agent of such an entity; or
- (f) A natural person who is a citizen of such a country; or
- (g) A consortium or joint venture where any member of the consortium or joint venture falls under any of the above

IV. The beneficial owner for the purpose of (iii) above will be as under:

1. In case of a company or Limited Liability Partnership, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person, has a controlling ownership interest or who exercises control through other means.

Explanation—

a. "Controlling ownership interest" means ownership of or entitlement to more than twenty-five per cent. of shares or capital or profits of the company;

b. "Control" shall include the right to appoint majority of the directors or to control the management or policy decisions including by virtue of their shareholding or management rights or shareholders agreements or voting agreements;

2. In case of a partnership firm, the beneficial owner is the natural person(s) who, whether acting alone or together, or through one or more juridical person, has ownership of entitlement to more than fifteen percent of capital or profits of the partnership;

3. In case of an unincorporated association or body of individuals, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person, has ownership of or entitlement to more than fifteen percent of the property or capital or profits of such association or body of individuals;

4. Where no natural person is identified under (1) or (2) or (3) above, the beneficial owner is the relevant natural person who holds the position of senior managing official;

5. In case of a trust, the identification of beneficial owner(s) shall include identification of the author of the trust, the trustee, the beneficiaries with fifteen percent or more interest in the trust and any other natural person exercising ultimate effective control over the trust through a chain of control or ownership.

V. An Agent is a person employed to do any act for another, or to represent another in dealings with third person.

VI. [To be inserted in tenders for Works contracts, including Turnkey contracts] The successful bidder shall not be allowed to sub-contract works to any contractor from a country which shares a land border with India unless such contractor is registered with the Competent Authority.

VII. The registration shall be valid at the time of submission of bid and at the time of acceptance of bid.

VIII. If the bidder was validly registered at the time of acceptance / placement of order, registration shall not be a relevant consideration during contract execution

#### **Model Certificate for Tenders:**

"I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India; I certify that this bidder is not from such a country or, if from such a country, has been registered with the Competent Authority. I hereby certify that this bidder fulfills all requirements in this regard and is eligible to be considered. [Where applicable, evidence of valid registration by the Competent Authority shall be attached.]"

#### **Model Certificate for Tenders for Works involving possibility of sub-contracting:**

"I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India and on sub-contracting to contractors from such countries; I certify that this bidder is not from such a country or, if from such a country, has been registered with the Competent Authority and will not sub-contract any

work to a contractor from such countries unless such contractor is registered with the Competent Authority. I hereby certify that this bidder fulfills all requirements in this regard and is eligible to be considered. [Where applicable, evidence of valid registration by the Competent Authority shall be attached.]"

**Model additional certificate by Bidders in the cases of specified ToT:**

*"I have read the clause regarding restrictions on procurement from a bidder having Transfer of Technology (ToT) arrangement. I certify that this bidder does not have any ToT arrangement requiring registration with the competent authority."*

OR

*"I have read the clause regarding restrictions on procurement from a bidder having Transfer of Technology (ToT) arrangement. I certify that this bidder has valid registration to participate in this procurement."*

**B. Model Certificate for GeM (to be taken by the GeM from seller during registration on GeM. GeM should also obtain this certificate from all existing bidders as soon as possible):**

"I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India; I certify that this vendor/ bidder is not from such a country and does not have any specified Transfer of Technology (ToT) from such a country or, if from such a country or if having specified ToT from such a country has been registered with the Competent Authority. I hereby certify that this vendor/ bidder fulfills all requirements in this regard and is eligible to be considered for procurement on GeM. [Where applicable, evidence of valid registration by the Competent Authority shall be attached.]"

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## **SPECIAL CONDITIONS OF CONTRACT**



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### ANNEXURES

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ANNEXURE – 2	TAXES & DUTIES
ANNEXURE – 3	COMPLIANCE TO PROVISIONS OF TAX DEDUCTION AT SOURCE (TDS)



## 1.0 DEFINITIONS / NOTES

- 1.1 The terms 'Client', 'Owner', 'Purchaser', 'Corporation' stated anywhere in the Bid Document refer to Hindustan Petroleum Corporation Limited (HPCL).
- 1.2 The term 'Consultant' shall mean Engineers India Limited.
- 1.3 The term 'Contract', 'Order' stated anywhere in the Bid Document carry the same meaning.
- 1.4 Any reference to the Govt. Acts / Regulations etc. in the Bid Document is only indicative, and it is entirely for the Bidder to ascertain the applicable Acts/Regulations.
- 1.5 Definition under clause 2(g) of GTC stands modified and replaced with the following  
Total Basic Order Value" / "Total Order Value" (TOV) means the cost of Supply of material including mandatory spares, Freight, Site work (as applicable), all applicable taxes & duties except GST. Services on per diem basis like Supervision, Training, 2 year spares, AMC etc. shall not be included in the TOV. For AMC, a separate contract would be placed and PRS for AMC shall be applicable as per terms of AMC.
- 1.6 Nearest Sea Port of entry will be "Mumbai Sea port"
- 1.7 Nearest Air Port of entry will be "Mumbai Air port"
- 1.8 The term "Bank Guarantee (BG)" means a Guarantee for the intended purpose defined in the Guarantee against the relevant provision of the Contract, issued by a bank out of list of acceptance banks (attached as **Annexure - 1 to SCC**), in the relevant format attached as Annexure to SCC / Contract.

In case bidder is submitting e-BG against Performance security, bidder to select applicable format for Bank guarantee as per formats provided in tender. Furthermore, if an e-BG is issued in favour of the Corporation, Bidder shall follow the instructions, as specified in **Annexure – 1A to SCC**.

Format of Bank Guarantees (Advance / PBG/CPBG), and Insurance Surety Bonds are attached as **Annexure to GTC**.

## 2.0 PROJECT LOCATION DETAILS

- 2.1 Refinery delivery location address:  
Hindustan Petroleum Corporation Limited  
Mumbai Refinery  
PO Box No. 18820  
BD Patil Marg,  
Old Corridor road, Mahul,  
Mumbai – 400074  
**GSTIN:**  
**Contact Person and Consignee:** Vipul Raj  
**Designation:** GM - Projects  
**Phone:** +91 0 22 25076102

## 3.0 ORDER OF PRECEDENCE

Clause 1.7 of GTC for supply stands modified and replaced with the following:



**In case of contradiction within the provisions specified in the various document, the Order of Precedence of documents shall be as follows with document at level a) having the highest precedence**

- a. Purchase Order
- b. Letter of Award / Fax of Acceptance
- b) RFQ Cover Letter / NIT / BDS
- c) Job Specifications (specific to particular job only)
- d) Drawings
- e) Special Conditions of Contract
- f) Technical Specifications
- g) Instructions to Bidders
- h) General Terms & Conditions – Goods (GTC for supply)
- i) Other Documents

Any amendment / change order issued after signing of formal contract shall take precedence over respective clauses of the formal contract and its annexures

#### **4.0 INSPECTION OF SUPPLY ITEMS/ MATERIALS**

Clause 7 of GTC for supply stands modified to the following extant:

- 4.1 All inspection and tests on final goods to be supplied as well as bought out items/ materials shall be conducted as per the Purchase requisition including Inspection & Test Plan attached in Purchase Requisition. The ITP/QAP shall give complete listing of stages of inspection, final inspection, tests and material certification requirements for the item, meeting all requirements specified in the Purchase Requisition and Approved Drawings & Data sheets and shall clearly indicate Hold (H), Witness (W) Inspection, Random Witness (RW), Review (R) stages of inspection to be carried by the supplier and EIL/ TPIA.

All quality assurance/inspection processes shall strictly be followed as per the approved QAP/ ITP.

- 4.2 Inspection (stage wise and/ or Final inspection, as per ITP) of all indigenous items (**except the following listed items**) to be procured as per Purchase Orders shall be carried out by EIL-Inspection as per the ITPs including review of quality documents, issue of Inspection report & Inspection Release Note.

- Cement
- Reinforcement Bars
- Structural Steel materials and IS:2062 Plates, if sourced from the Manufacturers
- Hand Railing materials
- Wrapping & Coating materials





- 6.2 Initially Price Reduction shall be applied considering Total Order Value and final Price Reduction settlement to be on undelivered quantities in the contractual delivery period subject to a maximum of 5% (Five percent) of the total executed order value.
- 6.3 Undelivered quantities shall be ascertained at the time of each consignment made after scheduled completion time and period of delay should be calculated for each individual consignment supplied after the scheduled date of delivery. In other words, PRS is to be applied on diminishing balance of undelivered quantities for the period of actual date of supply less last date of scheduled delivery for each consignment supplied.
- 6.4 In case certain imported components are involved and CIF details are furnished, the Total Order Value for recovery of PRS shall include Foreign Exchange variations. Similarly in respect of contracts involving imported components to be supplied, exchange rate variations up to the scheduled/ extended delivery period are reimbursable. In such cases the Total Order Value for PRS purposes will have to include the exchange rate variations up to the period agreed to be reimbursed by the company in terms of the contract.
- 6.5 The Total Order Value for levy of PRS shall include types of escalations agreed to in terms of the contract awarded.

#### 7.0 TAXES, DUTIES

Following point shall be an addendum to GTC for supply Clause 23, 24 & 25:

- 7.1 Provisions for Taxes & Duties shall be as per [Annexure - 2 to SCC](#).

#### 8.0 TERMS OF PAYMENT

- 8.1 In partial modification to clause 26 of GTC for supply, bills shall be raised as per the payment milestones specified in Bid Data Sheet (BDS).

- 8.2 HPCL's payment office address:

Hindustan Petroleum Corporation Limited,  
Shared Services, Priyadarshini Building,  
Second Floor, Eastern Express Highway,  
Sion, Mumbai - 400002, Maharashtra

- 8.3 TAX COLLECTED AT SOURCE:

Supplier shall not quote TCS rate/amount anywhere in their bid; even if quoted the same shall not be consider for evaluation as well as for payment purpose. Bidder shall be required to withdraw the same else the bid will be rejected. TCS claim to be made on Face of Invoices/Debit note and routed through BTS.

Tax Collection at Source u/s 206C(1H) of Income Tax Act 1961:

A Seller of Goods ("Vendor") within the requirement of Sec.206C (1H) of Income Tax Act, 1961, shall claim applicable Tax Collected at Source ("TCS") in the Invoice to be issued to HPCL or can claim the same through mutually agreed separate document. The payment of such TCS shall be made by HPCL once TCS amount deposited by vendor with the Tax authorities is reflected in Tax Credit Portal [Form 26AS] of HPCL.

HPCL's PAN Number for the purpose of TCS is AAACH1118B which is required to be uploaded by the Vendor for every TCS deposit.



The Vendor is obliged to claim TCS as per the extant statutory provision. HPCL shall be liable to reimburse appropriate TCS only. HPCL shall not be made liable for reimbursement of any higher TCS mistakenly deposited by the Vendor or in case any wrong deposit of TCS is made by the Vendor to the Tax authorities on account of HPCL. The Vendor shall be solely responsible for compliance of TCS provisions, viz., its collection at appropriate percentage, its remittance to Tax Authorities, filing of applicable/appropriate returns in stipulated time and issuance of TCS Certificate to HPCL matching with TCS collected by it from HPCL.

Any liability, claim, proceedings regarding and arising out of TCS compliance shall be the sole responsibility of Vendor. In case any such claim, liability, proceedings are initiated against HPCL, which are solely attributable to the non-compliance of Vendor with the TCS provision, the Vendor undertakes to indemnify HPCL against all such claims, liabilities and proceedings. Further, HPCL shall be entitled to deduct any such additional payment liability from the running bill of the Vendor or its total outstanding."

#### 8.4 TAX DEDUCTION AT SOURCE:

Provisions for Tax Deduction at Source are attached as **Annexure - 3 to SCC**. Bidder to submit the required details / compliance along with invoice.

#### 8.5 Digital Invoicing

Supplier to note that

"As per Rule 48(4) of CGST Rules, notified class of registered persons have to prepare invoice by uploading specified particulars of invoice (in FORM GST INV-01) on Invoice Registration Portal (IRP) and obtain an Invoice Reference Number (IRN).

Effective 01st April 2021, E – Invoicing is extended to Vendors having turnover for more than Rs. 50 Crores.

For ease of payment, Vendors are encouraged to issue E Invoice though their turnover may be less than Rs. 50 Crores.

#### IRP-generated QR Code on B2B & Export Invoices, Credit & Debit Notes:

As per Rule 48(4) of CGST Rules (inserted vide **Notification No. 68/2019 – Central Tax Dated 13-12-2019** and read with other notifications), notified registered persons, **in case of B2B & Export supplies**, have to prepare invoice by uploading specified particulars in FORM GST INV-01 on Invoice Registration Portal (IRP) and upon obtaining Invoice Reference Number (IRN). The Portal will also return a QR Code which contains key particulars of the invoice including IRN.

While the 64-character IRN need not be printed on the invoice, the **QR code generated by IRP** shall be printed on the invoice issued to the buyer. (It was also clarified that printing of QR code on separate paper is not allowed. While the printed QR code shall be clear enough to be readable by a QR Code reader, the size and its placing on invoice is upto the preference of the businesses.)

Notification No. 68/2019 – Central Tax Dated 13-12-2019, 13/2020-Central Tax dated 21st March, 2020 & 61/2020 Dt. 30-7-2020, Notification No. 05/2021 – Central Tax New Delhi, the 8th March, 2021
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1	Type of transaction Covered	Supplies made by a class of registered persons to other registered persons and exports
2	Applicable to whom?	Registered persons (GST taxpayers) having an aggregate turnover above Rs. 50 crore in a financial year.
3	Notification highlights	<p>Notified registered persons, in case of B2B &amp; Export supplies, have to prepare invoice by uploading specified particulars in FORM GST INV-01 on Invoice Registration Portal (IRP) and upon obtaining Invoice Reference Number (IRN).</p> <p>On upload of e-invoice particulars on the Invoice Registration Portal (IRP), the portal would return a QR Code also which will contain key details of the invoice like the IRN, sellers' and buyers' GSTIN, taxable value and tax amount, IRN, digital signature and dominant HSN of the invoice etc.</p>
4	QR code to be generated by	Generated by the IRP and returned against the e-invoice details reported to IRP.
5	Purpose	To embed key particulars of reported invoice and to verify whether an invoice has actually been reported to IRP or not and whether digital signature is intact or tampered with.

## 9.0 DISPUTE RESOLUTION

The following is the addendum to **Clause 41 of GTC for supply**:

### 9.1 Public Sector v/s. Government Department or vice versa:

In the event of any dispute or difference relating to the interpretation and application of the provisions of the commercial contract(s) between Central Public Sector Enterprises (CPSEs)/ Port Trusts inter se and also between CPSEs and Government Departments/Organizations (excluding disputes relating to Railways, Income Tax, Customs & Excise Departments), such dispute or difference shall be taken up by either party for its resolution through Administrative Mechanism for Resolution of CPSE Disputes (AMRCD) as mentioned in DPE OM No. 05/0003/2019-FTS-10937 dated 14th December, 2022 and the decision of AMRCD on the said dispute will be binding on both the parties.

## 10.0 JURISDICTION

### 10.1 In partial modification to clause 42 of GTC for supply, the courts at Mumbai (India) shall have exclusive jurisdiction over all Disputes arising under or in connection with the PO/Contract.



## **11.0 SUB-CONTRACTING**

- 11.1 Sub-contracting for part of the work, if any, shall be prior approval of Owner. If a Supplier submits his bid, qualifies and does not get the contract because of his being not the lowest, he will be prohibited from working as a sub-supplier for the supplier who is executing the contract except for the bought-out components for which he is a qualified/approved manufacturer/supplier.

## **12.0 GOVERNMENT OF INDIA LIABILITY CLAUSE**

- 12.1 It is expressly understood and agreed by and between Supplier and Purchaser that they are entering into this agreement solely on their own behalf and not on behalf of any other person or entity. In particular, it is expressly understood and agreed that the Government of India is not a party to this agreement and has no liabilities, obligations or right hereunder. It is expressly understood and agreed that the Purchaser is an independent legal entity with power and authority to enter into contracts solely on its on behalf under the applicable laws of India and general principles of contracts law. The Supplier expressly agrees, acknowledges and understands that the Purchaser is not an agent, representative or delegate of the Government of India. It is further understood and agreed that the Government of India is not and shall not be liable for any acts, omission, and commissions, breaches or other wrongs arising out of the contract. Accordingly, Supplier actions or claims including cross claims, implored claims, or counter claims against the Government of India arising out of the Contract and covenants not to sue the Government of India as to any manner, claim, and cause of action or thing whatsoever arising out of or under this agreement.

## **13.0 TERMS & CONDITIONS FOR SITE WORKS**

- 13.1 Terms and Conditions for Site work (in case, site work is applicable as per Material Requisition) attached in the Bidding Document shall apply.

## **14.0 TERMS & CONDITIONS FOR SUPERVISION / TRAINING AT SITE (ON PER DIEM BASIS)**

- 14.1 Terms and Conditions for Supervision / Training at site (wherever applicable, as per Material Requisition) attached in the Bidding Document shall apply.

## **15.0 TERMS & CONDITIONS FOR ANNUAL MAINTENANCE CONTRACT (AMC)**

- 15.1 Terms and Conditions for AMC (wherever applicable, as per Material Requisition) attached in the Bidding Document shall apply.

## **16.0 USAGE OF TReDS PLATFORM BY MSE VENDORS**

- 16.1 Provision related to MSE bidders on page 17 & 18 of GTC-Goods, stands deleted and provisions towards MSE bidders shall be as per relevant clause of ITB.
- 16.2 The Government has introduced Trade Receivable e-Discounting System (TReDS) which is a platform approved by the Reserve Bank of India specially for Micro, Small and Medium Enterprises (MSMEs) to ease and facilitate constraints faced by them in obtaining adequate working capital finance, particularly in terms of their ability to convert their trade receivables into liquid funds.
- 16.3 To facilitate the same, HPCL has been registered as Buyer with all three RBI recognized TReDS platform provider as below:



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- a) Invoice Mart (A.TREDS Ltd)  
b) MI Exchange (Mynd Solutions)  
c) RXIL (Receivables Exchange of India Ltd)
- 16.4 All MSE vendors with UDYAM REGISTRATION CERTIFICATE (UDYAM) are MANDATORILY required to get themselves registered with any one or all of the aforesaid TReDS platforms upon receipt of LOI / PO. In case any Vendor is not updated as MSE in HPCL System, same needs to be updated through valid UDYAM to enable TReDS onboarding.
- 16.5 HPCL has also enabled TReDS discounting option in HPCL System for ease of process during payments post PO placement.
- 17.0 GRIEVANCE REDRESSAL MECHANISM**
- 17.1 There is a grievance redressal mechanism in HPCL for vendors participating in the tender, the details of which are available on HPCL's website [www.hindustanpetroleum.com](http://www.hindustanpetroleum.com).
- 17.2 For Grievance Redressal Mechanism, the Name Designation and Address of GRC members coordinator is as follows:
- Head Materials, Mumbai Refinery  
Hindustan Petroleum Corp Ltd  
Hindustan Bhawan,  
8, S V Marg  
Ballard Estate  
Mumbai - 400001

### List of Scheduled Commercial Banks (SCBs)

<b>List of Scheduled Public Sector Banks</b>	
<b>Sr.No.</b>	<b>Name of the Bank</b>
1.	Bank of Baroda
2.	Bank of India
3.	Bank of Maharashtra
4.	Canara Bank
5.	Central Bank of India
6.	Indian Bank
7.	Indian Overseas Bank
8.	Punjab & Sind Bank
9.	Punjab National Bank
10.	State Bank of India
11.	UCO Bank
12.	Union Bank of India

### List of Scheduled Private Sector Banks

<b>Sr.No.</b>	<b>Name of the Bank</b>
1.	Axis Bank Limited
2.	Bandhan Bank Limited
3.	CSB Bank Limited
4.	City Union Bank Limited
5.	DCB Bank Limited
6.	Dhanlaxmi Bank Limited
7.	Federal Bank Limited
8.	HDFC Bank Limited
9.	ICICI Bank Limited
10.	IndusInd Bank Limited
11.	IDFC FIRST Bank Limited
12.	Jammu & Kashmir Bank Limited
13.	Karnataka Bank Limited
14.	Karur Vysya Bank Limited
15.	Kotak Mahindra Bank Limited
16.	Nainital Bank Limited
17.	RBL Bank Limited
18.	South Indian Bank Limited
19.	Tamilnad Mercantile Bank Limited
20.	YES Bank Limited
21.	IDBI Bank Limited

<b>List of Scheduled Foreign banks in India</b>	
<b>Sl.No</b>	<b>Name of bank</b>
1.	AB Bank PLC
2.	American Express Banking Corporation
3.	Australia and New Zealand Banking Group Ltd.
4.	Barclays Bank Plc.
5.	Bank of America
6.	Bank of Bahrain and Kuwait B.S.C.
7.	Bank of Ceylon
8.	Bank of China Limited
9.	Bank of Nova Scotia
10.	BNP Paribas
11.	Citibank N.A.
12.	Coöperatieve Rabobank U.A./ Coöperatieve Centrale Raiffeisen-Boerenleenbank B.A.
13.	Credit Agricole Corporate and Investment Bank
14.	CTBC Bank Co., Ltd.
15.	DBS Bank India Limited (Subsidiary of DBS Bank Ltd.)
16.	Deutsche Bank A.G.
17.	Doha Bank Q.P.S.C
18.	Emirates NBD Bank P.J.S.C
19.	First Abu Dhabi Bank PJSC
20.	FirstRand Bank Limited
21.	Hong Kong and Shanghai Banking Corporation Limited
22.	Industrial and Commercial Bank of China

23.	Industrial Bank of Korea
24.	J.P. Morgan Chase Bank N.A.
25.	JSC VTB Bank
26.	KEB Hana Bank
27.	Kookmin Bank
28.	Mashreqbank P.S.C
29.	Mizuho Bank Ltd.
30.	MUFG Bank, Ltd.
31.	NatWest Markets Plc
32.	NongHyup Bank
33.	PT Bank Maybank Indonesia TBK
34.	Qatar National Bank (Q.P.S.C.)
35.	Sberbank
36.	SBM Bank (India) Limited (Subsidiary of SBM Group)
37.	Shinhan Bank
38.	Societe Generale
39.	Sonali Bank PLC
40.	Standard Chartered Bank
41.	Sumitomo Mitsui Banking Corporation
42.	United Overseas Bank Limited
43.	UBS AG
44.	Woori Bank
<i>*Wholly Owned Subsidiary</i>	

**Instructions for submission of e-BG**

In case bidder is submitting e-BG against Bid security or Performance security, bidder to select applicable format for Bank guarantee as per formats provided in tender. Furthermore, if an e-BG is issued in favour of the Corporation, the following text, must be included within the e-BG document itself:

1. “We..... the bank hereby undertake that no amendment or changes, if any, to this Bank Guarantee shall be carried out except with the prior consent of HPCL in writing.
2. Notwithstanding anything contained herein above:
  - i. Our liability under this guarantee shall not exceed Rs. ....
  - ii. This Bank Guarantee shall be valid upto and including \_\_\_\_ ( date); and
  - iii. We are liable to pay the guarantee amount or any part thereof under this Bank Guarantee only and only if you serve upon us a written claim or demand (including through NeSL portal or any other mode) on or before the expiry of 60 days from the date of expiry of this guarantee.
  - iv. This Guarantee may be invoked in parts and our liability shall remain for the entire value/ balance value of the Guarantee till its expiry.”

SFMS confirmation to be submitted in case of e-BG also. :-

- BG/eBG should be obtained from the Bank Branch (Nationalized Bank, Scheduled Bank, other than Co-operative Bank) which is live on **SFMS**.
- BG/eBG issuing bank should send the BG issuance advice through **SFMS** to HPCL’s designated Banker: **ICICI Bank, Backbay Branch, Mumbai (IFSC: ICIC0000393)**
- While sending the BG/eBG issuance advice through SFMS platform, BG issuing bank should ensure the following:
  - a. **SFMS Message type should be : 760COV (for original BGs), 767COV (for amended BGs)**
- While sending BG/eBG issuance advice, BG/eBG issuing bank should mention applicable Unique Identifier Code (**UIC**) in row/field number 7037 of SFMS Delivery Report.

<b>HPCL Location</b>	<b>Head Office</b>	<b>Unique Identifier Code (UIC)</b>
CPO	Mumbai	<b>HPCL508902133CP</b>

- The concerned Vendor/Transporter/Customer is advised to take a print-out of **SFMS** Delivery Report from the BG/eBG Issuing Bank Branch and attach copy of the same along with the hard copy/eBG of BG while submitting the same to HPCL.

Further, details required for furnishing bid security in the form of e-BG is summarized below. In case of Performance Security (post order placement), L1 bidder shall be advised on the details of e-BG along with the Purchase Order/LOA.

Sr.No.	Description	HPCL Details	Remarks
1	PAN / UIN*	AAACH1118B	PAN of Beneficiary i.e. PAN of HPCL
2	Name	Hindustan Petroleum Corporation Limited	Full Name of Beneficiary i.e. HPCL
3	Date of Incorporation	15-07-1974	For Beneficiary i.e. HPCL
4	Email ID	User E-Mail ID	Email id of HPCL Location / RO Concern Official
5	Contact number	User contact No	Mobile No. of HPCL Location / RO Concern Official
6	Legal Constitution	Company	For Beneficiary i.e. HPCL
7	Registered office address	Hindustan Petroleum corporation Limited, PB No 17, Jamshedji Tata Road, Mumbai	Registered Office Address of Beneficiary i.e. HPCL
8	Registered office address Pin code	400020	Pin Code of Registered Office of HPCL
9	Communication address	HPCL, Hindustan Bhawan	Address of HPCL Concerned RO / Location
10	Communication address Pin code	400001	Pin Code of HPCL Concerned RO / Location
11	Business Unit Code*	09025	HPCL RO / Location / Plant Code for which BG is accepted
12	Contract Reference Number*	SAP PO Number (Tender number shall be mentioned)	SAP PO No. or Contract Reference No.
13	Vendor / Customer Code*	SAP Vendor / Customer code (If available)	HPCL Vendor / Customer Code if available
14	ePortal ID*	Procurement Portal (GEM, CPPP etc)	If available and required

**ANNEXURE – II TO SCC**

**TAXES & DUTIES  
FOR LMBU PROJECT HPCL  
(JOB NO. C068)**

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#### A. Price basis w.r.t inclusion/exclusion of taxes and duties

1. The quoted price(s) shall be inclusive of all the taxes and duties except GST (i.e. IGST or CGST and SGST/UTGST applicable in case of interstate supply or intra state supply respectively) and GST compensation cess, (if applicable) leviable on sale of finished goods/services.
2. Transportation charges (if applicable) upto respective project site shall be exclusive of GST.
3. Site work prices, if applicable shall be inclusive of all taxes and duties except GST. All necessary registrations, if required, for carrying out the site activities shall be done by the bidder and costs towards the same shall be included in quoted site work prices.
4. Prices of per diem supervision charges, training/AMC, HAZOP Study etc. (as applicable) shall be exclusive of GST. However, GST shall not be applicable on training provided at foreign bidder's work/training facilities in any territory other than India.

#### B. TAX CLAUSES

##### 1. Goods and Services Tax

- a. The supplier/contractor will be liable to register with the respective tax authorities and to submit self-attested copy of such registration certificates and the supplier/contractor will be responsible for procurement of goods/services in its own registration (GSTN).
- b. Supplier/Contractor shall be required to issue tax invoice in the form and manner prescribed under GST Act read with Rules thereunder including E-Invoicing provisions so that input tax credit under GST can be availed by Owner. In the event that the supplier/contractor fails to provide the Tax Invoice/E-Invoice in the form and manner prescribed under the GST act read with GST invoicing rules thereunder, Owner shall not be liable to make any payment on account of GST against such invoice.
- c. In case supplier/contractor is not subject to E-Invoicing provisions under the GST Laws as amended from time to time, then a declaration to this effect shall be furnished by the supplier/contractor in format prescribed in Annexure A along with the Invoice.
- d. GST shall be paid to supplier/contractor against receipt of Tax Invoice/E-Invoice and on auto-population of input tax credit on GSTN portal. In case of non-receipt of Tax Invoice/E-Invoice and/or non-auto-population of input tax credit on GSTN portal, Owner shall with hold the payment of GST.

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- e. The supplier/contractor shall always comply with the requirements of applicable laws and provide necessary documents as prescribed under the rules and regulations, as applicable from time to time. In particular, if any tax credit, refund or any other benefit is denied/delayed to Owner or any interest/penalty is charged to Owner due to any non-compliance/ delayed compliance by the supplier/contractor under the GST Law (including but not limited to failure to upload the details of the sale on GSTN portal, failure to pay GST to the government or due to non-furnishing or furnishing of incorrect or incomplete documents, non-filing of GST return by the supplier/contractor), the supplier/contractor shall be liable to reimburse Owner for all such losses and other consequences including but not limited to the tax loss, interest and penalty. Owner shall be entitled to recover such amount from the supplier/contractor by way of adjustment from the next invoice, encashment of BG or by way of any other means either of same project or any other project of the Owner.
- f. *In case of any Advance including Mobilization/Secured/Other Advance is granted to contractor as per the provisions of Contract, then the contractor shall issue a Receipt Voucher / GST Invoice/ **Proforma Invoice** in the form and manner prescribed under GST Act read with Rules thereunder including e-invoicing provisions"*
- g. In case of any Price Variation as per the provisions of Contract, the supplier/contractor shall issue an Invoice in the form and manner prescribed under the GST Act read with Rules thereunder including e-invoicing provisions.
- h. GST payable under reverse charge for specified services/goods under GST Act read with Rules thereunder, if any, shall not be paid to the supplier/contractor but will be directly deposited by Owner to the appropriate Government Tax Authority. If the same has already been reimbursed / paid to the supplier/contractor for any reason whatsoever, then Owner shall be entitled to deduct/set off /recover such amount against any amounts paid/payable by Owner to supplier/contractor.
- i. Where Owner has the obligation to discharge GST liability under reverse charge mechanism and Owner has paid or is liable to pay GST to the government on which interest/penalty becomes payable as per GST law for any reason which is not attributable to Owner or Input Tax Credit w.r.t. such payment is not available to Owner for any reason which is not attributable to Owner, then Owner shall be entitled to deduct/set off /recover such amount against any amounts paid/payable by Owner to contractor/supplier.

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- j. TDS under GST, if applicable shall be deducted from supplier/contractor bills at applicable rates and a certificate as per rules for tax so deducted shall be provided to supplier/contractor.
- k. *The contractor will be under obligation for charging correct rate of tax as prescribed under the respective tax laws. Any errors of interpretation **or error of any type** of applicability of taxes and duties by the contractor shall be to the contractor's account. Further the contractor shall avail and pass on benefits of all exemptions/concessions available under applicable tax laws"*
- l. In case bidder is covered under composition scheme under GST law, then bidder shall quote the price inclusive of GST. Further, such bidder should mention "Covered under GST Composition Scheme" in column for GST of relevant price schedule(s). In case subsequently such bidder gets covered under regular GST regime, the prices including GST under regular GST regime shall not exceed the prices quoted by the bidder under composition scheme.
- m. Owner prefers to deal with registered contractor of goods/services under GST. Therefore, contractor are requested to get themselves registered under GST, If not registered yet. However, in case any unregistered contractor is submitting bid, their prices will be loaded with applicable GST while evaluation of bid as per evaluation methodology of tender document. However, where Owner is entitled for input credit of GST, the same will be considered for evaluation of bid as per evaluation methodology of tender document. In case of change in applicable Rates post GST Registration by unregistered Vendor, Owners decision will be final.
- n. In case of foreign bidders, for supervision/site-work/training, services provided by foreign bidder at project site, GST shall be paid by Owner directly to appropriate Government Tax Authorities, under Reverse Charge Mechanism, if applicable and prices of such services will be loaded with applicable GST while evaluation of bid as per clause E (Evaluation Methodology).
- o. Bidder will be required to quote applicable tax rate (along with applicable HSN/SAC Code) as per provisions of GST Laws for all the line items forming part of the enquiry. Any higher rate of tax actually invoiced in excess of quoted rate of tax (except in compliance with provisions of Statutory Variation clauses) shall be adjusted in basic price.
- p. In case of delay in supply/execution of contract, supplier/contractor shall be liable to raise invoices for reduced value as per Price Reduction Schedule (PRS) provision of the bidding document. In case the supplier/contractor raises invoices for full value, then supplier/contractor shall issue Credit Note,

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in the form and manner prescribed under relevant GST Act read with Rules thereunder, towards applicable PRS amount with applicable GST thereon.

In case supplier/contractor fails to submit invoices with reduced value or does not issue Credit Note as mentioned above, Owner shall release payment to the supplier/contractor after giving effect to the PRS clause with corresponding reduction in taxes from invoice(s) of supplier/contractor.

In case any financial implication arises on Owner due to issuance of invoice without reduction in prices or non-issuance of Credit Note by supplier/contractor, the same shall be to the account of supplier/contractor. Owner shall be entitled to recover the amount of such financial implication paid or becoming payable by Owner together with penalty and interest thereon, if any.

- q. E-way bills shall be issued directly by supplier/contractor in all cases except in cases of direct imports by Owner where E-way bill shall be issued by Owner.
- r. In case of applicability of any recovery as per provisions of the contract, Owner shall raise Invoice on supplier/contractor after charging GST at applicable rates as per prevailing provisions of GST Laws.

## 2. IMPORT DUTIES

- a. Direct supplies by foreign suppliers where, client becomes consignee :
  - i. Consignee shall be Owner, bill of entry shall be filed by Owner, all import duties, Social Welfare Surcharge, IGST and GST Compensation Cess etc. as applicable in India shall be paid by Owner.
- b. Imported supplies by Indian suppliers as built in import content where Suppliers/Contractors will become consignee of the goods or by filling Bill of Entry for Home consumption
  - i. Custom duties, Social Welfare Surcharge, IGST, GST Compensation Cess, etc. as applicable in India on the imported materials shall be included in the quoted prices by the bidder (**considering the input tax credit of IGST, GST Compensation Cess on imported material**) and supplier/contractor shall be responsible for the timely payment of the custom duties to the relevant government authority. All harbor dues/pilotage fees, port fees, wharfage, unloading costs, demurrage charges etc. incurred in India in respect of any imported goods shall be to supplier's/contractor's account.
  - ii. Bidder to indicate, in relevant price schedule, CIF value of built-in import content and applicable merit rate of basic custom duty, Social

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- Welfare Surcharge on custom duty (**considering the input tax credit of IGST, GST Compensation Cess on imported material**) included in quoted price, in the price schedule.
- iii. In case merit rate of custom duty is applicable and bids are invited on the basis of same, however at a later stage concessional rate of custom duty becomes applicable, concessional certificate shall be issued towards import of material against the advance request letter submitted by the domestic bidder and the differential custom duties between concessional rate and quoted merit rate of custom duty by supplier/contractor shall be passed on to the Owner or it shall be recovered by the Owner from the supplier/contractor's invoice.
  - iv. The supplier/contractor shall be responsible for and shall exercise due diligence in properly classifying the goods and materials, undertaking the payment of custom duties, and/or otherwise complying with all applicable laws w.r.t. import of the goods and materials.
  - v. If bidder does not furnish built in CIF value and rates of custom duty, in that case bidder shall not be entitled to claim any variation in the custom duties even if bidder has quoted their prices considering custom duties.
  - vi. If custom duty rate actually paid on import of materials and components is found to be lower than the quoted rate of custom duty, then benefit of the same shall be passed on to the Owner.
  - vii. If bidder has considered Import Duty other than Merit Rate of Import Duty then statutory variation on the Import Duty shall be payable extra on the Merit Rate of Import Duty or the rate of Import Duty considered by the bidder, whichever is lower.
  - viii. In case, no import is made for execution of the order, clauses related to Imports will not be applicable.
- c. General points:
- i. In case Owner is exposed to any penal action, interest /penalties by the custom authorities for incorrect declaration and / or valuation of the goods or material by the supplier/contractor, or otherwise on account of any breach of applicable laws in the course of the import of the goods and material by supplier/contractor, the supplier/contractor shall indemnify and hold harmless the Owner for any and all costs, expenses or losses suffered or incurred by Owner in this regard
  - ii. If bidder intends to source import of goods from a country with which India has Free Trade Agreement (FTA) or Comprehensive Economic Partnership Agreement (CEPA) or any such multi-lateral / bi-lateral Agreement or Treaty with India or under Generalized System of Preference (GSP); or under any other notification (allowing lower rate of custom duty), then the bidder is advised to ascertain and confirm

its applicability along with supporting documents in the bid and ensure that conditions of such agreement/treaty etc. are strictly complied with.

- iii. The bidder shall be liable to provide all documentation to ensure availment of the exemption/waiver. In case the bidder defaults on this due to any reason, whatsoever, he shall be liable to bear the incremental custom duty applicable if any
- iv. Any additional custom duty applicability on account of any change in the notification (allowing lower rate of custom duty)/CEPA/FTA/multi-lateral/bi-lateral trade agreement shall be to bidder's account.
- v. Documentation to be furnished for availing the exemption/waiver of custom duty shall be specifically listed in the letter of credit also as a prerequisite for release of payment against shipping documents and this documentation shall necessarily form a part of shipping documents.

In case custom duty rate as quoted by Foreign bidder is less than Actual rate applicable on due date of submission of last price bid and payment of custom duty is on Owner's Account, differential amount on account of above-mentioned rate variation will be recovered from Foreign bidder.

- vi. Owner will not bear any liability towards payment of Safeguard Duty, Anti-Dumping Duty, Protective Duty and applicable IGST including GST Cess on same or Countervailing Duty on subsidized articles or any other such duties of Customs imposed by Government under Customs Tariff Act, 1975.

### 3. INCOME TAX

#### a. Foreign supervisors/suppliers/contractors

Prices of site work, contracts and other services of foreign supplier/contractor shall be gross of income tax i.e., inclusive of Indian income tax at the applicable prevailing rate as per Indian Income Tax Act and Rules there under.

Owner shall deduct withholding tax at source (TDS) as applicable while making payments against each invoice. Certificate for TDS shall be provided to the supplier/contractor.

In case foreign bidder quotes Prices of site work, contracts and other services "net of Income Tax" i.e., exclusive of Indian income tax, Owner shall deduct and deposit TDS as applicable after grossing up the sums due while making payments against each invoice at the applicable prevailing rate as per Indian Income Tax Act and Rules thereunder.

Foreign bidder irrespective of fact that whether prices are quoted Gross of income tax or Net of income tax shall furnish the information required in line with the prevalent provisions of Income tax act read with rules thereunder including but not limited to Tax residency certificate, Form 10F/ Online 10F, No permanent establishment declaration, No business connection certificate, No SEP declaration, PAN in India if available.

Failing to provide above documents/information, tax will be withheld at rates applicable as per the provisions of Income Tax Act, 1961 read with rules thereunder and the benefit of reduced rates will not be given.

If the non-resident is unable to obtain & submit Tax Residency Certificate to the Owner within a reasonable time, the bidder should furnish Form 10F/ Online 10F along with an undertaking to the effect that the bidder is a tax resident of (the specified country) and that they shall obtain and provide the tax residency certificate (TRC) to the Owner before 30 days of submission of first Invoice by them or within 3 months from the date of entering into contract whichever is earlier.

In case of contracts with term exceeding one financial year, the relevant documents like TRC, Form 10 F/ Online 10F, No PE / Business Connection Certificate, No SEP declaration, etc. as applicable, as per Income Tax Act, 1961 must be submitted at the beginning of each financial year and the Owner will not bear additional tax liability (if any) arising from non-submission of documents.

The bidder shall be liable to intimate the subsequent changes (if any) to the information submitted against any of the above particulars, along with full details.

In addition to the above particulars, the bidder should also provide any other information as may be required at a later stage for determining the taxability of the amount to be remitted to the non-residents.

In case, any additional tax liability arises on the Owner due to delay in submission / non-submission of information / documents required as above or change in residential status post submission of documents or change in any document (like TRC, Form 10F etc.) after its submission shall be recovered from the supplier/contractor.

b. Indian resident supervisors/ suppliers/contractors

Prices for supply and services of Indian suppliers/ contractors shall be inclusive of income tax.

Tax shall be deducted at source (TDS) by Owner on all sums due to supplier/contractor in accordance with the provisions of Indian Income Tax act read with rules thereunder as in force at the relevant point of time.

Owner shall issue a Tax Deduction Certificate to the supplier/contractor evidencing the tax deducted or withheld and deposited by Owner on payments made to the supplier/contractor to enable the supplier/contractor to claim the credit of Tax deducted by Owner.

c. INCOME TAX (General Points):-

- i. The supplier/contractor shall also be responsible for ensuring compliance with all applicable provisions of the Direct Tax Laws of India including, but not limited to, the filing of relevant Tax Returns and shall promptly provide all information required by the Owner for discharging any of its responsibilities/liabilities under such laws in relation to or arising out of the Contract. For the lapses/failure, if any, on the part of the supplier/contractor and consequential penal action taken by the Income Tax department, Owner shall not take any responsibility whether financial or otherwise and shall be indemnified by the supplier/contractor.
- ii. The Indian Income Tax Act and Rules made thereunder contains provisions permitting deduction of tax at source (TDS) at lesser rate if the supplier/contractor is able to justify to the Income Tax Authorities such lesser rate of deduction. However, a deduction once made has to be deposited by the Owner with the Income Tax Authorities in India and will not be adjustable by the Owner. It is therefore in the interest of the supplier/contractor that prior to release of any payment due to the supplier/contractor under the Contract that the supplier/contractor obtains from the relevant Income Tax Authorities in India, a certificate specifying the rate of deduction/withholding of Income tax at source, failing which, payment to the supplier/contractor shall be made by the Owner after withholding/deduction at the rate as may be applicable to the supplier/contractor as per provisions of Income Tax Act, 1961.
- iii. TDS on interest recovered on Mobilization/Other Advance will be deposited by the supplier/contractor and same would be reimbursed by the Owner against submission of Form-16A (TDS certificate).

C. INVOICING METHODOLOGY W.R.T. TAXATION

Following Invoicing methodology shall be followed:

1. In case of domestic / foreign PO's (Other than 2 below) , Invoice/E-Invoice shall be raised by the supplier/contractor in the name of Owner and consignee shall be Owner.
2. In case of package MR's (where title transfer or take over is envisaged to take place at site after completion of site work) and tenders, supplier/contractor shall bring material at project site in their own name and they themselves shall be consignee. As per provisions of contract between Owner and supplier/contractor, Invoice/E-Invoice shall be raised by supplier/contractor to Owner after charging GST.

#### D. APPLICABILITY OF TAX CREDIT

GST input tax credit is available to owner @ 100% except for goods falling under section 17(5) of GST ACT,2017, where input tax credit is not available.

#### E. EVALUATION METHODOLOGY W.R.T. TAXES

Following shall be loaded for evaluation:

1. Applicable Custom Duty, Social Welfare Surcharge etc, (excluding IGST & GST Compensation Cess (if applicable) on imported material which shall be dealt as per bid evaluation methodology given in E2 below) shall be loaded for price bid evaluation in respect of supplies for which bill of entry has to be filled by Owner.
2. GST on which input credit is not available to Owner including GST Compensation Cess (if applicable).
3. Applicable Income tax, in case foreign bidder quotes prices net of taxes.

#### F. TAXATION TERMS FOR INDIAN SOURCED SUPPLIES (Applicable in case of foreign supplier)

Shall be the same as applicable for Indian bidders.

#### G. TAX IMPLICATION WHERE FABRICATION YARD IS OUTSIDE THE FACTORY PREMISES, WHEREVER APPLICABLE

In case of package MRs and tenders, since contractors/suppliers shall bring material at project site in their own name and raise invoice to Owner (as per payment milestone achieved) after charging GST, location of fabrication yard whether inside or outside factory premises will not attract any additional liability.

#### H. TAX IMPLICATION WHERE OWNER WILL ISSUE FREE ISSUE MATERIAL (FIM) TO CONTRACTORS/SUPPLIERS

Where Owner issues FIM's to suppliers/contractors, material will be released against delivery challan and such FIM shall be received back in factory premises as per provision of GST.

## I. STATUTORY VARIATION (IN CASE OF MRS & TENDERS)

No variation on account of taxes and duties, statutory or otherwise, shall be payable to Supplier/Contractor except for the following:

1. GST: If after the due date of submission of last price bid and upto the contractual delivery/completion period (\*Note 4), any increase/decrease occurs in the applicable rate of GST, the variation in such GST shall be to Owner's account and shall be adjusted (increase / decrease) to / from the Supplier's/Contractor's invoices based on the documentary evidence.

Any increase in GST after the contractual delivery/completion period (\*Note 4) shall be to Supplier's/Contractor's account. However, any decrease in the rate of GST shall be passed on to Owner.

For calculating Statutory Variations ceiling amount as declared by the Bidder in price schedule shall only be considered.

2. Basic Custom Duty (BCD) & Social Welfare Surcharge (SWS): If after the due date of submission of last price bid and upto the XX (\*Note-3) of contractual delivery/completion period (\*Note 4), any increase/decrease occurs in the applicable rate of BCD & SWS on materials imported, the variation in such BCD & SWS shall be to Owner's account and shall be adjusted (increase/decrease) to/from the Supplier's/Contractor's invoices based on the documentary evidence.

Any increase in rate of BCD & SWS on materials imported after the XX (\*Note-3) of the contractual delivery/completion period (\*Note 4) shall be to Supplier's/Contractor's account. However, any decrease in the rate of BCS & SWS on materials imported shall be passed on to Owner.

For calculating Statutory Variations in BCD/SWS, ceiling amount of CIF Value and rate of custom duty as declared by the Bidder in relevant price schedule shall only be considered.

Note: Indian supplier/contractor to consider input tax credit of IGST and GST Compensation Cess if any (in case of import of raw Materials / components) in their quoted prices. Hence, Statutory variations on same in case of imported materials from outside India in Supplier's/Contractor's name (i.e., for Indian Bidders) shall be to Supplier/Contractor account.

3. Any new output taxes, duties, cess, levies notified or imposed after the due date of submission of last price bid but upto the contractual date of delivery/completion (\*Note 4) shall be to Owner's account. These shall be reimbursed against documentary evidence. However, in case of delay attributable to supplier/contractor, any new output taxes, duties, cess, levies notified or imposed after Time for Completion, defined as above, shall be to supplier's/Contractor's account.

## J. TAX INDEMNITY

Any omission/ errors of interpretation of applicability of taxes, duties, cesses and levies, whatsoever named, howsoever named, as are payable to any government, local or statutory authority in India or in any country other than India by the supplier/contractor shall be to supplier's/contractor's account.

If any fine/penalty/any other levy is required to be met by the Owner arising out of any non-compliance/fault/fraud/willful suppression/misstatement of facts/information/documents, whatsoever, of any applicable laws of India or any country other than India by the supplier/contractor/their personnel/sub-contractors/agencies, the same shall be recovered from any amount payable to the supplier/contractor under this contract or under any other contract of the Owner.

If any tax is paid / required to be paid by supplier/contractor in pursuance of any demand of any law enforcement agency/Tax Authority on account of non-compliance/fault/fraud/willful suppression/misstatement of facts/information/documents, whatsoever, of any applicable laws of India or any country other than India by the supplier/contractor/their personnel/sub-contractors/agencies, the same shall be to supplier's/contractor's account only.

### GENERAL:

1. \*Note-3 : XX in (\*Note-3) shall mean 100%
2. \*Note-4 Contractual delivery/completion period shall include extended contractual delivery/completion period for the reasons attributable to Owner or due to Force Majeure condition.

**PROVISIONS OF TAX DEDUCTION AT SOURCE**

The Government in the Finance Act 2021 has introduced a new section 194Q 'Tax Deducted at Source (TDS) on Purchase of Goods' w.e.f 01st July 2021 in the Act. Accordingly, TDS on Purchase of goods @ 0.1% is required to be applied by HPCL if the following conditions are fulfilled:

1. Annual turnover/Gross Receipts of the buyer (HPCL) exceeds Rs. 10 crores in the previous financial year and
2. Value of Transactions with seller (vendors) exceeds Rs. 50 lakhs in current financial year.

Since HPCL is meeting the turnover criteria as referred in Section 194Q, TDS on the Purchase value exceeding Rs 50 Lakhs from vendor supplying Goods to HPCL will be applied. The Annual Turnover / Gross Receipts will be calculated at PAN (Permanent Account number) level; hence, multiple vendor codes will be added under same PAN.

The PAN of HPCL is AAACH1118B.

HPCL will deposit TDS to Government Exchequer using below mentioned TANs.

HPCL TAN number
CALH01077G
CHEG06368F
LKNH05430F
AHMH02644F
MUMH09973F
DELN05271A
HYDH02288G
BLRH05922A
MUMH07057B
VPNH00039E
MUMH01340D

Further, you are requested to provide copy of your valid PAN to respective HPCL offices if not provided earlier. It may be noted that in the absence of Valid PAN, higher TDS rate will be applicable.

## GENERAL TERMS & CONDITIONS OF CONTRACT FOR SUPPLY

### 1. PRELIMINARY

- 1.1 This is a Contract for execution of job as defined in tender document at the specified location
- 1.2 The tenderer for the abovementioned supply is the company/ proprietary concern/ individual (as per details & address mentioned in the unpriced bid) and undersigned (digitally) is authorized to submit the bid on behalf of tenderer.
- 1.3 The terms and conditions mentioned hereunder are the terms and conditions of the Contract for the execution of the job mentioned under item 1.1 above.
- 1.4 It is the clear understanding between Hindustan Petroleum Corporation Limited and the tenderer that in case the bid of tenderer is accepted by Hindustan Petroleum Corporation Limited and an intimation to that effect is so issued and also a Procurement Order is on the tenderer this document shall form part of the Contract between the parties and terms and conditions hereunder would govern the parties interest.
- 1.5 Interpretation of Contract Documents: All documents forming part of the Contract are to be taken mutually explanatory. Should there be any discrepancy, inconsistency, error or omission in the contract, the decision of the Owner/Engineer-in-Charge/Site-in-Charge shall be the final and the contractor shall abide by the decision. The decision shall not be arbitrable. Items shown upon the drawings but not mentioned in the specification or described in the specifications without being shown on the drawings shall nevertheless be deemed to be included in the same manner as if they are shown in the drawings and described in the specifications.
- 1.6 Special conditions of Contract: The special conditions of contract, if any provided and whenever and wherever referred to shall be read in conjunction with General Terms and Conditions of contract, specifications, drawings, and any other documents forming part of this contract wherever the context so requires. Notwithstanding the subdivision of the documents into separate sections, parts volumes, every section, part or volume shall be deemed to be supplementary or complementary to each other and shall be read in whole. In case of any misunderstanding arising the same shall be referred to decision of the Owner/ Engineer-in-Charge/Site-in-Charge and their decision shall be final and binding and the decision shall not be arbitrable.

It is the clear understanding that wherever it is mentioned that the Contractor shall do/perform a job and/or provide facilities for the performance of the job, the doing or the performance or the providing of the facilities is at the cost and expenses of the Contractor not liable to be paid or reimbursed by the Owner.

**1.7 The Order of Precedence of documents shall be as follows with document at level 1 having the highest precedence**

1. Contract Agreement
2. Detailed Letter of Acceptance along with its enclosures
3. Letter of Award / Fax of Acceptance
4. Job Specifications (specific to particular job only)
5. Drawings
6. Special Conditions of Contract
7. Technical Specifications
8. Instructions to Bidders
9. General Conditions of Contract
10. Other Documents

Any amendment / change order issued after signing of formal contract shall take precedence over respective clauses of the formal contract and its annexures

**2. DEFINITIONS**

- a. The following expressions used in the Purchase Order shall have meaning as indicated against each of these:
- b. The CORPORATION means HINDUSTAN PETROLEUM CORPORATION LIMITED, a company incorporated in India having its registered office at 17, Jamshedji Tata Road, Mumbai- 400 020 and shall include its successors and assignees.
- c. "Goods / Materials": Goods and/or Materials shall mean any of the articles, materials, machinery, equipments, supplies, drawings, data and other property and all services including but not limited to design, delivery, installation, inspection, testing and commissioning specified to complete the order.
- d. "Vendor / Seller / Supplier": Vendor / Seller / Supplier shall mean the person, firm or corporation to whom this Purchase Order is issued.
- e. "Contractual Delivery Date": Contractual Delivery date is the date on which goods shall be delivered F.O.R/F.O.T. Despatching Point/ Destination in accordance with the terms of the Purchase Order. This contractual delivery date / period is inclusive of all the lead time for engineering, procurement of raw materials, manufacturing, inspection, testing, packing and any other activity whatsoever required to be accomplished for affecting the delivery at the agreed delivery point.
- f. "Inspectors": Inspectors deputed by Corporation.

- g. 'Total Order Value' means:-
- i. For Material Supply Contract: - The basic cost excluding taxes, duties, levies, freight etc. unless and until specifically mentioned in the purchase order.
  - ii. For Lump sum / Turnkey contract: - The total cost & all other cost inclusive of taxes, duties, levies, freight etc.
- h. 'Total Order Value' shall be considered for the purpose of calculation of:
1. Price reduction on account of delay
  2. Performance bank Guarantee Amount or Insurance Surety Bond towards Performance Security Amount
  3. Payment of advance, if any to be made.
- i. **Note:** - The total order for levy of Price Reduction on account of delay shall include all types of escalation (including on account of Foreign Exchange Variation) agreed to in terms of Purchase Order.

### 3. REFERENCE FOR DOCUMENTATION

Purchase Order number must appear on order confirmation, correspondence, drawings, invoices, shipping notes, packings and on any documents or papers connected with the order.

### 4. CONFIRMATION OF ORDER

The Vendor shall acknowledge the receipt of the Purchase Order within ten days following the mailing of this order and shall thereby confirm his acceptance of this Purchase Order in its entirety without exceptions. The acknowledgment will bear on both purchase order and General Procurement Conditions.

### 5. SALES CONDITIONS

With Vendor's acceptance of provisions of this Purchase Order, he waives and considers as cancelled any of his general sales conditions.

### 6. COMPLETE AGREEMENT

The terms and conditions of this Purchase Order shall constitute the entire agreement between the parties hereto. Changes will be binding only if the amendments are made in writing and signed by an authorized representative of the Corporation and the Vendor.

### 7. INSPECTION-CHECKING-TESTING

- a. The equipment, materials and workmanship covered by the Purchase Order shall be subject to inspection and testing at any time prior to shipment and or despatch and to final inspection within a reasonable time after arrival at the place of delivery. Inspectors shall have the right to carry out the inspection and testing which will include the raw materials at manufacturer's shop, at fabricator's shop and at the time of actual despatch before and after completion of packing.

- b. All tests, mechanical and others and particularly those required by codes will be performed at the Vendor's expenses and in accordance with Inspector's instructions. The Vendor will also bear the expenses concerning preparation and rendering of tests required by Boiler Inspectorate or such other statutory testing agencies or by any other reputed inspection agencies as may be nominated by the Corporation.
- c. Before shipping or despatch, the equipment and or materials will have to be checked and stamped by inspectors who are authorized also to forbid the use and despatch of any equipment and/or materials which during tests and inspection fail to comply with the specifications, codes and testing requirements.
- d. The vendor shall inform the Corporation at least eight days in advance of the exact place, date and time of rendering the equipment or materials for required inspection.
- e. The vendor shall provide free access to inspectors during normal working hours at Vendor's or his/its sub-Vendor's works and place at their disposal all useful means of performing, checking, marking, testing, inspection and final stamping.
- f. Even if the inspections and tests are fully carried out, Vendor would not be absolved to any degree from his responsibilities to ensure that all equipments and materials supplied comply strictly with requirements as per agreement both during construction, at the time of delivery, inspection, on arrival at site and after its erection or start-up and guarantee period as stipulated in clause 30 hereof.
- g. The Vendor's responsibility will not be lessened to any degree due to any comments made by the Corporation and Inspectors on the Vendor's drawings or by Inspectors witnessing any chemical or physical tests.
- h. In any case, the equipment and materials must be in strict accordance with the Purchase order and/or its attachments failing which the Corporation shall have the right to reject the goods and hold the Vendor liable for non-performance of contract.

## **8. OFFICIAL INSTITUTIONAL TESTING**

- a. In addition to testing and inspection by Inspectors mentioned above, nominated agencies or similar institutional agencies like Boiler Inspectorate may be assigned for official testing of all coded equipment. The Vendor shall ensure that all Procedures for preparation and Performance of tests prescribed by such Institutions shall be completed scrupulously.
- b. The Vendor is required to send to such Institutions as may be designated by the Corporation at least three sets of construction drawings for each equipment and calculations. All manufacturer's mill's tests certificates and analytical reports from material laboratories in respect of all raw materials and components employed shall have to be presented to such institution's Inspectors in the number of copies required. Vendor shall be responsible for any delay in submission of necessary certificates. The Vendor shall maintain close liaison with the Corporation and Institution's Inspectors to maintain schedule and delay, if any in this process will not be taken into consideration as a cause of Force Majeure.

**9. WEIGHTS AND MEASUREMENTS**

- a. All weights and measurements recorded by the Corporation on receipt of goods at site will be treated as final.
  
- b. Vendor's shipping documents and invoices must contain the following data:
  - i Unit net weight
  - ii Unit gross weight (packing included)
  - iii Dimensions of packing.

**10. DESPATCH INSTRUCTIONS**

- a. Unless otherwise specifically advised in writing, goods shall not be despatched without prior inspection, testing and Release Order / Materials Acceptance Certificates issued by Inspectors.
- b. In case despatch by rail is specified in the Purchase Order, vendor shall exercise due care and ensure that the consignment shall be booked under appropriate railway classification, failing which, any additional freight incurred by Corporation due to Vendor's booking the material under a wrong classification shall be to Vendor's account.
- c. The goods shall be consigned in the name of consignee as applicable.
- d. Corporation's warehouse is open to receive stores between 9.00 A.M and 3 P.M on all working days. No goods will be accepted after 3.00 P.M.
- e. Corporation reserves the right to advise any change in despatching point / destination and / or mode of transport, as may be required. Any extra expenditure on this account supported by documentary evidence will be reimbursed by the Corporation.

**11. OILS & LUBRICANTS**

The first filling of oils and lubricants, if any, required for every equipment shall be included in the price and appropriate products manufactured by the Corporation (HPCL) shall be used. The Vendor shall also recommend the quality / quantity of oils and lubricants required for one year continuous operation.

**12. SPAREPARTS**

- a. The Vendor must furnish itemised price list of spare parts indicating quantity, unit rate & total rate required for two years operation of the main equipment and prime movers also, if mentioned in the tender.
- b. The Vendor shall provide the necessary cross sectional drawing to identify the spare parts numbers and their location as well as inter-changeability chart.

### 13. PACKING AND MARKING

- a. The Materials shall be suitably packed for safe transportation till receipt at site and should be commensurate with best possible practices of packing, unless specifically stipulated in the Technical specifications, to avoid any damage during transit.
- b. All fragile and exposed parts shall be packed carefully and the package shall bear the words '**HANDLE WITH CARE**', '**THIS SIDE UP**' and '**FRAGILE**'.
- c. All holes and openings and also other delicate surfaces shall be carefully protected against bad weather. All threaded fittings shall be greased and provided with plastic caps. All small pieces shall be packed in cases.
- d. The Supplier shall be liable for all damages or breakage to the Materials due to defective or insufficient packing as well as for corrosion due to insufficient protection.
- e. Detailed packing list in waterproof envelope shall be kept in each package together with material and one copy of packing list shall be fastened outside the box in waterproof envelope.
- f. Each package shall be marked in bold letters on the external three surface of the package as follows:
  - i. From: Address of Supplier / Sub-supplier.
  - ii. For: Hindustan Petroleum Corporation Ltd. \_\_\_\_\_(location)
  - iii. Item:
  - iv. Package No. : \_\_\_\_of total packages
  - v. Dimensions: (Dimensions of each package)
  - vi. Weight: (Weight of each package)
  - vii. Special Instruction for storage, if any.
  - viii. Special unloading arrangements, if required, shall be clearly mentioned in the Packing List.
  - ix. All packages containing the following items shall be packed separately as ordered and shall have additional clear marking for identification.
    1. Mandatory Spares.
    2. Commissioning Spares.

### 14. SHIPMENT AND SHIPMENT NOTICES

- a. The Vendor shall make shipment only after prior approval by Inspectors whenever specifically mentioned. In the event of the Vendor having been advised to hold shipments(s) for any reason whatsoever the Vendor shall hold the materials in his / its warehouse for at least 30 days without any compensation; or without prejudice to any reduction in price already accrued on account of delay.

- b. Within 24 hours of shipment, Vendor shall inform despatch particulars to Corporation by fax / courier / email.
- c. The Vendor shall carefully note the destination of materials.
- d. The demurrage or other expenses incurred owing to any negligence, delay, default on the part of the Vendor will be to Vendor's account.

**15. CONTROL REGULATIONS**

The supply, despatch and delivery of goods shall be arranged by the Vendor in strict conformity with the statutory regulations including provision of Industries (Development and Regulation) Act 1951 and any amendment thereof as applicable from time to time. The Corporation disowns any responsibility for any irregularity or contravention of any of the statutory regulations in manufacture or supply of the stores covered by this order.

**16. TRANSIT RISK**

Transit Risk insurance shall be covered by the Corporation. The Vendor shall advise the despatch particulars to Corporation immediately after shipment.

**17. RESPECT FOR DELIVERY DATES.**

Time of delivery as mentioned in the Purchase Order shall be the essence of the contract and no variation shall be permitted except with prior authorization in writing from the Corporation. Goods should be delivered securely packed and in good order and condition at the place and within the time specified in the Purchase Order for their delivery.

**18. PRICE REDUCTION FOR DELAYED DELIVERY**

In case of delayed delivery, prices will be reduced @1/2% of the total basic order value for every week of delay or part thereof subject to a maximum of @5% of the total basic order value.

**NOTE:**

- a. Price Reduction shall be applicable only on the basic cost and on Full complete week (s) and for fractional days Price reduction shall be applicable on pro-rata, if any.
- b. Initially Price Reduction shall be applicable for total basic order value and final Price Reduction settlement to be on undelivered portion in the contractual delivery period.

**19. FORCE MAJEURE**

Circumstances leading to force majeure

- (a) act of terrorism;
- (b) riot, war, invasion, act of foreign enemies, hostilities (whether war be declared or not), civil war, rebellion, revolution, insurrection of military or usurped power;

- (c) ionising radiation or contamination, radio activity from any nuclear fuel or from any nuclear waste from the combustion of nuclear fuel, radioactive toxic explosive or other hazardous properties of any explosive assembly or nuclear component;
- (d) epidemics, earthquakes, flood, fire, hurricanes, typhoons or other physical natural disaster, but excluding weather conditions regardless of severity; and
- (e) freight embargoes, strikes at national or state-wide level or industrial disputes at a national or state-wide level in any country where Works are performed, and which affect an essential portion of the Works but excluding any industrial dispute which is specific to the performance of the Works or the Contract.

For the avoidance of doubt, inclement weather, third party breach, delay in supply of materials (other than due to a nationwide transporters' strike) or commercial hardship shall not constitute a Force Majeure event.

- Notification of Force Majeure

Contractor shall notify within [10(ten)] days of becoming aware of or the date it ought to have become aware of the occurrence of an event of Force Majeure giving full particulars of the event of Force Majeure and the reasons for the event of Force Majeure preventing the Affected Party from, or delaying the Affected Party in performing its obligations under the Contract.

- Right of either party to terminate

If an event of Force Majeure occurs and its effect continues for a period of 180 (one hundred eighty days) or more in a continuous period of 365 (three hundred sixty-five) days after notice has been given under this clause, either Party may terminate the Contract by issuing a written notice of 30 (thirty) days to the other Party.

- Payment in case of termination due to Force Majeure

The Contract Price attributable to the Works performed as at the date of the commencement of the relevant event of Force Majeure.

The Contractor has no entitlement and Owner has no liability for:

- a) any costs, losses, expenses, damages or the payment of any part of the Contract Price during an event of Force Majeure; and
- b) any delay costs in any way incurred by the Contractor due to an event of Force Majeure.

Time extension for such cases will be worked out appropriately.

## **20. REJECTION, REMOVAL OF REJECTED GOODS AND REPLACEMENT**

- a. In case the testing and inspection at any stage by Inspectors reveal the equipment, material and workmanship do not comply with specification and requirements, the same shall be removed by the Vendor at their / its own expense and risk within the time allowed by the

Corporation. The Corporation shall be at liberty to dispose of such rejected goods in such manner as they may think appropriate. In the event the Vendor fails to remove the rejected goods within the period as aforesaid, all expenses incurred by the Corporation for such disposal shall be to the account of the Vendor. The freight paid by the Corporation, if any, on the inward journey of the rejected materials shall be reimbursed by the Vendor to the Corporation before the rejected materials are removed by the Vendor.

- b. The Vendor will have to proceed with the replacement of that equipment or part of equipment without claiming any extra payment if so required by the Corporation. The time taken for replacement in such event will not be added to the contractual delivery period.

## **21. TRANSFER OF PROPERTY FROM THE VENDOR TO THE CORPORATION**

- a. The transfer of property shall be deemed to have taken place as follows subject to the provisions herein contained:
  - i. Exworks: when the vendor places the goods at the disposal of the buyer at the vendor's premises or another named place (i.e. works, factory, warehouse, etc.)
  - ii. F.O.R. or F.O.T despatch point: On handing over the equipment to the carrier against receipt and such receipt having been passed over to the Corporation.
  - iii. FOT / FOR destination station: On taking delivery from the transporters/railways at the destination station.
  - iv. Equipment sent freight carriage paid to the project Site: On arrival under lifting hook at the job site.
  - v. Equipment erected by the Vendor: On temporary acceptance at job site.
  - vi. Equipment commissioned by the Vendor: On taking over by the Corporation for regular operation after test runs at maximum capacity for specified period satisfactorily performed.

## **22. PRICE**

- a. Unless otherwise agreed to in the terms of the Purchase Order, the price shall be firm and not subject to escalation for any reason whatsoever till the execution of entire order, even though it might be necessary for the order execution to take longer than the delivery period specified in the order.
- b. Price shall be exclusive of GST (CGST, SGST, IGST as applicable), Customs Duty and applicable Cess, which are leviable by law on sale of finished goods to Corporation. The nature and extent of such levies shall be shown separately.
- c. Anti-Profiteering Clause – GST Act anti-profiteering provisions mandates that any reduction in tax rates or benefits of input tax credits be passed on to the consumer by way of commensurate reduction in prices. Vendors to take note of the same and pass such benefits while quoting their price.

**23. TAXES & DUTIES:**

- a. GST (CGST, SGST, IGST as applicable), Customs Duty and applicable Cess as applicable shall be reimbursed for the materials consigned to Corporation as per limits indicated in the offer against documentary evidence to be furnished by the supplier. Corporation shall pay only those taxes, duties and levies as indicated by Supplier at the time of bid submission/as agreed subsequently prior to opening of priced bids). Taxes/duties and/or levies not indicated by supplier in bid, but payable, shall be to Supplier's account. In case of any increase/decrease applicable in GST (CGST,SGST, IGST as applicable) Customs Duty and applicable Cess indicated with reference to limits mentioned in the offer/bid or new taxes/duties/levies imposed by the Indian Government through Gazette notification after the date of submission of last Price Bid but prior to contractual delivery date, the Corporation shall reimburse/adjust the increase/decrease in taxes & duties on satisfactory supporting documents.
- b. Supplier shall be responsible for availing all applicable concessions in taxes, duties, levies etc. as per terms of Purchase Order. Any loss, direct or implied, accrued to Corporation on account of supplier's failure to avail concessions shall be borne by Supplier.
- c. The vendor shall comply with all the provisions of the GST Act/Rules/ requirements like providing of tax invoices, payment of taxes to the authorities with in the due dates, filing of returns with the due dates etc. to enable HPCL to take Input Tax Credit. In case of imports, vendors shall provide import documents and invoice fulfilling the requirement of Customs Act and Rules. Vendor will be fully responsible for complying with the Customs provisions to enable HPCL to take Input Tax Credit.
- d. In case, HPCL is not able to take Input Tax Credit due to any noncompliance/default/negligence of the seller of goods/service provider, the same shall be recovered from the pending bills/dues (including security deposit, BG etc.)
- e. Vendor shall be responsible to indemnify the Corporation for any loss, direct or implied accrued to the Corporation on account of supplier/service provider failure to discharge his statutory liabilities like paying taxes on time, filing appropriate returns within the prescribed time etc.

**24. CUSTOMS DUTY (CD) VARIATION**

- a. The prices mentioned in offer are subject to Customs Duty (CD) variation. In case of any increase in rates of Customs Duty, IGST and applicable Cess by the Indian Government through Gazette notification after the submission of last priced offer but within the time schedule for import of materials, as mentioned. Corporation shall reimburse the increase in taxes and duties at actuals against satisfactory supporting documents.
- b. All downward variations in the rates of all such duties shall be to Corporation's account and same shall be calculated on actual CIF value of imported materials subject to the limit mentioned. Supplier shall submit all relevant documents to Corporation for the proof of duty paid by them within one month from the date of Bill of Entry (BOE).

- c. Custom Duty variation shall be paid by Corporation up to the limit of maximum CIF value of imported components as indicated in the offer.
- d. Rate of Custom Duty along with tariff number considered by Supplier in the prices shall be indicated in the offer.

**25. FOREIGN EXCHANGE (FE) VARIATION**

- a. The CIF value in Indian Rupees / Foreign Currency to be declared should cover the currencies of the countries from which import of materials / components are envisaged to administer foreign currency variation.
- b. The FE variation will be paid for if imports are made at the listed currency subject to ceiling limit.
- c. The list of foreign currency, country of origin, ceiling of foreign value of import envisaged against each item of materials / components for import and rate of conversion into Rupees envisaged to be furnished in the tender. The period within which import shall be made after placement of LOI (i.e. Contractual Completion date of imports, herein after called CDD) shall also be indicated in the offer.
- d. For reimbursement of foreign exchange variation, documentary evidence like bank certificates of remittance showing the date of payment and rate of foreign currency to Indian rupees to be furnished along with a copy of bills of entry duty attested by Customs department. All downward variations in conversion rate will be to Corporation's account.
- e. Variation will be paid only if imports are made within the period as specified in offer for import. For imports made beyond that period, foreign currency variation will be paid based on the conversion rates prevailing on the last date of period of agreed to for imports. The last date for imports agreed will be the import landing date in India envisaged by Bill of Entry.
- f. Bidder shall indicate the maximum CIF component along with currency of import. In case supplier imports less than the CIF value indicated in the bid, Duty. FE variation etc. shall be reimbursed only for the actual import carried out.
- g. Foreign exchange variation, if any, downward or upward, will be paid only if imports are made within the agreed completion period.
- h. For the purpose of Foreign Exchange variation reimbursement, State Bank of India (SBI) selling rate applicable on the bill of entry date or SBI selling rate on Bank remittance date or actual remittance rate, whichever is lower shall be considered. The following clause also to be considered.
- i. The BOE date may fall within Contractual Completion Date or beyond, it has already been stipulated as above conditions that no reimbursement for FE / CD variation will be paid if the actual import is beyond Contractual completion date. In such a case, the variation reimbursement will be restricted to the difference between the rate quoted in the tender and the lower of the following:
  - i. The actual remittance rate.
  - ii. SBI Bill selling rate on the date of CDD.

**26. TERMS OF PAYMENT**

- a. The following payment terms shall be applicable:
  - i. 75% of the bill amount duly recommended by user on receipt of materials / docs. at HPCL shall be paid within 7 days of receipt of bill.
  - ii. Balance 25% to be paid after verification/ certification within 15 days of receipt of bill. However, the final bill payment will not exceed 30 days.
- b. HPCL has taken the initiative to expedite the payment to vendors through e-payment. Hence confirm that you have filled the HPCL bank mandate for e-payment.
- c. Payment against invoice shall be made on receipt of equipment/materials at site against submission of following documents along with your Bill/Invoice:-
  - i. Delivery Challan / Lorry Receipt.
  - ii. Manufacturer's Test Certificate
  - iii. Inspection/Clearance report
  - iv. Manufacturer's Guarantee Certificate
  - v. Performance Bank Guarantee or Insurance Surety Bond towards Performance Security for 10% Basic Order Value
  - vi. Any other document specified in the Purchase Order.
- d. The financial settlement of Vendor's invoice is liable to be withheld in the event the Vendor has not complied with submission of drawing data and such documentation as called for in the Purchase Order and/or as required otherwise.
- e. HPCL will furnish their approved format for bank guarantee/ indemnity bond or all the advance payments directly to vendor along with FOA/ PO, wherever applicable.
- f. In case of delayed supplies, bills will be paid after recovering the amount as per price reduction clause of the P.O.
- g. All bank guarantees shall be non revocable and from a bank in India from the list of banks whose bank guarantees are acceptable to the Corporation (list enclosed) as per HPCL's proforma. Similarly, all Insurance Surety Bonds shall be irrevocable and from IRDAI regulated Insurance companies only as per HPCL's proforma.
- h. PBG or ISB towards Performance Security shall be valid till expiry of guarantee period. All other Bank Guarantees or Insurance Surety Bonds shall be valid till contractual completion period, unless otherwise specified. All bank guarantees or Insurance Surety Bonds shall have a claim period of 1(one) month after expiry date of bank guarantee or Insurance Surety Bond.

**27. RECOVERY OF SUMS DUE**

Whenever any claim against the Vendor for payment of a sum of money arises out of or under the contract, the Corporation shall be entitled to recover such sums from any sum then due or which at any time thereafter may become due from the Vendor under this or any other contract with the Corporation and should this sum be not sufficient to cover the recoverable amount, the Vendor shall pay to the Corporation on demand the balance remaining due.

**28. CHANGES**

The Corporation has the option at any time to make changes in quantities ordered or in specification and drawings. If such changes cause an increase or decrease in the price or in the time required for supply, an equitable adjustment under this provision must be finalised within 10 days from the date when change is ordered.

**29. CANCELLATION / RISK PURCHASE CLAUSE:**

- a. The Corporation reserves the right to cancel this purchase order or any part thereof and shall be entitled to rescind the contract wholly or in part with a written notice to the vendor if:
  - i. The vendor fails to comply with the terms of this purchase order.
  - ii. The vendor fails to deliver the goods on time and / or replace the rejected goods promptly.
  - iii. The Vendor becomes bankrupt or goes into liquidation.
  - iv. The vendor makes a general assignment for the benefit of creditors.
  - v. A receiver is appointed for any of the property owned by the vendor.
- b. Upon receipt of the said cancellation notice, the vendor shall discontinue all work on the Purchase Order and matters connected with it. The vendor is aware that the said goods are required by the Corporation for the ultimate purpose of materials production and that non delivery may cause loss of production and consequently loss of profit to the Corporation.
- c. Therefore, in case of Termination of the contract, Corporation shall have the right to carry out the unexecuted portion of the supply/work either by themselves or through any other vendor(s)/contractor(s) at the risk and cost of the vendor/ contractor. In view of paucity of time, Corporation shall have the right to place such unexecuted portion of the supply/work on any nominated vendor(s)/contractor(s). However, the overall liability of the vendor/Contractor shall be restricted to 100% of the total contract value.
- d. The provision of this clause shall not prejudice the right of the Corporation from invoking the provisions of clause "Delayed Delivery" as a fore said.

**30. PATENTS AND ROYALTIES**

On acceptance of this order, the Vendor will be deemed to have entirely indemnified the Corporation from any legal action or claims regarding compensation for breach of any patent rights.

**31. PERFORMANCE GUARANTEE**

- a. The supplies made against this order shall be fully guaranteed against any manufacturing defects/poor workmanship/inferior quality etc. for a period of 12 months from the date of commissioning or 18 months from the date of supply whichever is earlier. During this period, you will arrange to repair/replace any defective parts free of cost or replace complete set if required.

Guarantee Certificate should be submitted along with despatch documents. You will furnish performance Bank Guarantee in favour of HPCL issued by a bank from the list of banks whose bank guarantees are acceptable to the Corporation (list enclosed) or Insurance Surety Bonds towards performance security from IRDAI regulated Insurance companies only for 5% value of the material supplied and valid during the above guarantee period.

- b. Composite PBG or Composite ISB valid upto a period of 3 months beyond the expiry of defect liability period. Demand Draft should be drawn on Scheduled Banks (other than cooperative banks). Quantum of Performance Bank Guarantee or Insurance Surety Bond towards Performance Security inclusive of Security Deposit should be as follows:

- All items (other than CVR items) : 5% of PO value
- For CVR items: r 10.0 lakhs or 5% of the order value whichever is lower. Composite PBG or Composite ISB towards Performance Bank Guarantee or Insurance Surety Bond towards Performance Security of above value inclusive of Security Deposit shall be accepted (in lieu of deduction of retention money of 5 % from each bill); Such composite PBG or Composite ISB shall be valid upto a period of 3 months beyond the expiry of defect liability period.

### **32. NON WAIVER**

Failure of the Corporation to insist upon any of the terms or conditions incorporated in the Purchase Order or failure or delay to exercise any right or remedies or by law or failure to properly notify Vendor in the event of breach, or the acceptance of, or payment of any goods hereunder or approval of design shall not release the Vendor and shall not be deemed a waiver of any right of the Corporation to insist upon the strict performance thereof or of any of his or their rights or remedies as to any such goods regardless of when goods are shipped, received or accepted nor shall any purported oral modification or revision of the order by the Corporation act as waiver of the terms hereof.

### **33. NON ASSIGNMENT**

The Purchase Order shall not be assigned to any other agency by the Vendor without obtaining prior written consent of Corporation.

### **34. PART ORDER/ SPLIT ORDER / REPEAT ORDER**

Vendor hereby agrees to accept part orders, split order at Corporation's option without any limitation whatsoever and also accept repeat order up to 100% of each item during a period of 12 months after placement of purchase order at the same unit prices, terms and conditions.

### **35. VENDOR'S DRAWINGS AND DATA REQUIREMENT**

The Vendor shall submit drawings, data and documentation in accordance with but not limited to what is specified in the requisition and / or in Vendor drawings and data form attached to the Purchase Order as called for in clause 8, viz, 'Expediting' above. The types, quantities and time limits of submitting this must be respected in its entirety failing which the Purchase Order shall not be deemed to have been executed for all purposes including settlement of payment since the said submission is an integral part of Purchase Order execution.

**36. TECHNICAL INFORMATION**

- a. Drawings, specifications & details shall be the property of the Corporation and shall be returned by the Vendor on demand. The Vendor shall not make use of drawing and specifications for any purpose at any time save and except for the purpose of the Corporation.
- b. The Vendor shall not disclose the technical information furnished to or gained by the Vendor under or by virtue or as a result of the implementation of this Purchase Order to any person, firm or body or corporate authority and shall make all endeavours to ensure that the technical information is kept CONFIDENTIAL. The technical information imparted and supplied to the Vendor by the Corporation shall at all times remain the absolute Property of the Corporation.

**37. SERVICES OF VENDOR'S PERSONNEL**

Unless otherwise specified in the PO, services of vendor's personnel shall be made within two weeks advance notice and the Vendor shall depute the necessary personnel to site for supervision of erection and start up of the equipment and train a few of the Corporation's personnel for the operation and maintenance of the equipment if required, by the Corporation. The terms and conditions for the services of the Vendor shall be mutually settled.

**38. VENDOR'S LIABILITY**

The Vendor's workmen or employees shall under no circumstances be deemed to be in Corporation's employment and the Vendor shall hold himself responsible for any claim or claims which they or their heirs, dependents, personal representatives may have or make for damages or compensation for anything done or committed to be done in the course of carrying out the work covered by this Purchase Order, whether arising on Corporation premises or elsewhere and agrees to indemnify the Corporation against any such claim or claims if made against the Corporation and all cost (as between attorney and client) of proceedings, suits or action which the Corporation may incur/sustain in respect of the same. The Vendor shall also procure and keep in force at his own cost comprehensive Automobile Liability insurance for adequate coverage in respect of all his vehicles visiting or plying in project premises. The Vendor shall also be responsible for compliance of existing laws in respect of their workmen and employees. Extent of Liability shall be read in conjunction with clause no. 28 above.

**a. LIMITATION OF LIABILITY**

Notwithstanding anything contrary contained herein, the aggregate total liability of Seller, excluding his liability towards infringement of patent, trade mark or industrial design rights under the contract or otherwise shall be limited to 100% of value of Purchase order. However, neither party shall be liable to the other party for any indirect and consequential damages, loss of profits or loss of production.

**39. CORPORATION'S MATERIAL**

- a. Corporation's material shall be delivered to the Vendor against submission of Bank Guarantee for indemnifying the full value there of strictly in the manner and as per proforma of bank Guarantee approved by the Corporation.

- b. Wherever possible the material shall be consigned to Vendor's siding. In the event the Vendor does not have any siding, materials shall be consigned to the Public siding / goods depot to be specifically confirmed by Vendor Loading / Unloading and any handling from the siding / destination shall be arranged by the Vendor at his responsibility and cost.
- c. The Vendor shall give a firm and binding list of Corporation issue materials and the desired schedule of its delivery to Shop floor strictly in accordance with the sequence of fabrication vis-à-vis the contract delivery period.
- d. Unused material or scrap from material supplied by the Corporation to the Vendor shall be returned by the Vendor to the Corporation or if the Corporation so directs, the Vendor may dispose of the same by sale or otherwise on such terms and conditions as the Corporation may stipulate and the Vendor shall pay to the Corporation the sale proceeds of the material so disposed by sale deducting there from expenses incurred by the Vendor on such sale, the quantum of such deduction to be mutually agreed upon in advance between the Corporation and the Vendor.

**40. GUARANTEE FOR SPARE PARTS:**

- a. The seller shall undertake that before going out of production of the spare parts he will give adequate advance notice to the Procurement so that the latter may order his requirements of spares in one lot if so desires.
- b. The seller shall further guarantee that if he goes out of production of spare parts, then he will make available blue prints , drawings of spare parts and specification of materials at no extra cost to the Procurement , if and when required in connection with the equipment to enable the procurer to fabricate or procure spare parts from other source.
- d. The provision of this clause shall remain effective and binding upon the seller even after the completion or expiry of the order and till the plant / machinery / equipment / instrument supplied under the order is in use by the procurer.

**41. DISPUTE RESOLUTION**

**(A) Discussions and Resolution**

- (i) The parties shall attempt to resolve all dispute and difference arising out of or relating to this contract through negotiations in good faith. If any dispute or difference remains unresolved, then all such unresolved disputes or differences shall be referred to the Executive Director/SBU Head of HPCL of the concerned department and the Director/ Owner / authorized Senior Official of the contractor/supplier for an amicable solution.
- (ii) If any dispute or difference remains unsettled within sixty (60) days from the date on which either Party has served a written notice on the other Party making claims and for discussions, then the provisions of Part B (i.e. Conciliation) of this Clause shall apply.

**(B) CONCILIATION**

- (i) All disputes and differences covered under the Conciliation Rules, 2019 arising out of or relating to this contract including its performance or interpretation, shall be fully and finally settled through Conciliation as per the Conciliation Rules, 2019 of HPCL, as amended from time to time.

- (ii) The Conciliation Rules, 2019 of HPCL and any modification thereof shall be binding upon the Parties
- (iii) The language of the conciliation shall be English;
- (iv) The governing law of this contract shall be of India.
- (v) In case the Conciliation fails, or if there are any disputes or differences which are not covered under Conciliation Rules, 2019, then the parties shall be free to take appropriate legal remedies for adjudication of their disputes.
- (vi) The Courts having jurisdiction over the place where the contract was performed, except for enforcement of decree/judgment, shall be the court having jurisdiction to adjudicate the disputes between the parties.

## **42. JURISDICTION**

The Vendor hereby agrees that the Courts situated in location given in tender header” shall have the jurisdiction to hear and determine all actions and proceedings arising out of this contract.

### **CLAUSE**

- a. Vendor needs to clarify whether you are registered with NSIC. If registered, vendor needs to submit the following documents along with their offer.
- b. Photocopy of the NSIC Registration Certificate, which clearly shows the following details/information:
  - i. Name of the Bidder
  - ii. Address of the Bidder
  - iii. Validity of the Registration
  - iv. Items for which the Bidder is registered
  - v. Monetary Limitand acknowledged copy of Entrepreneurs Memorandum Part II
- c. Also vendor has to clarify whether you have secured Orders for same items, during the preceding 12 months, in competition with Large Scale Units, WITHOUT any Price Preference.
- d. In case vendor have secured Orders for same items, during the preceding 12 months, in competition with Large Scale Units, WITHOUT any Price Preference, then vendor has to furnish a Declaration on their Letter Head accordingly.
- e. Please note that in the absence of the above information, offer will be evaluated without considering Price Preference.

1.0 Preference to MSEs (Refer Gazette notification of the Government of India , the Ministry of Micro, Small and Medium Enterprises number S.O.2119 (E ), dated 26<sup>th</sup> June, 2020 on criteria for lassifying the enterprises as micro, small and medium enterprises & Udyam registration for revised guideline.)

- a. In case the bidder is a Micro or Small Enterprises registered with District Industries Centers or Khadi and Village Industries Commission or Khadi and Village Industries Board or Coir Board or National Small Industries Corporation or Directorate of Handicrafts and Handloom or any other body specified by Ministry of Micro and Small

Enterprises, the bidder shall be entitled for following:

- i. Issue of Tender Documents to MSEs free of cost.
- ii. Exemption to MSEs from payment of EMD.
- iii. Micro and Small Enterprises quoting price within price band of L1+15% shall also be allowed to supply a portion of requirement by bringing down their prices to L1 price in a situation where L1 price is from someone other than a micro and small enterprises and such micro and small enterprises shall be allowed to supply upto 25% of the total tendered value. In case of more than one such Micro and Small Enterprises, the supply of 25% portion shall be shared amongst them. Further, out of above 25%, of 4% will be earmarked for procurement from MSEs owned by SC/ST entrepreneurs and 3% will be earmarked for procurement from MSEs owned by women.

This quota is to be transferred to other MSEs in case of non-availability of MSEs owned by SC/ST entrepreneurs or women entrepreneurs.

- b. The quoted prices against various items shall remain valid in case of splitting of quantities of the items as above.
- c. MSE bidder shall submit the following:
  - i. Documentary evidence that the bidder is a Micro or Small Enterprises registered with District Industries Centers or Khadi and Village Industries Commission or Khadi and Village Industries Board or Coir Board or National Small Industries Corporation or Directorate of Handicrafts and Handloom or any other body specified by Ministry of Micro, Small and Medium Enterprises.
  - ii. If the MSE is owned by SC/ST Entrepreneurs or MSEs owned by women entrepreneurs, the bidder shall furnish appropriate documentary evidence in this regard.
  - iii. The above documents submitted by the bidder shall be duly certified by the Statutory Auditor of the bidder or a practicing Chartered Accountant (not being an employee or a Director or not having any interest in the bidder's company/firm) where audited accounts are not mandatory as per law.
- d. If the bidder does not provide the appropriate document or any evidence to substantiate the above, then it will be presumed that they do not qualify for any preference admissible in the Public Procurement Policy for Micro and Small Enterprises (MSEs) order 2012 along with amendments notified vide Government of India Gazette from time to time.

#### **43. VALIDITY OF OFFER:**

Offer shall be valid for 3 months from the due date / extended due date of the tender enquiry.

#### **44. INTEGRITY PACT:**

All tenders shall comply with the requirements of the Integrity Pact (IP) if the value of such tenders is ₹ 1 crore & above. Failure to sign the Integrity Pact shall lead to outright rejection of bid.

**45. ORDER OF PRECEDENCE**

In case of any discrepancy between the conditions stated in the GPC (which is an integral part of the Order) and those specifically mentioned in the Purchase Order, the later shall prevail over the former.

**46. GENERAL:**

- a. Deviations to Terms and Conditions shall lead to loading of prices or make your offer liable for rejection.
- b. All resident/non-resident parties to obtain and furnish their PAN in order to avoid tax withholding at a higher rate. Even though the non-residents may not have permanent establishment (PE), branch, local office in India, they can apply with their foreign address. For your information, the web address for applying for PAN in Form No. 49A to NSDL or UTISL online as given in the following sites: (AO details for International Taxation are also available online).
  - i. <http://tin.tin.nsdl.com/pan/index.html/>
  - ii. <http://incometaxindia.gov.in/>
  - iii. <https://incometaxindiaefiling.gov.in/portal/index.jsp>
  - iv. <http://www.utitsl.co.in/>
- c. GRIEVANCE REDRESSAL: There is a grievance redressal mechanism in HPCL for vendors participating in the tender, the details of which are available on HPCL's website [www.hindustanpetroleum.com](http://www.hindustanpetroleum.com).
- d. PBG Format is attached with this GPC.
- e. The guidelines for Holiday Listing as adopted and available on HPCL website shall be applicable to all tenders floated and all Purchase Orders/ Contracts placed by HPCL.

**ANNEXURE 2B: BANK GUARANTEE  
FOR ADVANCES**

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**BANK GUARANTEE FOR ADVANCES**

(on non-judicial stamp paper of appropriate value)

To,  
Hindustan Petroleum Corporation Ltd.,

(Address as applicable)

In CONSIDERATION OF MESSRS. HINDUSTAN PETROLEUM CORPORATION LIMITED, a Government of India Company registered under the Companies Act 1956, having its registered office at 17, Jamshedji Tata Road, Bombay - 400 020 (hereinafter called "the Corporation" which expression shall include its successors in business and assigns) having placed an order on Messrs \_\_\_\_\_ a partnership firm/sole proprietor business/ a company registered under the Companies Act, 1956 having its office at \_\_\_\_\_ (hereinafter called "the Supplier" which expression shall include its successors and assigns) vide Order No. \_\_\_\_\_ dated \_\_\_\_\_ (hereinafter called "the Order" which expression shall include any amendments/alterations thereto as issued by "the Corporation") for the supply of goods/to the execution of Service for "the Corporation" and having agreed to pay the supplier as and by way of advance upto a sum of ₹ \_\_\_\_\_ (Rupees \_\_\_\_\_ only) being \_\_\_\_\_% of the value of the order in terms of "the Order" on production of an acceptable Bank Guarantee for an amount of \_\_\_\_\_ (Rupees \_\_\_\_\_ only)

1. We, \_\_\_\_\_ Bank having office at \_\_\_\_\_ (hereafter referred to as "the Bank") do at the request and on behalf of "the Supplier's" hereby agree to pay "the Corporation" without any demur on first demand an amount not exceeding ₹ \_\_\_\_\_ (Rupees \_\_\_\_\_ only) against any loss or damage, costs, charges and expenses caused to or suffered or would be caused to or suffered by "the Corporation" by reason \_\_\_\_\_ of any breach on the part of "the Supplier" of any of the terms and conditions of the said order.
2. We, \_\_\_\_\_ Bank further agree that "the Corporation" shall be sole judge whether the said "Supplier" has committed breach of any of the terms and conditions of "the Order" and the extent of loss, damage, cost charges and expenses suffered or incurred or would be suffered or incurred by "the Corporation" on account thereof and we waive in favour of "the Corporation" all the rights and defences to which we as guarantors and/or "the Supplier" may be entitled to.
3. We, \_\_\_\_\_ Bank further agree that the amount demanded by "the Corporation" as such shall be final and binding on "the Bank" as to "the Bank's" liability to pay and amount demanded and "the Bank" undertake to pay "the Corporation" the amount so demanded on first demand and without any demur notwithstanding any dispute raised by "the Supplier" or any suit or other legal proceedings including arbitration **or conciliation** pending before any court, tribunal or arbitrator **or conciliator(s)** relating thereto, our liability under

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**ANNEXURE 2B: BANK GUARANTEE  
FOR ADVANCES**

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this guarantee being absolute and unconditional. (We \_\_\_\_\_ Bank further agree that the guarantee herein contained shall remain in full force and continue to have full effect so long as the said amount remains unadjusted, provided, however, the value of the guarantee shall progressively reduce upon any adjustments being made by "the Corporation" against the said advance and "the Corporation" rights shall extend only to the value of the unadjusted amount.

4. We, \_\_\_\_\_ Bank further agree with "the Corporation" that "the Corporation" shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said "order"/or to extend time of performance by "the Supplier" from time to time or to postpone for any time or from time to time any of the powers exercisable by "the Corporation" against "the Supplier" and to forbear to enforce any of the terms and conditions relating to "the Order" and we shall not be relieved from our liability by reason of any such variation or extension being granted to "the Supplier" or for any forbearance, act or omission on "the Supplier" or by any such matter or things whatsoever which under the law relating to sureties would be for this provisions have the effect of relieving us.
5. Notwithstanding anything contained herein above :
  - i. Our liability under this guarantee shall not exceed ` .....
  - ii. This Bank Guarantee shall be valid upto and including.....; and
  - iii. We are liable to pay the guarantee amount or any part thereof under this Bank Guarantee only and only if you serve upon us a written claim or demand on or *# before the expiry of 30 days from the date of expiry of this guarantee*
6. We, \_\_\_\_\_ Bank further undertake not to revoke this guarantee during its currency except with the previous consent of "the Corporation" in writing.
7. We, \_\_\_\_\_ Bank lastly agree that "the Bank" liability under this guarantee shall not be affected by any change in the constitution of "the Supplier".
8. We, \_\_\_\_\_ Bank has power to issue this guarantee in favour of "the Corporation" in terms of the documents and/or the agreement/contract or MOU entered into between "the supplier" and "the Bank" in this regard.

IN WITNESS WHEREOF the Bank has executed this document on this \_\_\_\_\_ day of \_\_\_\_\_

\_\_\_\_\_  
(FOR \_\_\_\_\_ BANK)  
(by its constituted attorney)  
(signature of a person authorized  
to sign on behalf of "the Bank")

Bidders to note the following:

- 1) BG shall be submitted in the form of Bank Guarantee payable at Mumbai as per above enclosed format.
- 2) The place of encashment of BG shall be stated as "Mumbai"
- 3) Bidders to submit SFMS confirmation along with BG. Issuing bank should sent SFMS confirmation to ICICI Bank Limited with IFSC Code ICIC0000393
- 4) Bidders to submit Contact details of issuing branch
- 5) HPCL details for BG issuance is as below:

Beneficiary Bank Name : ICICI Bank LIMITED

Branch Address : 163 BACKBAY RECLAMATION, MUMBAI 400020

IFSC Code : ICIC0000393

Telephone Number : 022 - 67574314 / 4322

Email ID : tradekcm@icicibank.com

Beneficiary : HINDUSTAN PETROLEUM CORPORATION LIMITED

HPCL Customer ID : 508902133

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**BANK GUARANTEE FOR SECURITY DEPOSIT**

**BANK GUARANTEE FOR SECURITY DEPOSIT**

(On Non-Judicial stamp paper of appropriate value)

TO : Hindustan Petroleum Corporation Limited  
(Address as applicable)

IN CONSIDERATION OF MESSRS. HINDUSTAN PETROLEUM CORPORATION LIMITED, a Government of India Company registered under the Companies Act, 1956, having its registered office at 17, Jamshedji Tata Road, Bombay-20 (hereinafter called "The Corporation" (which expression shall include its successor in business and assigns) having placed an order on Messers ..... a partnership firm/sole proprietor business/a company registered under the Companies Act, 1956 having its office at ..... (hereinafter called "the supplier") (which expression shall include executors, administrators and assigns) vide order No..... dated..... (hereinafter called "the order" which expression shall include any amendments/alterations to "the order" issued by "the Corporation") for the supply of goods to/execution of services for "the Corporation" and "the Corporation" having agreed :

- a) not to insist upon immediate payment of Security Deposit for the fulfilment and performance of the said order
- b) that "the supplier" shall furnish a security for the performance of "the supplier's" obligations and/or discharge of "the supplier's" liability in connection with the said "order"; and "the Corporation" having agreed with "the supplier" to accept Bank Guarantee for the security deposit.

We, ..... Bank having office at ..... (hereinafter referred to as "the Bank" which expression shall include its successors and assigns) at the request and on behalf of "the supplier" hereby agree to pay to "the Corporation" without any demur on first demand an amount not exceeding r..... (Rupees.....only) against any loss or damage, costs, charges and expenses caused to or suffered by "the Corporation" by reason of non performance and fulfilment or for any breach on the part of "the supplier" of any of the terms and conditions of the said "order".

2. We, ..... Bank further agree that "the Corporation" shall be sole judge whether the said "Supplier" has failed to perform or fulfill the said "order" in terms thereof or committed breach of any terms and conditions of "the order" and the extent of loss, damage, cost, charges and expenses suffered or incurred or would be suffered or incurred by "the Corporation" on account thereof and we waive in the favour of "the Corporation" all the rights and defenses to which we as guarantors and/or "the Supplier" may be entitled to.

3. We, ..... Bank further agree that the amount demanded by "the Corporation" as such shall be final and binding on "the Bank" as to "the Bank's" liability to pay and the amount demanded and "the Bank" undertake to pay "the Corporation" the amount so demanded on first demand and without any demur notwithstanding any

**ANNEXURE 2F: BANK GUARANTEE FOR SECURITY DEPOSIT**

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- ® dispute raised by "the Supplier" or any suit or other legal proceedings including arbitration or conciliation pending before any court, tribunal or arbitrator or conciliator(s) relating thereto, our liability under this guarantee being absolute and unconditional.
4. We, ..... Bank further agree with "the Corporation" that "the Corporation" shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said "order"/or to extend time of performance by "the Supplier" from time to time or to postpone for any time to time any of the powers exercisable by "the Corporation" against "the Supplier" and to forbear to enforce any of the terms and conditions relating to "the order" and we shall not be relieved from our liability by reason of any such variation or extension being granted to "the Supplier" or for any forbearance, act or omission on the part of "the Corporation" or any indulgence by "the Corporation" to "the Supplier" or by any such matter or things whatsoever which under the law relating to sureties would but for this provision have the effect of relieving us.
5. However, it has been agreed between "the Supplier" and "the Corporation" Bank Guarantee for security deposit is Valid upto a period of 3 (Three) months beyond the expiry of the defects liability period as per the terms of the Order No. dated \_\_\_\_\_.
6. Notwithstanding anything contained herein above :
- i. Our liability under this guarantee shall not exceed r .....
  - ii. This Bank Guarantee shall be valid upto and including ; and
  - iii. We are liable to pay the guarantee amount or any part thereof under this Bank Guarantee only and only if you serve upon us a written claim or demand on or # *before the expiry of 30 days from the date of expiry of this guarantee.*
7. We, ..... Bank further undertake not to revoke this guarantee during its currency except with the previous consent of "the Corporation" in writing.
8. We, ..... Bank lastly agree that "the Bank"'s liability under this guarantee shall not be affected by any change in the constitution of "the Supplier".
9. "The Bank" has power to issue this guarantee in favour of "the Corporation" in terms of the documents and/or the Agreement/Contract or MOU entered into between "the Supplier" and "the Bank" in this regard.

IN WITNESS WHEREOF the Bank has executed this document on this

..... day of .....

For .....Bank (by its  
constituted attorney) (Signature of  
a person authorised to sign on  
behalf of "the Bank")\*

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**BANK GUARANTEE FOR PERFORMANCE OF THE OBLIGATIONS OF SUPPLIER / CONTRACTOR**

(on non-judicial stamp paper of appropriate value)

To,

Hindustan Petroleum Corporation Ltd.,  
(Address as applicable)

IN CONSIDERATION OF THE HINDUSTAN PETROLEUM CORPORATION LTD. a

Government of India Company registered under the Companies Act, 1956, having its registered office at 17, Jamshedji Tata Road, Bombay - 400 020 (hereinafter called "the Corporation" which expression shall include its successors and assigns) having awarded to M/s \_\_\_\_\_ a partnership firm/sole proprietor business/a company registered under the Companies Act, 1956 having its office at \_\_\_\_\_ (hereinafter referred to as "the Supplier" which expression shall wherever the subject or context so permits includes its successors and assigns) a supply contract in terms inter alia, of "the Corporation's" Order No. \_\_\_\_\_ dated \_\_\_\_\_ and the General procurement conditions of "the Corporation" and upon the condition of "supplier's" furnishing security for the performance of "the Supplier's" obligations and/or discharge of "the supplier's" liability under and/or in connection with the said supply contract upto a sum of r (Rupees \_\_\_\_\_) amounting to 10% (ten percent) of the total contract value.

We, \_\_\_\_\_ (hereinafter called "the Bank" which expression shall include its successors and assigns) hereby jointly and severally undertake and guarantee to pay to "the Corporation" in rupees forthwith on demand in writing and without protest or demur of any and all moneys anyway payable by "the Supplier" to "the Corporation" under, in respect of or in connection with the said supply contract inclusive of all the Corporation's losses and damage and costs, (inclusive between attorney and client) charges, and expenses and other moneys anyway payable in respect of the above as specified in any notice of demand made by "the Corporation" to the Bank with reference to this Guarantee upto and aggregate limit of r \_\_\_\_\_ (Rupees \_\_\_\_\_) and "the

Bank" hereby agrees with "the Corporation" that:

1. This Guarantee/Undertaking shall be a continuing Guarantee /Undertaking and shall remain valid and irrevokable for all claims of "the Corporation" and liabilities of "the Supplier" arising upto and until midnight of \_\_\_\_\_
2. This Guarantee/Undertaking shall be in addition to any other guarantee or security whatsoever that "the Corporation" may now or any time anyway have in relation to "the

## ANNEXURE 2C: BANK GUARANTEE FOR PERFORMANCE

Supplier's obligation/liabilities under and/or connection with the said supply contract, and "the Corporation" shall have full authority to take recourse to or enforce this security in preference to the other security(ies) at its sole discretion and no failure on the part of "the Corporation" to enforcing or requiring enforcement to any other security shall have the effect of releasing "the Bank" from its full liability hereunder.

3. "The Corporation" shall be at liberty without reference to "the Bank" and without affecting the full liability of "the Bank" hereunder to take any other security in respect of "the Supplier's" obligation and/or liabilities under or in connection with the said supply contract and to vary the term vis-a-vis "the supplier" of the said supply contract or to grant time and/or indulgence to "the Supplier" or to reduce or to increase or otherwise vary the prices of the total contract value or to release or to forebear from enforcement of all or any of the obligations of "the supplier" under the said supply contract and/or the remedies of "the Corporation" under any other security(ies) now or hereafter held by "the Corporation" and no such dealing(s), variation(s) or other indulgence(s) or agreement(s) with "the supplier" or release of forbearance whatsoever shall have the effect of releasing "the Bank" from its full liability to "the Corporation" hereunder or of prejudicing rights of "the Corporation" against "the Bank".
4. This Guarantee/Undertaking shall not be determined or affected by the liquidation or winding up, dissolution or change of constitution or insolvency of "the supplier" but shall in all respects and for all purposes be binding and operative until payment of all moneys payable to "the Corporation" in terms hereof.
- ® 5. "The Bank" hereby waives all rights at any time inconsistent with the terms of this Guarantee/Undertaking and the obligations of "the Bank" in terms hereof shall not be anyway affected or suspended by reason of any dispute having been raised by "the suppliers" (whether or not pending before any arbitrator, **conciliator(s)**, officer, tribunal or court) or any denial of liability by "the supplier" or any other order of communication whatsoever by "the supplier" stopping or preventing or purporting to stop or prevent any payment by "the Bank" to "the Corporation" in terms hereof.
6. The amount stated in any notice of demand addressed by "the Corporation" to "the Bank" as liable to be paid to "the Corporation" by "the supplier" or as suffered or incurred by "the Corporation" on account of any losses or damages or costs, charges/and/or expenses shall be as between "the Bank" and "the Corporation" be conclusive of the amount soliable to be paid to "the Corporation" or suffered or incurred by "the Corporation", as the case may be, and payable by "the Bank" to "the Corporation", in terms hereof.
7. Notwithstanding anything contained herein above :
  - i. Our liability under this guarantee shall not exceed r.....
  - ii. This Bank Guarantee shall be valid upto and including.....; and
  - iii. We are liable to pay the guarantee amount or any part thereof under this Bank Guarantee only and only if you serve upon us a written claim or demand on or # before the expiry of 30 days from the date of expiry of this guarantee.

**ANNEXURE 2C: BANK GUARANTEE FOR PERFORMANCE**

8. "The Bank" has power to issue this guarantee in favour of "the Corporation" in terms of the documents and/or the agreement/contract or MOU entered into between "the supplier" and "the Bank" in this regard.

IN WITNESS Where of \_\_\_\_\_ Bank, has executed this document at  
\_\_\_\_\_ on \_\_\_\_\_ 199 .

\_\_\_\_\_ Bank  
(by its constituted attorney) (signature of a  
person authorized to sign on behalf of "the  
Bank")

Bidders to note the following:

- 1) BG shall be submitted in the form of Bank Guarantee payable at Mumbai as per above enclosed format.
- 2) The place of encashment of BG shall be stated as "Mumbai"
- 3) Bidders to submit SFMS confirmation along with BG. Issuing bank should sent SFMS confirmation to ICICI Bank Limited with IFSC Code ICIC0000393
- 4) Bidders to submit Contact details of issuing branch
- 5) HPCL details for BG issuance is as below:
  - Beneficiary Bank Name : ICICI Bank LIMITED
  - Branch Address : 163 BACKBAY RECLAMATION, MUMBAI 400020
  - IFSC Code : ICIC0000393
  - Telephone Number : 022 - 67574314 / 4322
  - Email ID : tradekcm@icicibank.com
  - Beneficiary : HINDUSTAN PETROLEUM CORPORATION LIMITED
  - HPCL Customer ID : 508902133

**ANNEXURE 2L: INSURANCE SURETY BOND FOR  
PERFORMANCE SECURITY**

**INSURANCE SURETY BOND TOWARDS PERFORMANCE OF THE  
OBLIGATIONS OF SUPPLIER/CONTRACTOR**

(On Non-Judicial stamp Paper of appropriate value)

TO: Hindustan Petroleum Corporation Limited  
(Address as applicable)

IN CONSIDERATION OF THE HINDUSTAN PETROLEUM CORPORATION LTD. A Government of India Company registered under the Companies Act, 1956, having its registered office at 17, Jamshedji Tata Road, Mumbai- 400 020 (hereinafter called "the Corporation/Creditor" which expression shall include its successors and assigns) having awarded to M/s..... a partnership firm/sole proprietor business/a company registered under the Companies Act, 1956 having its office at (hereinafter referred to as "the Supplier/Principal Debtor" which expression shall wherever the subject or context so permits includes its successors and assigns) a supply contract in terms inter alia, of "the Corporation's/Creditor's" order No. ....dated.....and the General procurement conditions of "the Corporation/Creditor" and upon the condition of "the Supplier's/Principal Debtor's" furnishing security for the performance of "the Supplier's/Principal Debtor's" obligations and/or discharge of "the Supplier's/Principal Debtor's" liability under and/or in connection with the said supply contract upto a sum of Rs..... (Rupees.....) amounting to 10% (ten percent) of the total contract value.

We .....Surety having its office at.....(hereinafter referred to as "the Surety" which expression shall include its successors and assigns) hereby jointly and severally undertake and guarantee to pay to "the Corporation/Creditor" in rupees forthwith on demand in writing and without protest or demur of any and all moneys anywise payable by "the Supplier/Principal Debtor" to "the Corporation/Creditor" under, in respect of or in connection with the said supply contract inclusive of all "the Corporation's/Creditor's" losses and damage and costs, (inclusive between attorney and client) charges, and expenses and other moneys anywise payable in respect of the above as specified in any notice of demand made by "the Corporation/Creditor" to "the Surety" with reference to this Insurance Surety Bond upto and aggregate limit of Rs.....(Rupees.....) and "the Surety" hereby agrees with "the Corporation/Creditor" that:

1. This Insurance Surety Bond shall be a continuing and shall remain valid and irrevocable for all claims of "the Corporation/ Creditor" and liabilities of "the Supplier/Principal Debtor" arising upto and until midnight of.....
2. This Insurance Surety Bond shall be in addition to any other guarantee or security whatsoever that "the Corporation/Creditor" may now or any time anywise have in relation to "the Supplier's/Principal Debtor's obligation/liabilities under and/or connection with the said supply contract, and "the Corporation/Creditor" shall have full authority to take recourse to or enforce this security in preference to the other security(ies) at its sole discretion and no failure on the part of "the Corporation/Creditor" to enforcing or requiring enforcement to any other security shall have the effect of releasing "the Surety" from its full liability hereunder.

3. "The Corporation/Creditor" shall be at liberty without reference to "the Surety" and without affecting the full liability of "the Surety" hereunder to take any other security in respect of "the Supplier's/Principal Debtor's" obligation and/or liabilities under or in connection with the said supply contract and to vary the term vis-a-vis "the Supplier/Principal Debtor" of the said supply contract or to grant time and/or indulgence to "the Supplier/Principal Debtor" or to reduce or to increase or otherwise vary the prices of the total contract value or to release or to forebear from enforcement of all or any of the obligations of "the Supplier/Principal Debtor" under the said supply contract and/or the remedies of "the Corporation/Creditor" under any other security(ies) now or hereafter held by "the Corporation/Creditor" and no such dealing(s), variation(s) or other indulgence(s) or agreement(s) with "the Supplier/Principal Debtor" or release of forbearance whatsoever shall have the effect of releasing "the Surety" from its full liability to "the Corporation/Creditor" hereunder or of prejudicing rights of "the Corporation/Creditor" against "the Surety".
4. This Insurance Surety Bond shall not be determined or affected by the liquidation or winding up, dissolution or change of constitution or insolvency of "the Supplier/Principal Debtor" but shall in all respects and for all purposes be binding and operative until payment of all moneys payable to "the Corporation/Creditor" in terms hereof
5. "The Surety" hereby waives all rights at any time inconsistent with the terms of this Insurance Surety Bond and the obligations of "the Surety" in terms hereof shall not be anyway affected or suspended by reason of any dispute having been raised by "the Suppliers/Principal Debtors" (whether or not pending before any arbitrator, conciliator(s), officer, tribunal or court) or any denial of liability by "the Supplier/Principal Debtor" or any other order of communication whatsoever by "the Supplier/Principal Debtor" stopping or preventing or purporting to stop or prevent any payment by "the Surety" to "the Corporation/Creditor" in terms hereof.
6. The amount stated in any notice of demand addressed by "the Corporation/Creditor" to "the Surety" as liable to be paid to "the Corporation/Creditor" by "the Supplier/Principal Debtor" or as suffered or incurred by "the Corporation/Creditor" on account of any losses or damages or costs, charges/and/or expenses shall be as between "the Surety" and "the Corporation/Creditor" be conclusive of the amount so liable to be paid to "the Corporation/Creditor" or suffered or incurred by "the Corporation/Creditor", as the case may be, and payable by "the Surety" to "the Corporation/Creditor", in terms hereof.
7. Notwithstanding anything contained herein above:
  - I. Our liability under this Insurance Surety Bond shall not exceed Rs .....
  - II. This Insurance Surety Bond shall be valid up to and including \_\_\_\_ (date); and
  - III. We are liable to pay the Insurance Surety Bond amount or any part thereof under this Insurance Surety Bond only and only if you serve upon us a written claim or demand on or before the expiry of 30 days from the date of expiry of this Insurance Surety Bond.
8. "The Surety" has power to issue this Insurance Surety in favour of "the Corporation/Creditor" in terms of the documents and/or the agreement/contract or MOU entered into between "the Supplier/Principal Debtor" and "the Surety" in this regard.

IN WITNESS WHEREOF the Surety has executed this document on this ..... day of ..... For ..... Surety (by its constituted attorney)

(Signature of a person authorized to sign on behalf of "the Surety")

**ANNE XURE - 11 (SPECIMEN)**

**COMPOSITE BANK GUARANTEE FOR, SECURITY DEPOSIT/  
RETENTION MONEY/PERFORMANCE GUARANTEE**

(On Non-Judicial stamp paper of appropriate value)

To: Hindustan  
Petroleum Corporation  
Limited (Address as  
applicable)

**IN CONSIDERATION OF HINDUSTAN PETROLEUM CORPORATION LIMITED**, a Government Company registered under the Companies Act, 1956, having its registered office at 17, Jamshedji Tata Road, Churchgate, Mumbai-400020 hereinafter called "The Corporation" (which expression shall include its successors in business and assigns) having placed an order on M/s..... a sole proprietor business/a company registered under the Companies Act its office at ..... hereinafter called "the supplier" (which expression shall include its executors, administrators and assigns) vide order No..... dated..... (hereinafter called "the order" which expression shall include any amendments/alterations to "the order" issued by "the Corporation") for the supply of goods to/execution of work/ providing services for "the Corporation" and "the Corporation" having agreed :

- a. not to insist upon immediate payment of Security deposit for the fulfilment and performance of the said order and agreed to accept a Bank Guarantee in lieu thereof;
- b. not to deduct retention money from the bills of the supplier and accept a Bank Guarantee in lieu thereof;
- c. that "the supplier" shall furnish a security for the performance of "the supplier's" obligations and/or discharge of "the supplier's" liability in connection with the said "order"; and "the Corporation" having agreed with

"the supplier" to accept a composite Bank Guarantee for the security deposit, retention money and performance guarantee;

2) We, \_\_\_\_\_ Bank having its office at \_\_\_\_\_ (hereinafter referred to as "the Bank" which expression shall include its successors and assigns) at the request and on behalf of "the supplier", hereby unconditionally and irrevocably agree to pay to "the Corporation" without any demur, on first demand, an amount not exceeding r..... (Rupees.....only) against any loss or damage, costs, charges and expenses caused to or suffered by "the Corporation" by reason of non-performance and fulfilment or for any breach on the part of "the supplier" of any of the terms and conditions of the said "order".

3) We, ..... Bank further agree that "the Corporation" shall be the Sole Judge as to whether the said "Supplier" has failed to perform or fulfill the said "order" in terms thereof or committed breach of any terms and conditions of "the order" and the extent of the loss, damage, cost, charges and expenses suffered or incurred or which would be suffered or incurred by "the Corporation" on account thereof and we waive in favour of "the Corporation" all the rights and defences to which, we as guarantors and/or "the Supplier" may be entitled to.

4) We, ..... Bank further agree that the amount demanded by "the Corporation" as such shall be final and binding on "the Bank" as to "the Bank" 's liability to pay and the amount demanded and "the Bank" undertake to pay "the Corporation" the amount so demanded, on first demand and without any demur, notwithstanding any dispute raised by "the Supplier" or the pendency of any suit or other legal proceedings including arbitration or conciliation pending before any court, tribunal or arbitrator or conciliator(s) relating thereto, our liability under this

guarantee being absolute and unconditional.

5) We, ..... Bank further agree with "the Corporation" that "the Corporation" shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder, to vary any of the terms and conditions of the said "order" or to extend time of performance by "the Supplier" from time to time or to postpone for any time to time any of the powers exercisable by "the Corporation" against "the Supplier" and to forbear to enforce any of the terms and conditions relating to "the order" and we shall not be relieved from our liability by reason of any such variation or extension being granted to "the Supplier" or for any forbearance, act or omission on the part of "the Corporation" or any indulgence by "the Corporation" to "the Supplier" or by any such matter or things whatsoever, which, under the law relating to sureties, would, but for this provision, have the effect of relieving us.

6) However, it has been agreed between "the Supplier" and "the Corporation" that there shall be only one Composite Bank Guarantee for the security deposit and performance guarantee/Retention Money @ \_\_\_ \_\_\_% of the Contract Value, valid till the end of the defect liability period as per the terms of the P.O. No. \_\_\_\_\_ dated \_\_\_\_\_. This guarantee shall stand and remain valid towards the \_\_\_% retention money/defects liability, fully valid in all respects unto a further period of 3 (three) months, as per the Purchase Order of "the Corporation".

7) Notwithstanding anything contained herein above :

- i. Our liability under this guarantee shall not exceed r .....
- ii. This Bank Guarantee shall be valid upto and including \_\_\_\_\_ ( date ) ; and
- iii. We are liable to pay the guarantee amount or any part thereof under

this Bank Guarantee only and only if you serve upon us a written claim or demand on or before the expiry of 60 days from the date of expiry of this guarantee.

iv. This Guarantee may be invoked in parts and our liability shall remain for the entire value/ balance value of the Guarantee till its expiry.

8) We, ..... Bank further undertake not to revoke this guarantee during its currency except with the previous consent of "the Corporation" in writing.

9) We, ..... Bank lastly agree that "the Bank"'s liability under this guarantee shall not be affected by any change in the constitution of "the Supplier".

IN WITNESS WHEREOF the Bank has executed this document on this ..... day of ....., 20\_\_ .

For.....  
Bank

(by its constituted attorney)  
(Signature of a person authorised to sign on behalf of "the Bank")\*

Bidders to note the following:

- 1) BG shall be submitted in the form of Bank Guarantee payable at Mumbai as per above enclosed format.
- 2) The place of encashment of BG shall be stated as "Mumbai"
- 3) Bidders to submit SFMS confirmation along with BG. Issuing bank should sent SFMS confirmation to ICICI Bank Limited with IFSC Code ICIC0000393
- 4) Bidders to submit Contact details of issuing branch
- 5) HPCL details for BG issuance is as below:
  - Beneficiary Bank Name : ICICI Bank LIMITED
  - Branch Address : 163 BACKBAY RECLAMATION, MUMBAI 400020
  - IFSC Code : ICIC0000393
  - Telephone Number : 022 - 67574314 / 4322
  - Email ID : tradekcm@icicibank.com
  - Beneficiary : HINDUSTAN PETROLEUM CORPORATION LIMITED
  - HPCL Customer ID : 508902133

**ANNEXURE 2M: COMPOSITE INSURANCE SURETY BOND  
FOR SECURITY DEPOSIT/RETENTION MONEY/  
PERFORMANCE SECURITY**

**INSURANCE SURETY BOND TOWARDS PERFORMANCE SECURITY**

(On Non-Judicial stamp Paper of appropriate value)

TO: Hindustan Petroleum Corporation Limited  
(Address as applicable)

IN CONSIDERATION OF HINDUSTAN PETROLEUM CORPORATION LIMITED, a Government Company registered under the Companies Act, 1956, having its registered office at 17, Jamshedji Tata Road, Church gate, Mumbai- 400020 hereinafter called "the Corporation/Creditor" (which expression shall include its successors in business and assigns) having placed an order on M/s..... a sole proprietor business/a company registered under the Companies Act, 1956 having its office at (hereinafter called "the Supplier/Principal Debtor", which expression shall include its executors, administrators and permitted assigns) vide order No. .... dated..... (hereinafter called "the Order" which expression shall include any amendments/alterations to "the Order" issued by "the Corporation/Creditor") for the supply of goods to/execution of work/ providing services for "the Corporation/Creditor " and "the Corporation/Creditor " having agreed:

- a) not to insist upon immediate payment of Security deposit for the fulfilment and performance of the said Order and agreed to accept Insurance Surety Bond in lieu thereof;
- b) not to deduct retention money from the bills of "the Supplier/Principal Debtor" and accept a Insurance Surety Bond in lieu thereof;
- c) that "the Supplier/Principal Debtor" shall furnish a security in the form of Insurance Surety Bond for the performance of "the Supplier's/Principal Debtor's" obligations and/or discharge of "the Supplier's/ Principal Debtor's" liability in connection with the said "order"; and "the Corporation/Creditor " having agreed with "the Supplier/Principal Debtor " to accept Insurance Surety Bond for the security deposit, retention money and performance guarantee;

1. We, ..... Surety having its office at .....(hereinafter referred to as "the Surety" which expression shall include its successors and assigns) at the request and on behalf of "the Supplier/Principal Debtor", hereby unconditionally and irrevocably agree to pay to "the Corporation/Creditor" without any demur, on first demand, an amount not exceeding Rs..... (Rupees.....only) against any loss or damage, costs, charges and expenses caused to or suffered by "the Corporation/Creditor" by reason of non-performance and fulfilment or for any breach on the part of "the Supplier/Principal Debtor" of any of the terms and conditions of the said "Order".
2. We, ..... Surety further agree that "the Corporation/Creditor" shall be the Sole Judge as to whether the said "Supplier/Principal Debtor" has failed to perform or fulfil the said "Order" in terms thereof or committed breach of any terms and conditions of "the Order" and the extent of the loss, damage, cost, charges and expenses suffered or incurred or which would be suffered or incurred by "the Corporation/Creditor" on account thereof and we waive in favour of "the Corporation/Creditor" all the rights and defences to which, we as "the Surety" and/or "the Supplier/Principal Debtor " may be entitled to.
3. We, ..... Surety further agree that the amount demanded by "the Corporation/Creditor " as such shall be final and binding on "the Surety" as to "the Surety's liability to pay and the amount demanded and "the Surety" undertake to pay "the Corporation/Creditor " the amount so demanded, on first demand and without any demur,

notwithstanding any dispute raised by "the Supplier/Principal Debtor" or the pendency of any suit or other legal proceedings including arbitration or conciliation pending before any court, tribunal or arbitrator or conciliator(s) relating thereto, our liability under this Bond being absolute , unconditional and irrevocable.

4. We, ..... Surety further agree with "the Corporation/Creditor " that "the Corporation/Creditor " shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder, to vary any of the terms and conditions of the said "Order" or to extend time of performance by "the Supplier/Principal Debtor" from time to time or to postpone for any time to time any of the powers exercisable by "the Corporation/Creditor " against "the Supplier/Principal Debtor " and to forbear to enforce any of the terms and conditions relating to "the Order" and we shall not be relieved from our liability by reason of any such variation or extension being granted to "the Supplier/Principal Debtor " or for any forbearance, act or omission on the part of "the Corporation/Creditor " or any indulgence by "the Corporation/Creditor " to "the Supplier/Principal Debtor " or by any such matter or things whatsoever, which, under the law relating to sureties, would, but for this provision, have the effect of relieving us.
5. However, it has been agreed between "the Supplier/Principal Debtor" and "the Corporation/Creditor " that there shall be one Insurance Surety Bond for the security deposit and performance guarantee/Retention Money @ .....% of the Contract Value, valid till the end of the defect liability period as per the terms of the P.O. ....dated..... This Insurance Surety Bond shall be irrevocable and remain in full force for a period of 3 months after completion of defect liability period and shall continue to be enforceable till all amounts under this Insurance Surety Bond have been paid.
6. Notwithstanding anything contained herein above:
  - I. Our liability under this Insurance Surety Bond shall not exceed Rs.....
  - II. This Insurance Surety Bond shall be valid up to and including..... (date); and
  - III. We are liable to pay the Bond amount or any part thereof under this Insurance Surety Bond only and only if you serve upon us a written claim or demand on or before the expiry of 60 days from the date of expiry of this Insurance Surety Bond.
7. This Insurance Surety Bond may be invoked in parts and our liability shall remain for the entire value/ balance value of the bond till its expiry.
8. We, ..... Surety further undertakes not to revoke this Insurance Surety Bond during its currency except with the previous consent of "the Corporation/Creditor " in writing.
9. We, ..... Surety lastly agree that "the Surety's" liability under this Insurance Surety Bond shall not be affected by any change in the constitution of "the Supplier/Principal Debtor ".

IN WITNESS WHEREOF the Surety has executed this document on this ..... day of ..... For ..... Surety (by its constituted attorney)

(Signature of a person authorized to sign on behalf of "the Surety")

	Hindustan Petroleum Corporation Limited Mumbai Refinery	Issue No: 01
		Issue Date: 01/01/2018
		Rev No: 06
		Rev Date: 20/10/2024
	Safety Manual	Doc No: HPCLMR/APX/SFT/7500-01

Annexure - XII to SCC

## Section 5: Work Permit System

	<b>Hindustan Petroleum Corporation Limited</b> <b>Mumbai Refinery</b>	Issue No: 01
		Issue Date: 01/01/2018
		Rev No: 06
		Rev Date: 20/10/2024
		Doc No: HPCLMR/APX/SFT/7500-01
<b>Safety Manual</b>		

## 5.0 Basic Philosophy

In a chemical industry it is necessary to have practicable and sufficiently safe system of isolation of plants and equipment containing highly flammable, toxic, poisonous and corrosive materials so that hazards are eliminated and the maintenance jobs are carried out with high factor of safety. This can be best achieved by a proper and effective safety work permit system procedure which also fulfils the requirement of Sections 36 & 37 of Factories Act 1948 as well as OISD-STD-105.

In order to safeguard personnel and equipment, no mechanical work can be performed on operating equipment until authorization is received from the Operating or Process department or Area in-charge in the form of a work permit. This is necessary as mechanical personnel generally may not be adequately familiar with process conditions affecting the equipment on which work is to be done. More important, in most cases it is necessary for the Process Department to prepare the equipment involved for mechanical work. The permit procedure is a means of assuring that the Process Department has determined that it is safe to perform the designated work, that the scope of the job is defined and that the priority and time limits are set for performance of the mechanical work.

In an effort to establish control over operations using open flame or producing sparks or hazardous chemicals, or flammable materials, it becomes necessary to institute Work Permit System.

Our work permit system has been designed to provide the close contact and high degree of cooperation necessary to fix the responsibilities for the work to be done; and to safeguard personnel and equipment from fire and personal injury. The work permit system is operated on owner-in-charge basis in Refinery.

These procedures cover most cases. Special cases will, no doubt, arise where good judgment must be used and work carried out with adequate safety precautions.

### 5.1 Policies and Guidelines

- 5.1.1 It is the policy of the company to ensure the safety of people, equipment, materials and Environment when performing any work within the Refinery premises.
- 5.1.2 Jobs shall be performed only after obtaining the stipulated work permit.
- 5.1.3 All Permit issuers, approvers and receivers have to mandatory undergo Work Permit training and should have authorizing cards.
- 5.1.4 Permit shall be issued/ renewed and received only by personnel designated for the same and are to be signed by the issuing/ renewing and receiving personnel.
- 5.1.5 All necessary checks and tests shall be conducted to ensure safety of the jobs prior to issue of permits. All precautionary measures required to be taken shall be clearly indicated on the permit and their compliance ensured before handing over the permit to receiver. Permits shall be worded so as to limit the work to the designated areas/ equipment/ facilities, agencies and time. At the most Five meter deviation from the designated areas is allowed to facilitate piping activity.
- 5.1.6 If any of the conditions vary during the work which may affect safety of human beings and equipment, the job is to be stopped and permit to be withdrawn and given back to the issuer. Reason for withdrawing the permit shall be mentioned on the permit.

	<b>Hindustan Petroleum Corporation Limited</b> <b>Mumbai Refinery</b>	Issue No: 01
		Issue Date: 01/01/2018
		Rev No: 06
		Rev Date: 20/10/2024
	<b>Safety Manual</b>	Doc No: HPCLMR/APX/SFT/7500-01

- 5.1.7 If a permit is withdrawn, the work should be restarted only after safe conditions are established back and clearance obtained from the issuing authority.
- 5.1.8 Work Permit shall be made readily available at the worksite for verification by concerned personnel. The permit shall be put in a plastic folder and same shall be displayed at work site. Failure to present the permit on demand for verification shall result in stoppage of work and penalty as per SWP-5.
- 5.1.9 Site visits by the Permit Issuer, Area In-charge and Fire & Safety Personnel (depending on the requirement) will depend on the complexity and duration of that work, and the hazards involved. In the case of hot work and confined space jobs, the site visits shall be carried out at least twice at the start and completion of the work but more often if required. They shall verify whether the work is being carried out as per the conditions laid down in the work permit. The housekeeping of the site shall be proper to avoid incidents while executing job. All employees of MR are authorized to inspect any site and suspend jobs that are being executed in an unsafe manner.
- 5.1.10 Work permits are valid only for the shift or the time mentioned on work permit whichever is earlier.
- 5.1.11 If the jobs is to be continued beyond the shift, it shall be renewed at the beginning of the next shift. Approval from CGM (O) / GM (O) shall be taken for extended hours working beyond day light, on normal working day and working on off days & holidays.
- 5.1.12 Extended permit can be issued for major shutdown/ project/maint jobs for a maximum period of 31 days. For all extended permits (31 days), gas test shall be taken at least once in an each shift and gas testing record / register shall be maintained at worksite. Executing job supervisor is sole responsible for safe execution of job. In case of any untoward incident, job supervisor has to report the incident.
- 5.1.13 While renewing a work permit that has already been issued by another issuing authority of the concerned department, the renewing authority is no way relieved of the duties and responsibilities specified by the original issuing authority.
- 5.1.14 At the time of renewal of a permit or when the job is in progress, if the issuing or renewal authority as the case may be feel that some additional conditions or precautions already stipulated are not necessary based on the prevailing condition, a new permit is to be issued incorporating the changes and the previous permit should be withdrawn.
- 5.1.15 All work permits must be closed on completion of the job by the supervisor of the executing department/section and the permit duly signed for closure is to be returned to the issuer. Closed work permit shall be retained for minimum six months from the date of closure.
- 5.1.16 The work permit should be issued for one job only. Separate permits to be issued for performing different work on same equipment.
- 5.1.17 No hot work shall be allowed to be included in the hot work permit already issued for the other jobs. Each permit shall be job specific, location specific and activity specific.
- 5.1.18 Whenever there is a job in pipe track/ pipe alley which is in close vicinity (less than 5 meter) of process unit then prior to issuing of the permit the clearance from the concerned unit in charge should also be obtained.
- 5.1.19 Each hot work permit shall have only a single job with job scope printed on it and the person who is taking the gas test must sign on the permit.
- 5.1.20 Always Receiver has to sign the permit last, after taking all the necessary approvals and understanding the necessary safety measures.

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5.1.21 The jobs demarcation of each contractor shall be clearly defined on the permit beforehand, in case more than one contractor working in the same area.

## 5.2 Objective and Function of Work Permit System

The objective and function of a work permit system are as follows:

- 5.2.1 It ensures that proper authorization has been granted to perform designated work.
- 5.2.2 It ensures those people conducting the work know the exact nature of the task, including hazards, restrictions, required precautions/ controls, time limitations, etc.
- 5.2.3 It specifies the controls and precautions necessary to undertake the work safely, e.g., isolating machinery, equipment, pipeline, energy source, etc.
- 5.2.4 It allows the ability to display, to those who need to know, exactly what ongoing work is.
- 5.2.5 It provides a procedural means of suspending work when this is necessary.
- 5.2.6 It provides an ability to control work that might interact or conflict with ongoing operations or other work permit activities.
- 5.2.7 It provides a procedural means of handing over the work when it covers more than one shift.
- 5.2.8 It provides a procedural means of handing back the area or plant involved in the work.

## 5.3 Responsibility

### 5.3.1 Responsibility of Permit Issuing Authority

It is the primary responsibility of the authorized person issuing the permit to make certain that it is safe to perform the mechanical work in the particular area, equipment or vessel. The person issuing the permit has the following specific responsibilities:

- 5.3.1.1 To make sure that each item on the permit is accurately and completely filled out after inspecting the work site.
- 5.3.1.2 To make sure that the employee understands the requirements on the permit and any unusual conditions concerned with the job.
- 5.3.1.3 In no case he shall sign the permit until the area and the existing conditions have been made safe for Hot or Cold Work.
- 5.3.1.4 Where work on opening any equipment or pipeline containing flammable liquids or gases is to be carried out, the Process Supervisor, before signing the permit shall ensure that the equipment/ pipeline has been:
  - Effectively blanked
  - Drained into main sewer
  - Vented
  - Steamed out
  - Hot lines in the vicinity area properly covered.
  - Gas testing is done.

### 5.3.2 Responsibility of Permit Receivers

Permit Receiver should satisfy themselves and ensure that all conditions stipulated in the Permits are rigidly followed. In case of any clarifications are required, they should promptly contact, Company's Supervisor/ Issuing Authority concerned.

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- 5.3.2.1 To check whether instructions and conditions for carrying out the work have been implemented by people doing the work. Work must be stopped if instructions on the permit are not being carried out.
- 5.3.2.2 To stop the work if unusual operating conditions arise which affect the safety of the employees/contractor's men, or plant/equipment.
- 5.3.2.3 To check that standby fire equipment is in working order.
- 5.3.2.4 To pass on the pertinent information about the mechanical or other work in progress to his relief.
- 5.3.2.5 To ensure that no worker has clothes contaminated with flammable materials.
- 5.3.2.6 Make a Final Inspection after completion of work.
- 5.3.2.7 To notify the issuing authority upon completion or stoppage of work.
- 5.3.2.8 To conduct tool box meeting for his contract work force.

### 5.3.3 Responsibility of Permit Approvers

- 5.3.3.1 Permit approvers shall be in Sr. Manager or above grade, who is over all responsible for coordinating Work Permit related activities.
- 5.3.3.2 Before approving or rejecting any work permit, he will visit site to see the conditions. Based on site condition he will decide whether to issue or reject permit.
- 5.3.3.3 For jobs for implementing new schemes he shall ensure that engineering drawing is made. He will decide about the JSA requirement for said activities.
- 5.3.3.4 He will prioritize all work permit activities based on operating conditions. He can restrict number of permits to be issued.
- 5.3.3.5 He will reject permit not properly prepared. Like request is made for extended permit in running plant.

Work Permit System is instituted for safety of the people - those doing work and others and Company's property. Safety can be achieved through work permit system, only when all concerned are alert all the time.

### 5.4 Gas Tests for Permits

Tests for hydrocarbon gas/ oxygen/ toxic gases are required when:

- Any time a person is to enter a confined space.
- When hot work is to be done on or in a vessel, or in operating area.
- For any open excavation where the head of a man will be below ground level.

In all other cases a person authorized to issue Vessel Entry Permit or Hot Work Permit will decide if and what type of Gas Test is required.

A person authorized to issue Confined Space Entry or Hot Work Permit is required to determine from the Gas Test results and other conditions, if it is safe to enter or commence hot work and what special precautions are to be taken.

A gas test of a Confined Space for Entry or Hot Work is normally performed from the outside of a Confined Space by the use of a probe. If it is necessary for a gas tester to enter a confined space, a confined space entry permit is to be issued specifying the use of a breathing apparatus.

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Gas tests include tests for:

- Hydrocarbon gases by multi gas hydrocarbon gas detector
- Hydrogen gas by single hydrogen gas detector or multi gas hydrogen gas detector.
- Oxygen deficiency by oxygen detector.
- Hydrogen sulfide by H<sub>2</sub>S detector
- Carbon monoxide by CO detector or dragger tubes.
- Sulphur Di-Oxide by SO<sub>2</sub> detectors.

#### 5.4.1 Important points to be observed for correct gas testing

- Meter Check: Check display and pump is on (where provided) daily bump test by sniffing sample.
- Handling & Storage: Not to be left outside in heat or direct sunlight, protect from contact with water, fall etc.
- Gas Testing: Not to be done with steam, N<sub>2</sub> or high temp, atmosphere to be tested should be near ambient temperature. Under N<sub>2</sub> atmosphere hydrocarbon gas testing shall be done with IR detectors only.
- Gas Tester Safety: Long drums, tanks, etc. use BA set and Standby.
- Look for other hazards: Deposits, heavy oils will not give reading in meter.
- If the sample is too rich to explode, the meter will show error and will then fall to zero or below, giving no further indication.
- For Hot Work meter should read zero.
- NO Entry is permitted inside Confined Spaces beyond 20% (reading of 0.2 in the meter) lower flammable (Explosive) limit even with air supplied breathing apparatus.
- For entry inside Confined Spaces oxygen content should be not less than 19.5%
- Hydrogen - Gives 50% lower reading than actual amount of gas present - use combustible Gas Indicator especially calibrated for Hydrogen.
- Hydrogen Sulphide: H<sub>2</sub>S mixed with other flammable gases. No material calibration change but H<sub>2</sub>S by itself gives an indication of 10% lower than actual amount of gas present.
- Flame arresting system gives complete protection flashback but indicator **MUST NOT BE USED** on mixtures of combustible gas and pure oxygen.



#### 5.5 Expiration of Permits: Validity and Limitation of Permits

- 5.5.1 Work permits are valid only for the date and time specified on the Permit. (Example: December 20, 2023 from 8 a.m. to 11 a.m., or December 20, 2023 from 8 a.m. to 4.00 p.m.)
- 5.5.2 Work already underway may be continued under the Permit issued during that day, provided, however, that at the end of the shift, i.e. at 4 p.m. and 12 midnight, the job and the surrounding area is re-inspected, combustible and toxic gas tests are made as required, and the existing Permit is again signed or initiated by the Authorized Person.

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Work continued into a third consecutive eight-hour period shall require similar handling at the end of the second eight-hour period. In all cases at the beginning of the next regular work day i.e. at 8 a.m. a new Permit may be issued if the Hot Work is continued, except Permits issued for new construction work authorized by Department Head for a longer period or certain types of cold work.

- 5.5.3 When Hot Work is NOT started within two hours after a gas test was taken, another gas test shall be made and a revised or new Permit shall be issued before the work is started.
- 5.5.4 When Hot Work is NOT started within two hours on a job that did not require a gas test, the issuing authority shall again CHECK the AREA and then change the time of issue on copies of the expired Permit or issue a new Permit.
- 5.5.5 When work is stopped for more than two hours, the Permit expires.
- 5.5.6 Consideration must be given to special problems and hazards which may exist or result from the performance of Hot Work, and that all possible conditions cannot be covered by this regulation. Should there be any doubt in the mind of anyone authorized to sign Hot Work Permits as to whether or not the conditions are safe, he should withhold the issuance of the Permit and consult with his immediate supervisor.

## 5.6 Types of Work Permit

There are two types of the permit in Mumbai Refinery.

1. Cold work permit, and
2. Hot work permit.

Under these two permits, there are additional sub categories, like, height permit, excavation, chipping, confined space permit, crane operation etc.

If permit is requested for more than one category, it will lead to generation of third type of work permit, Composite work permit. Composite permits are further sub divided in two categories,

1. Cold composite work permit, and
2. Hot composite work permit.

Cold work permits are Green in color and Hot work permits are Red in color.

### 5.6.1 Cold Work Permit

Cold Work activity which does not produce sparks or sufficient heat to ignite a flammable substance or which does not normally cause a serious hazard to the life or health of people. Examples: Checking of vibration of the pump, grass cutting, housekeeping etc.

When required - Some examples requiring cold work permits are:

- Opening utility or process lines, equipment or vessels. Working on electrical circuits and electrical equipment, except instrument checks.
- Excavating where underground utility lines might be buried.
- Using hand operated tools, and pneumatic wrenches.
- Painting: Equipment Inspection Work

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5.6.1.1 Gas test and blinding requirements for Cold Work: Gas tests are required for the following activities:

5.6.1.2 Cold Work in Open Area

- a. Where, in the opinion of the process authorized person there may be excessive concentrations of combustible or toxic gases in some open area where cold work is to be performed; gas tests shall be made to ensure the safety of the work.
- b. The requirements in this case are the same as for "Entry into a Confined Space",
- c. The process authorized person may issue a cold work permit without a gas test if, in his opinion, the area is suitable for the work.

5.6.1.3 Cold Work Requiring Contact with Flammable Liquids

- a. In some jobs, particularly cleaning work, it may be necessary for the work to be performed near flammable liquids. In such cases necessary steps shall be taken to make certain that ignition of the flammable vapours does not occur.

5.6.1.4 Free Areas for Cold Work

Cold Work permits are not required for the following areas/ equipment. Under certain condition work in the following areas may be accomplished without a permit being required, provided prior agreement has been reached by the Process and Mechanical supervisor concerned:

- a. Housekeeping jobs (sweeping, clearance of materials and cleaning)
- b. Grass cutting.
- c. Changing of fused bulbs/ flood lights in street.
- d. Loading/ unloading of Lube oil drums, salt and phosphate bags.
- e. Repairing/ replacing ground-level indicators except those in corrosive services such as sulphuric acids, caustic soda, MEA and HCL.
- f. Changing of water taps/washers, repairs of toilet flush tanks, commodes, and water coolers.
- g. Repairs of refrigerators/ air-conditioners.
- h. Lubrication with grease gun and changing of oil in pumps.
- i. Erecting scaffolds of single pole on ground levels.
- j. Curing of new/repared/concrete foundations.
- k. Checking of batteries in the sub-stations.
- l. Checking of Fire & Safety equipment and fixing housing boxes for fire & safety equipment in the unit where no hot work and drilling is involved.
- m. Backfilling of trenches.
- n. Work on fences or building outside operating areas.
- o. Repairs to telephones.
- p. Routine inspection of ground clamps and cables.
- q. Routine spot-checking of pumps.
- r. Routine work on meters and instruments in the control rooms.
- s. Loading and Unloading material in ware house premises.

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#### 5.6.1.5 Cold work duration:

It can be issued or extended for maximum seven days for normal work and maximum 31 days for shut down and project jobs.

### 5.6.2 Hot Work Permit

Hot work activity which produce sparks or sufficient heat to ignite a flammable substance and the job which cause serious hazard to life or health of personnel is treated as hot work

#### HOT WORK PERMIT DEFINATIONS

- a. Hot Work is an operation that may produce enough heat to ignite flammable gas-air mixtures or flammable materials.
- b. A gas test is a test made to determine whether (a) flammable or (b) toxic gas is present or (c) to determine the presence of oxygen.
- c. Confined Space means all closed containers such as vessels, tanks, drums, towers, barrels, pipelines, tank-cars and barges; also enclosures such as furnaces, which are used to confine flammable gases or vapours and pits and trenches and open top containers greater than 1.2 meter (4 feet) depth.

#### 5.6.2.1 Any jobs that falls under the following

Whenever hot work is performed in process operating areas a hot work permit is required. The following types of work are considered hot work.

- 5.6.2.1.1 Welding, burning, grinding, soldering, sandblasting, power tool metal chipping, hot and cold riveting, metal drilling, flash cameras, equipment using electric motors, or vehicle engines which are not flame-proof, and operating of portable or mobile internal combustion engines within battery limits of operating units.
- 5.6.2.1.2 Using electrically powered tools or other equipment having non-explosion proof motors or parts, unless proven to be intrinsically safe.
- 5.6.2.1.3 Entering or operating of motor vehicles, cranes and other internal combustion driven equipment within operating unit/-processing areas.
- 5.6.2.1.4 Work on electric transmission.
- 5.6.2.1.5 Confined Space Entry and vessel box-up.
- 5.6.2.1.6 Working below water (example: TK-1265 cleaning, Dredging)
- 5.6.2.1.7 Radiography, Usage of Ultrasonic instruments for thickness measurements.
- 5.6.2.1.8 Opening/ Closing/ testing of electrical junction boxes in plants.
- 5.6.2.1.9 All Jobs on Cooling Towers
- 5.6.2.1.10 All Excavation Job

#### 5.6.2.2 Sub Classifications of Hot work permits.

- a. Crane / Fork Lift/ IC Engine / Vehicle entry: to be issued for entry and/or operation of equipment with internal combustion engine in unit areas e.g. truck, dumper, fork-lift, crane, de-watering pump, compressor, hydro blasting machine etc. Use of non-explosion proof equipment
- b. Radiography/Photography: To be issued for carrying out radiography in the operating area.

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- c. Excavation: To be issued for the excavations, along with clearance from electrical for underground cables and F&S for road closures.

The following procedure has been established to avoid damage to underground power lines and injury to personnel:

- Work permit request for digging should specify the exact location of the job. Work Permits must also have the signature of Sr. Maintenance Engineer - Electrical or specific engineer authorized for this purpose by Dept. Head, to indicate the possibility of cables at that location.
  - The permit must be for a specific area and is for the duration of the particular work.
  - Excavation work by powered equipment is prohibited closer than four feet to any underground cable. To assure this, such areas must be identified and suitably defined by the engineer concerned.
  - Mech. /Tech. Engineers (Including Mahul and Marketing personnel) should instruct contractor supervisors on digging jobs to be cautions and report any red brick/red mortar/gray concrete tiles indicative of cables to permit issuing authority or Sr. Maintenance Engineer- Electrical.
  - Initial digging in proximity of cables be by hand tools, in cautions manner.
  - Red bricks or sand covering the cables must not be broken or removed without approval of engineer concerned.
  - No digging will be permitted beyond 6 p.m. If digging is to be carried out for operational requirements, like line leaks, electrical standby will have to be provided.
  - The permit must be retained at the site and be readily available for inspection.
  - After completion of the work, the permit must be surrendered.
  - If excavation is to be done across the excavation permit procedure to be followed.
- d. Cutting/welding/ grinding- Where open spark or flame is expected while working.
- e. Confined Space: Examples of "Confined Spaces", as referred to are: tanks, drums, towers, barrels, pipelines, furnaces, sewers and other similar enclosures which may confine gases or vapours such as pits and open end containers. If it is necessary to enter a Confined Space for inspection work, a Confined Space Entry Permit must be obtained. A permit is to be made out authorizing only Confined Space entry after the following requirements have been met:
- The vessel, where applicable, has been blinded effectively.
  - The Confined Space has been satisfactorily gas freed and tested.
  - The Confined Space is free of toxic materials.
  - Adequate air circulation through the Confined Space has been arranged by removal of selected man way covers and / or use of an air blower or other means. In special cases entry into a Confined Space where equipment's are to be kept in inert conditions and above have not been met, entry may be permitted provided adequate safety equipment (such as B.A. Set) is worn. Confined Spaces that have been purged with inert gas require a test for carbon monoxide as well as oxygen. Whenever the normal service of a Confined Space could lead to the presence of toxic materials within that Confined Space, checks must be made for the presence of those materials before entry is permitted.

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- f. Shot-blasting is to be done with hot work Permit.
- g. Jobs on Cooling Tower- All jobs on cooling tower
- h. Chipping- For chipping operation.

#### 5.6.2.3 Hot work permit duration

It can be issued or extended for maximum seven days for normal work and maximum one month for shut down and project jobs.

#### 5.6.2.4 Free areas for hot work

- Mechanical Shops
- Authorized Contractor Sheds / Fabrication yards / areas
- Any equipment brought from operating area/ units, it must be ensured that it is thoroughly prepared and gas test is taken prior to doing hot work in the above-approved area.

### 5.6.3 Working at Height Permit

This permit is applicable to all jobs to be carried out at elevation more than 1.8 Meters, like painting, scrapping, cleaning, instrument checks, working on scaffolds etc.

- 5.6.3.1 Check all Personal protective equipment required such as: Safety Helmet / Gloves / Goggles / proper foot were/ Boiler Suit / , Dust Respirator/ /Life line/Safety Harness are provided.
- 5.6.3.2 If the job involves working on equipment, which are in service, DCS Control room should be kept informed.
- 5.6.3.3 All the workers must be physically and psychologically fit for working at elevation.
- 5.6.3.4 Work at elevation should not be permitted in extreme weather conditions such as high wind, heavy rains, storms etc.
- 5.6.3.5 The hot-work or cold-work permit must be issued for carrying out intended activity along with the working at height permit.
- 5.6.3.6 This permit must be available at the work site at all times.

### 5.6.4 Electrical Isolation/ Energization Permit

The permit to enable an equipment/ facility electrically safe and that the electrical powers isolated to the extent necessary for the safe conduct of the authorized work. Approved LOTO procedure shall be followed.

Examples: Isolation and energizing of all electrical equipment connections at substations.

- 5.6.4.1 The principal of “One Job One Tag” is to be followed in case of an Electrical isolation is given for an given equipment to different agencies for different jobs. Viz. Electrical, Rotary, Instrumentation. Then a Separate Electrical tag to be provided for individual jobs with different permit number.
- 5.6.4.2 Duties of Permit issuer:

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The Operation department personnel/ owner of the equipment will raise the online permit in the online electrical clearance system and fill the online permit as required. On receipt of online confirmation back from electrical Section duly acknowledgement then only issuer will take further action.

#### 5.6.4.3 Duties of Electrical Department

On receipt of the online permit, Electrical Section personnel will carry out the energization of de-energization (as required) and enter the action taken in the system, this gives confirmation to Operations department/permit raiser. In addition to this the Electrical Maintenance personnel will prepare and put a TAG with required information on electrical panel and on equipment. For specimen, please see the Electrical Lock Out Tag-Out Procedure.

### 5.6.5 Composite Work Permit

Composite Work Permit which will cover following types of permits;

1. Cutting/welding/grinding
2. Crane/Forklift/Vehicle/IC Engine Operation
3. Excavation
4. Work at Height
5. Confined Space /Vessel Entry

Composite Work Permit can be requested for Minimum of 2 and maximum of 5 types of jobs at one location.

Permit requester will have to submit request for Composite Work Permit in online system by following the current procedure for creating work permit i.e., by right clicking on the MR Plot Plan. He will get 4 options i. e. Create hot Work Permit, Create Cold Work permit, Create Height permit and Create Composite Permit for selecting the type of permit.

1. To create Composite permit, click on the “Create composite Permit”. Following window will appear,
2. Select the type of jobs by clicking on the check box and fill the required details.
3. Click “Next” to fill the permit checklist for the required jobs.
4. Click on the submit button. The “Composite Work Permit Request” will be generated.
5. This request will go for the approval to the Approver of concern block.
6. Remaining procedure is same as that of other regular permits.
7. The approval of this permit will be same i. e., for 7 Days- Plant Mgr & for 31 days – GM.
8. To cover all the checklist points of all 5 types of permits some of the checklist items are combined.
9. While entering job description Permit Requester shall enter the complete nature of job indicating all categories in the “Nature of Work” space.
10. For this permit following 2 new checklist items have been added;
  - a. Job Hazard Analysis done and safety precaution enlisted: Job Engineer applying for Composite work permit have to carry out the “Job Hazard Analysis” and list out the hazards and safety precautions to execute the job

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safely and keep this at site with permit.

- b. Stand by person provided for fire watch: One contractor worker is to be assigned as “fire watch” who will keep watch on any fire. He will have to wait at site for minimum half an hour after completing the day’s job for keeping watch on any fire at site and take requisite actions.

## 5.7 Extended Permit

An extended permit is issued on the basis of location where the multiple jobs are to be carried out at a safe location. This permit is issued to have a limited control over the activity and can be issued for a maximum one month for project job/ TA jobs.

As per OISD-STD-105 on Work Permit System, the extended work permits can be given for max 31 days after the approval of Sr management (CGM or GM / concerned of the area). There is no renewal required for such permits. However periodic checks as decided by issuer to be done during the Extended work period. Following jobs can qualify for extended work permits:

- Periodic tank Maint and repairs when tank is fully emptied, made hydrocarbon free and segregated from other areas
- Project related jobs in hydrocarbon free and segregated area.

### 5.7.1 Extended Permit Requirements

- Gas testing in work area at least once in a shift and maintaining its register or record at worksite.
- Cordoning off the areas.
- Provision of the firefighting facilities.
- Built in Electrical safety devices like ELCB of 30 mA
- Certification of Electrical equipment’s by Electrical department
- Power supply source and emergency Telephone No. for isolation of the power to be written on the panel.
- First aid box.
- JSA.

### 5.7.2 Specific duties of Issuing / renewing authority

The extended permit for the specific location will be decided by the GM - Operations / Project consultation of Head – Fire & Safety on satisfying with the site conditions. The authority for issuing the extended permit cannot be down delegated for the first issue however, subsequent renewals can be done by Unit Managers.

Will carry out gas tests and record the reading of the permit and initial.

### 5.7.3 Procedure for issuing extended permits

- The Mechanical Supervisor must request a blanket permit from the Authorized Person for the mechanical employees under his supervision.
- The Authorized Person must make certain that all prescribed conditions have been met for the issuance of the blanket permit.

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- The Mechanical Supervisor must countersign and receive the permit and then assign his men to work.
- The Mechanical Supervisor has the responsibility of explaining to his men the conditions under which the permit was issued and his men must comply with the specified conditions.
- The Mechanical Supervisor must notify the authorized person when the job is completed or stopped.
- Permit receiver shall submit the renewal request for the shift & day for which job will be carried. On submitting the renewal request, the permit will get renewed in the system.

## 5.8 Online Work Permit System

All our permits are made online in SAP. The work permits issued in the online system are automatically registered in the centralized system and the permit number itself will be the registration number.

### 5.8.1 Permit Issuing Procedure

The following step-by-step procedure outlines the ordinary day-by-day procedure which must be followed for obtaining work permits from authorized employees:

- The mechanical supervisor/employee informs the issuing Authority/will make online request in the permit system in whose area he is to do work.
- The approving authority (section in-charge) inspects the work area and determines if conditions are satisfactory for the work to proceed.
- If conditions surrounding the work are satisfactory and JSA (if required) is completed, the authorized person will approve the permit request.
- If conditions surrounding the proposed work are satisfactory, and tests for combustible and toxic gases are necessary, the permit issuer will request that gas tests be made. Upon completion and if results are satisfactory, he will issue the work permit.
- In no case shall the same person sign a permit for more than one function (such as Gas testing and issuing permit).
- If the conditions surrounding the area are not satisfactory for the work to proceed, the Authorized Person will so inform the Mechanical employee and his supervisor for further instructions.
- When the permit is issued to the Mechanical employee, he must retain it on his person, obtain the proper protective equipment, and proceed to work.
- Upon completion or stoppage of the work, the Mechanical Employee must notify the Authorized person and return the permit duly signed.
- Issuance of a work permit for any third party, including specialists brought in from another organization or contractors, performing work for the company property shall be the responsibility of the Authorized Person in charge of the equipment or area involved.

### 5.8.2 Work Flow of Online Permit System

#### 5.8.2.1 Cold Work Permit

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- a. Requester (Maintenance/ Project) will make request in online work permit system.
- b. In Online form details like work type, work locations, work duration, contractor name etc. to be filled and it shall be submitted.
- c. Once it goes to issuer, he will review the filled checklist received from the receiver, if receiver checklist is not filled properly, he can modify it. Issuer will fill his checklist also in the system after checking the site.
- d. After issuers checklist is filled, print out shall be taken on Green Paper.
- e. Issuer will decide whether gas test is required or not. If it is required, he will handover printout to technician for gas test.
- f. Once gas test is taken, Technician will put his signature on the permit. Then issuer will put his signature. In last receiver will put his signature after understanding all requirements for the job.
- g. If jobs continue beyond that shift, requester will make online request by selecting date and shift.
- h. Step No “E” to “F” will be repeated for renewal of permit.
- i. Once job is completed. Permit shall be closed in the system by receiver and signed permit shall be handed over to the issuer.

#### 5.8.2.2 Hot Work Permit

- a. Requester (Maintenance/ Project) will make request in online work permit system.
- b. In Online form details like work type, work locations, work duration, contractor name etc. to be filled and it shall be submitted.
- c. Checklist will pop up based on the work type.
- d. After filling checklist, it will automatically go to the approver of that block/ section.
- e. Approver will make physical check of that area and based on the operating conditions he will decide whether to approve it or reject the permit.
- f. Once approved by the approver, it will be available in the box of all issuers of that block.
- g. Issuer will review the filled checklist received from the receiver, if receiver checklist is not filled properly, he can modify it. Issuer will fill his checklist also in the system after checking the site.
- h. After issuers checklist is filled, print out shall be taken on Pink Paper.
- i. Print out shall be handed over to technician for gas test.
- j. Once gas test is taken, Technician will put his signature on the permit. Then issuer will put his signature. In last receiver will put his signature after understanding all requirements for the job.
- k. If jobs continue beyond that shift, requester will make online request by selecting date and shift.
- l. Step No “I” to “J” will be repeated for renewal of permit.
- m. Once job is completed. Permit shall be closed in the system by receiver and signed permit shall be handed over to the issuer.

#### 5.8.2.3 Working at Height

- a. Requester (Maintenance/ Project) will make request in online work permit system.

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- b. In Online form details like work type, work locations, work duration, contractor name etc. to be filled and it shall be submitted.
- c. Once it goes to issuer, he will review the filled checklist received from the receiver, if receiver checklist is not filled properly, he can modify it. Issuer will fill his checklist also in the system after checking the site.
- d. After issuers checklist is filled, print out shall be taken on Yellow Paper. Both issuer and receiver will sign on the permit.
- e. If jobs continue beyond that shift, requester will make online request by selecting date and shift.
- f. Issuer will issue the renewed permit, if conditions are satisfactory.
- g. Once job is completed. Permit shall be closed in the system by receiver and signed permit shall be handed over to the issuer.

## 5.9 Permit for Special Cases

### 5.9.1 Permit for Working on Fragile Roofs

- Fragile roofs mean roofs that are made of fragile material such as asbestos cement sheets or made from similar materials such as Perspex, polyester or other plastic type of fibers.
- Fragile roofs may not stand the weight of a person while going over them for any work on the roof. If goes without saying that if a person falls through the roof he is likely to get serious injuries which may prove fatal also. Hence following safety precautions must be taken prior to allowing persons to work on fragile roofs, which are more than 3 meters above the ground level.
- A Height Permit must be issued for any work on fragile roofs by the concerned Maintenance / Projects / Technical Engineer who is in charge of the repairs of the building.
- Suitable and sufficient ladders, duck ladders or crawling boards which shall be securely supported should be provided. The objective here is not to give direct point pressure on fragile roofs, which may break or may be slippery to walk on.
- A safety belt with a lifeline should be secured at a suitable independent structure, which would protect the person on the roof against falling through.

### 5.9.2 Permit for Firewater Connection

- Fire water from hydrant to new tanks for hydrostatic testing or for existing tanks for maintenance work should be given only on a Cold Work & Safety Permit and the Permit should be countersigned by Captive Power Plant shift in-charge & Shift Fire Officer.
- Permission in prescribed format i.e. Fire water usage format to be obtained from F&S Dept.
- Mention should be made in the permit that a responsible person should be available near the hydrant, who will shut off the hydrant valve, in case of fire alarm. A NRV shall be fitted between the hydrant and other end to restrict the water flow in reverse direction.

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### 5.9.3 Permit for more than one jobs

A cold work permit may be issued to craft/crafts to cover a number of similar or duplicate jobs on a single process unit. Typical examples are

- Insulation work
- Painting
- Preventive maintenance inspections.
- Checking of meters or Pumps
- Inspection of grounding clamps and cables
- Steam leaks

### 5.9.4 Use of permit by next shift

Permits may be passed from one shift to succeeding shift or for continuing work on an overtime basis in the 24-hour period, provided the process mechanical supervisor explains the relevant safety aspects being followed to his relief and the relieving employee is doing the same work in the same location as the original permit was issued for. Authorized person must endorse the permit at the start of the succeeding shift. The endorser should be one who will be in the plant during the extended period.

Mechanical supervisor will notify the Authorized Person when the job is completed/ stopped.

## 5.10 Division of Area and Issuing Authorities

### General:

- i. Cold work and Hot work on asbestos roof in any area requires permits. Permit will be issued by respective authorized personnel for areas as above and for other areas by concerned Shift in charge.
- ii. For road cutting, permit will be issued by Shift In-charge - OM&S/ Operations and countersigned by Shift Fire Officer & Electrical Engineer.
- iii. For new construction in free areas, away from operating facilities permit requirements will be decided by Management.
- iv. Generally, Hot work is issued up to 4.00 p.m. only. Further extension of spark producing hot works and other high risk jobs beyond Day light hours and also on Holidays. CGM (O) Concurrence shall be obtained by execution department for Hot work conducted beyond day light hours Holidays, This is advised in EHS meeting on dated 31.10.2022
- v. Hot work in critical areas such as Tank Farm and in proximity of operating unit and which has to be done for extended period such as construction of new projects, it would be necessary to conduct a safety audit, prior to commencing of hot work.
- vi. In pipe alleys adjacent to Unit areas, permit will be issued by unit personnel and it will be countersigned by OMCC I/C as necessary.
- vii. For all hot work jobs in Refinery, permit must be issued excepting the free areas, mentioned in 5.3.2.4 of this section.
- viii. For excavation work other than road cutting, permit will have to be countersigned by Electrical Engineer.

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- ix. Approval from GM/CGM (Opns) shall be taken for carrying hot work of spark producing nature in gas/light hydrocarbon handling units i. e., LEU, LTU, GCU, DHT, DHDS, HGU, LOUP, PDU, PDA, LPGSA, Condenser drum decks in ADUs, naphtha & crude pump slabs in FR & FE.

### Guiding Principle of Work Permits

1. Area in-charge will issue the permit.
2. Roads between 2 units of same block: Permit will be issued by the unit shift in-charge up to the center line of the road towards that unit.
3. Pipeline passing on pipe rack adjacent to one unit but originating from other unit: Permit will be issued by unit in charge adjacent to pipe rack with countersignature of pipeline originating unit.
4. Pipe rack across 2 units: Up to center line of pipe rack by adjacent unit with countersignature of originating unit.
5. Roads between Unit & Offsite area: On road permit will be issued by Offsite. If pipeline originating from offsite passes in onsite and again goes in offsite area, then permit will be issued by offsite and will be countersigned by Onsite operations.
  - i. Supplier is the owner of the line and is the main coordinator for carrying out job on the line.
  - ii. Permit should be issued area-wise: If line originates from offsite, offsite area permit will be given by offsite. When it enters unit area, that section (unit area) permit to be given by unit (onsite).
  - iii. (As done recently in case of Elasto Supreme line leak in FR OMCC area)
6. Pipe rack and pipe ally upto road adjacent to unit: Permit will be issued by unit in charge up to road.
  - i. This will include area outside unit battery limit up to road also. Concept of unit battery limit to be clarified to all departments in case of maintenance jobs.
7. Admin building and open area around buildings: Civil Maintenance. If there is sewer in between then countersignature of offsite operations to be taken.
8. Jetty pipelines outside Refinery: Permit will be issued by P&U operations.
9. DCS control room: In operating area by unit console in charge and in non-operating area by maintenance.
10. SRR: Maintenance (inside/outside jobs to be defined. Inside jobs may require countersign by operations).
11. Analyzer room south of FR DCS: Permit to be issued by FR OM&S operations.
12. Outside pipelines except Jetty lines: Offsite operations.
13. Area from DHT KOD to DHDS: Permit will be issued by DHDS operations.
14. Area north of DHDS KOD: To be handed over to project and project will issue permit.
15. Connected Pipe alleys between units: Permit will be given by unit where the job is and countersignature from upstream unit.
16. Rest will be as per current system.

Sr. No.	Area	Issuing Authority
1.	All units/plants	Unit shift In charge

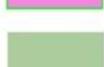
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Sr. No.	Area	Issuing Authority
2.	All pipe alleys, overhead pipe racks around unit areas.	Unit in charge
3.	Offsite areas	FR/LR OM&S shift In charge
4.	FR DCS Control Room	Boardman in operating area, Maint in non-operating area
5.	LR DCS Control Room	Boardman in operating area, Maint in non-operating area
6.	Electrical Sub Stations	Shift In charge –Maint-Elect
7.	Satellite Rack Rooms	Instrument Area Incharge
8.	Analyzer Rooms near additive building area	FR OM&S Shift in charge
9.	Main Admin Building, LR Admin Building, Old Admin Bldg, Annexe-I&II, Main Gate Bldg, North Gate Bldg, OHSC	Manager-Maint –Civil
10.	FR,LR Workshop Building	In charge Workshop
11.	Main Ware House, Project ware house, Cable Yard	Manager-Ware house
12.	Data Centre	Data Centre In charge
13.	CPP to LR gate –East side of the road	LR-OM&S
14.	CPP to LR gate –West side of the road	FR-OM&S
15.	Lab Building	Lab shift In charge
16.	Fire Station Building	Fire station shift In charge
17.	Contractor Shed: LR Contractor shed, FR Contractor shed (Balmer Lawrie) area,	These are No Permit Zone Areas. However Maint-Offsite is overall in charge of these areas.
18.	LR Skim Pond Area,	LR-OM&S Shift In charge
19.	Area west of tank 117	FR OM&S shift In charge
20.	LR B/H area	LR –Onsite
21.	Refinery owned lines outside refinery boundary	FR-OM&S
22.	Pipe rack West of DHT upto New HGU	DHT Shift in charge
23.	Area from DHDS BDD to west of DIU (Area north of DHDS Utilities- north side of road)	DHDS
24.	Any undefined area	FR, LR OM&S or as decided by CGM-Operations
25.	MR-II area	MR-II shift In charge

For areas that are not covered in the above, consult your Manager/ Department Head.

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Area coding as per given color.

	P&U		FR & FRE		LR Onsite
	FR DCS		GFEC		FR Offsite
	F&S		DHDT		Mahul Terminal
	Civil Maint		P&U		Warehouse
	Maint Scrap Disposal		LR Offsite		P&U
	GAIL		ONGC		Projects
	Elect Maint				MR-II

Work Permit issued as per unit manager.



### 5.11 Job Safety Analysis

While the basic aim of JSA is to identify the hazards involved in execution of job for initiating steps to elimination/ reduction of the risk involved.

- To ensure that the job is carried out safely without affecting the production.

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- To check on preparedness for handling potential emergencies.

### 5.11.1 Methodology of JSA

Permit Approver before approving permit will, envisage a risk potential & Need for Job Safety Analysis (JSA) of the job & if the job calls for additional safety precautions in addition to those covered by hot work permit he can call for JSA study. This study is carried out with representative from work executive authority including Contractor, Operational dept., Fire & Safety dept. Technical dept. and engineering personnel can also be co-opted in the team if required.

### 5.11.2 Formation of Multidisciplinary Audit Teams

The JSA should be carried out through multidisciplinary team. The composition of the JSA varies depending on work areas to be analyzed, however, person(s) concerned should have necessary experience and background to undertake in-depth study in particular discipline. A team of 4 to 5 experienced officers from various disciplines viz. Process, Maintenance/ Inspection/ Electrical/ Instrumentation, Fire & Safety and with the active involvement of concerned Plant/ Area Manager. The Area in-charge department / section officer will be the leader of the JSA team.

### 5.11.3 Use of Safety Checklists

Check lists are the most useful tools for undertaking systematic JSA. Like a code of practice, a Checklist is a means of pooling the knowledge and hard won experience and ensures that no important aspect is overlooked or forgotten. Such checklists help maintaining uniformity and speeding up the analysis.

### 5.11.4 Briefing

Before beginning of each study, all concerned persons of the area/ installation are briefed by the executing authority in detail and each step is described completely to all the members.

### 5.11.5 Site Inspections

Team members should inspect the work site and break up the job in successive steps or activity such as -

- Collect all the information about the job at the site.
- Breakup the job into various successive steps, observe, and discuss the deviations.
- Identify the hazards in each potential step.
- Develop the safe procedure to eliminate or minimize the hazard.

### 5.11.6 Discussion and Record

Further information can also be gathered through discussions with site personnel and Installation/ Plant Manager, who is in-charge of the area or other site officers. Steps to eliminate and minimize the hazards are to be discussed and recorded for compliance for execution authority.

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### 5.11.7 Requirement of JSA for Hot Work

As per Memo Issued by CGM –Safety on January 28, 2022 following methodology has been approved for JSA. This methodology will be in force till any new methodology is circulated. JSA must be conducted in the following cases.

- A. Any hot work in the following areas (except shut down periods)
  - a. Light Ends Units, LTU PDA, PDU, HGU, DIU
  - b. ISOM, CCR, Prime-G
  - c. Overhead condenser decks, API Separators and LPG storage area.
  - d. All Cooling Towers
  
- B. Activities of following nature
  - a. Work on very tall structures like chimneys/ Columns
  - b. Crane/ Poclain/ JCB activities in unit areas and congested places.
  - c. First time entry inside the vessels which are of chemicals, toxic materials services, Column OHD, HC and sour gas flare KODs
  - d. First time entry inside tanks, Confined space Like API Separator bays & fore bays, Slop oil sumps, OWS & CRWS Chamber, trenches & pits more than 5 feet depth.
  - e. Extended Permit requirement for handing over of area to maintenance /project.

NOTE: Above are the guidelines and does not limit the discretion of plant in charge or section head in deciding to call for JSA, seeking assistance from other functions like F &S.

### 5.11.8 Preparation of JSA Report

The work of JSA item should be presented in the form of a report which should contain observations & recommendations for minimizing/ elimination of hazard potential. Before finalizing the report, depending upon the risk potential the JSA team report can be discussed in management forum and the copies of the report is to be circulated to top management for additional input.

### 5.11.9 Routing / Follow up of JSA Reports

The reports are submitted to the concerned permit issuing authorities who will issue this procedure along with hot work permit to job executing authorities. Compliance and follow up of this report lies with the executing agencies and Fire & Safety dept. carried out surprise checks.

Note: For More details and JSA format are given in section 27.

## 5.12 Explanatory notes to Work Permit Forms

The check-listed items In the Work Permit Forms are elaborated below to amplify the underlying concepts and highlight their significance.

### 5.12.1 Equipment/Area Inspected

Equipment or area where work is to be conducted, should be Inspected to ensure that it is safe to carry out work and assess other safety requirements/stipulations.

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In case of Confined Space box-up permit, the Inspection is required to ensure work is complete, all personnel are out, no maintenance gear is left behind and debris is removed.

#### 5.12.2 Surrounding area checked/cleaned

Unsafe conditions for performance of work may arise from surrounding area. It should be cleaned up to remove flammable material such as oil, rags, and grass.

#### 5.12.3 Sewers, Manholes, CBD etc. cement sealed and hot Surfaces COVERED

Flammable gases may be released from nearby sewers. Hot uninsulated surfaces/pipelines may provide a source of ignition. Therefore, these shall be properly cement sealed to prevent fires.

#### 5.12.4 Considered hazard from other routine/ non-routine operations and persons alerted

Other activities (routine & non routine) being carried out nearby, which can create conditions which are unsafe for performance of the permit work, should be taken into consideration and the concerned persons should be alerted accordingly.

#### 5.12.5 Equipment electrically isolated and tagged

Before issuing permit for mechanical/electrical work in the operating area, it should be ensured that electrical switches are locked out and cautionary tags duly signed with date and time are attached. Wherever local locking arrangement is provided in the field, the same should be used. Refer format for electrical lockout/energizing given in OISD-Std-137 on Inspection of Electrical equipment.

#### 5.12.6 Running water hose/Portable extinguisher provided

Running water hose and portable fire extinguisher are required respectively to flush/dilute in case of release of any hazardous chemical or to quench sparks and to put out small fires immediately.

#### 5.12.7 Fire water system checked for readiness

In order to meet any contingency, it should be ensured that the fire water system including firewater pumps, storage, network, etc. is checked and kept ready for immediate use.

#### 5.12.8 Equipment blinded/ disconnected/ closed/ isolated/ wedged open

- Equipment/vessel on which the work permit is being issued should be completely isolated from the rest of the plant with which. It is connected during normal operation, in order to ensure that there is no change in the work environment with respect to presence of toxic flammable gases, liquids, hazardous chemicals etc. in the course of the work.

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- Blinding is one of the most effective ways or isolation. Blinds should be installed as close to the vessel as possible. If lines cannot be blinded, they should be disconnected and the open ends should be made safe by installing pipe caps/plugs, blind flanges, mud packing etc.

#### 5.12.9 Equipment properly drained/depressurized

- Equipment under pressure should be depressurized after isolation. This will be followed by draining/purging/water flushing etc. as the case may be.
- Equipment containing liquid hydrocarbons should be drained completely. There may be a possibility of overlooking liquid collected in pockets or inaccessible areas such as level gauges, small nozzles/bleeders on vessels, laterals in pipework etc. All low point drains should be in unplugged condition.

#### 5.12.10 Equipment properly steamed/purged

Purging of equipment (vessels, pipelines, compressors etc.) is done to free them of flammable hydrocarbons and toxic gases. Steam is used for gas freeing of vessels and pipes in refineries and processing units, but it may not be available at other locations. Other means of purging is by displacement with water and final traces of gas removed by air educator. All high point vents should be unplugged while purging. Purging may be done continuously or in batches to conserve purge medium. It should be done in a systematic manner to cover the entire equipment/plant and continued till the allowable level of toxic / flammable gas concentration is attained.

#### 5.12.11 Equipment water flushed

Water flushing is an effective means of cooling, cleaning and even gas- freeing of equipment. It is also employed to remove traces of acids / chemicals. Equipment metallurgy must be considered before using sea / saline water. Sometimes flushing with demineralized water would be necessary depending upon the metallurgy of the equipment.

#### 5.12.12 Gas/Oxygen deficiency test done and found OK

Gas test includes measurement of:

- Hydrocarbons by Explosivity Meter
- Oxygen Deficiency by Oxygen Meter
- Toxic gases like Hydrogen Sulphide, Carbon Monoxide, Nickel Carbonyl, Chlorine, etc. by techniques like Indicator Tube method, Lead Acetate Paper etc.
- Gas tests may be specified for Confined Space entry including open excavation where head or a man will be below ground level and when hot work is being carried out. The person carrying out gas test must wear proper protective gear.
- No hot work shall be permitted unless the Explosivity meter reading is zero.
- Confined Space entry where no hot work is to be carried out may be permitted If combustible gases are up to 5% of lower Explosivity limit (LEL). Entry with an air supplied mask may be permitted with LEL of up to 20%.

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- The oxygen level should be at least 19.5% vol. and the concentration of toxic gases below the threshold limits.
- Special precautions, like wetting with water must be taken where there are materials such as iron sulfide, acetylides or polymers present which may ignite spontaneously.
- If there is a possibility of having inert gas present, tests for oxygen deficiency and carbon monoxide content shall be made.

#### 5.12.13 Shield against sparks provided

In order to protect against welding sparks, which can provide ignition in operating areas, shields are to be provided. The shield material should be nonflammable.

#### 5.12.14 Proper ventilation and lighting provided

Where natural ventilation is not available, fans/air eductors are provided. Some types of works like welding may generate fumes. Facilities may be required for the speedy dispersal of these fumes. Only approved reduced voltage extension lights (24 volts) are to be allowed for work inside Confined Spaces, from consideration of personal safety.

#### 5.12.15 Proper means of exit provided

Proper means of exit is required in case of emergencies developed on account of the work or otherwise. Availability of an alternate route of escape should be considered.

#### 5.12.16 Precautionary tags/boards provided

To prevent any unwarranted entry in the work area and also to caution other personnel taking actions which may endanger people working on the permit Job, precautionary tags/boards are to be provided. Example, 'No Entry' sign on roads or 'Caution-Men At Work Inside' on the manhole of a vessel.

#### 5.12.17 Portable equipment/Hose nozzles properly grounded

As a precaution against static electricity generation portable equipment / hose nozzles, example: nozzle of a sandblasting gun, are to be grounded. Use of hydrocarbon lines for earthing should be avoided.

#### 5.12.18 Standby person provided for Confined Space entry

- Whenever a Confined Space is being entered or work is being carried out in confined space, it may be necessary to keep standby persons (minimum 2) at the manhole or entry point holding the rope connected to the safety belt of the person inside. In case of any emergency inside or outside the Confined Space, the standby will be able to pull the person out.
- Standby personnel provided for fire watch from Process / Maintenance / Contractor / Fire Department

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- Depending on criticality of the job, work permit issuer shall decide the type of standby to be provided i.e. from which department, or what level, how many and also additional fire fighting support facilities.

#### 5.12.19 Iron Sulphide removed / kept wet

Pyrophoric substances may be present in operating area/equipment-handling hydrocarbon. Iron sulphide scales are the most common pyrophoric substance encountered. These should be either removed to safe locations or kept wet all the time to prevent their auto ignition.

#### 5.12.20 Area cordoned off

In order to prevent the unauthorized entry of people and to avoid accidents during excavation Jobs, work area is to be cordoned off. Area to be cordoned off with rigid material like scaffold pipes and reflective tapes.

#### 5.12.21 Precaution against public traffic taken

In case hot work is to be carried out in the close proximity of a public road, for example in the case of a trunk pipeline, it may be desirable to block-off/divert public traffic for the duration of the job as a precautionary measure.

#### 5.12.22 Clearance obtained for excavation from Technical, Electrical/concerned departments

For any excavation work which may affect underground sewers / telephone lines/cables/pipelines etc., Electrical, Technical services Dept., and/or other concerned departments, should be consulted for obtaining the co-ordinates and the depth to which excavation can be resorted to, without damaging the existing facilities. Markers should be put around the area where excavation can be done, and the depth can be indicated in the work permit.

#### 5.12.23 Clearance obtained for road cutting from Technical /Fire /concerned departments

Since road cutting can hamper the movement of the fire trucks, initial clearance should be obtained from Fire Department, and final approval from the higher designated authorities. If the road is wide, preferably the road should be cut hair at a time. Duration of cut road should be restricted as far as possible.

#### 5.12.24 Clearance obtained for dike cutting

When the dike is cut, any mishap in the tank farm can lead to a free flow of oil to outside the bund. A high level authority should be designated for authorizing dike cutting. Further, it should be ensured that dike would be reconstructed in the shortest possible time. For example, if pipes have to be laid through the dikes, the pipes should be laid quickly and plugged/capped so that the dike can be closed. Thereafter, balance of pipe fabrication can continue without any risk. Standby personnel should be available at the work site, who should possess a suitable size

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steel plate for blocking the opening in case of a mishap/tank failure. If no work is undertaken in evening and night shifts, invariably the gap should be closed with steel plate and mud packing at the end of day's work. For dyke wall cutting, proper approval to be taken from OMCC and F&S.

#### 5.12.25 **Checked Spark arrester on mobile equipment**

It shall be ensured that the PESO approved spark arrester is provided and ensure that it is properly fitted.

#### 5.12.26 **Checked for oil/gas trapped behind lining in equipment**

Before undertaking hot jobs, a check should be done for oil/gas trapped behind lining in the equipment. Many times oil/gas trapped behind lining depicts itself in the form of swelling and can be confirmed by way of drilling holes.

#### 5.12.27 **Stand by Personnel provided for fire watch from Process, Maintenance, Contractor and Fire & Safety Department**

Based on criticality of the job appropriate stand by shall be provided.

#### 5.12.28 **Welding Machine kept on Safety Location**

Hot exhaust pipe of dg machine can become source of ignition therefore dg machine shall be kept at safe location.

#### 5.12.29 **Checked for earthing return connection to the equipment being welded**

Ensure earthing return connection shall be provided and connected to the job.

#### 5.12.30 **ELCB provided on portable electrical equipment.**

Ensure that 30 mA leakage rating ELCB is provided for all portable electrical equipment's to protect workers from electrical shock due to leakage of current.

#### 5.12.31 **Oxygen, acetylene, lpg, argon etc. gas cylinders kept out side tank or vessel**

Gases can accumulate in confined space creating the hazards therefore all these cylinders shall be kept outside of tank, vessel or any confined space.

#### 5.12.32 **Air supplied breathing apparatus / life line provided**

Air supplied breathing apparatus / life line provided as per risk assessment

#### 5.12.33 **Flash back arrester and NRV provided on cutting set**

Ensure that these are provided to prevent back fire and backing of gases in other hoses.

#### 5.12.34 **Identification of hydrogen line / lines in surrounding areas**

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Ensure that all hydrogen lines in vicinity are identified.

#### 5.12.35 In case of sewer box entry top cover of chamber is removed

#### 5.12.36 Leak testing of flange / valves etc. on hydrogen lines in the area with soap solution

Ensure that all flanges, vent, bleeders etc. are checked for leakage with soap solution.

#### 5.12.37 Contractor Equipment Certification as per SWP-06

Ensure that contractor equipments are certified and green tags are provided

#### 5.12.38 Hot tapping

- While it is presumed that modification jobs will be undertaken always with the approval of the designated authority, it is further to be noted that hot tapping shall be undertaken after an approval by Inspection Personnel.
- Continuous flow in the line should be ensured.

#### 5.12.39 Explanatory notes to Working at Height Permit

This permit is applicable to all jobs to be carried out at elevation more than 1.8 Meters, like painting, scrapping, cleaning, instrument checks, working on scaffolds etc. If hot work is at elevation a separate hot work permit should be issued for it along with this permit, The check-listed items in the Work Permit Forms are elaborated below to amplify the underlying concepts and highlight their significance:

#### 5.12.40 Portable electrical equipment / Hose nozzles properly grounded

As a precaution against static electricity generation, portable equipment / hose nozzles e.g. nozzle of a shot blasting gun, electrical grinders are to be grounded. For electrical equipment apart from earthing ELCB are to be provided personnel safety.

- Before Using a Grinding Machine
  - Ensure that the worker using grinder is trained and has experience of the same.
  - Select right type & right rpm grinding wheel for the grinding job - A low rpm grinding wheel may shatter on a high rpm grinder!!! Wrong wheel can break causing extreme hazard. Always check the expiry date of the grinding wheels.
  - Check grinder stones and discs for nicks, cracks, or other defects. Replace immediately on locating any defect.
  - Ensure the grinding wheel is securely mounted on the grinding machine.
  - Ensure to wear proper face shield & eye protection
  - Ensure the grinder has adequate protective guard.
- While Using a Grinding Machine

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- Avoid clothing such as scarves, ties, loose sleeves
- After starting, stand on one side & run a grinder for a minute to make sure the wheel is safe.
- Don't attempt to adjust wheel or rests, while in motion as it may cause hand injury
- Don't use side of wheel for grinding, unless designed specifically for such use
- Never attempt to grind in an awkward position. A portable grinder can kick and glance off the work if not properly controlled.
- After turning off grinder, wait until all motion has stopped before putting it down

#### 5.12.41 Scaffolds/Ladders checked by concern Job Supervisors

The footing or anchorage for scaffold shall be level, sound, rigid and capable of carrying the maximum intended load without setting or displacement. Guard rails and mid rails shall be installed at set intervals. It is recommended that every 30 ft. the scaffold should be tied and securely braced against building or the equipment. Safe and convenient means of access to be provided to working location on scaffold by means of fixed ladder or a ramp.

#### A. Ensure all material carried up at elevation are fall protected

It should be ensured that all material carried up at elevation is carried in a toolbox or can which a be hoisted up properly. If the equipment is of larger size it advisable to tie with a rope even when it in use.

#### B. ISI marked safety belts are provided for contractor workers.

Contractor must give assurance that he has provided ISI marked safety belts to his workers it essential check one or two belts prior to requesting for the permit by executing authority

#### C. Contractor certified that his crew is fit for working at height

Contractor must give assurance that all his workers are physically AND psychologically fit for working at elevation

#### D. Instructions are given to workmen to tie the life lines of safety belt properly

Executing authority should ensure that Instructions are given to workmen to tie the lifelines of safety belt properly. Help from safety dept. can also be taken initially for arraigning a training to workers at site.

#### E. Proper ventilation and lighting provided

Where natural ventilation is not available, fans/air eductors are provided. Some types of work like welding may generate fumes. Facilities may be required for the speedy dispersal of these fumes. Only approved reduced voltage extension lights

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(not exceeding 24 volts) are to be allowed for work inside Confined Spaces from consideration of personal safety.

#### **F. Adequate working platform & space is provided**

- Adequate working space, free from any obstruction, loose objects and tripping hazards is to ensure at working elevation site if working platform is to be built it should have hand railing as fall protection and it should be covered from bottom so that material does not fall down from platform
- Be stable and of sufficient strength and rigidity for their purpose
- Rest on stable and suitably strong surfaces
- Be of sufficient size to allow safe use for persons
- Have suitable means for preventing a fall like railing/edge protection.
- Have a surface which has no gap through which a person or material could fall and cause injury
- Be constructed, used and maintained to prevent the risks of slipping, tripping or any person being trapped between them and any adjacent structure.

#### **G. Proper means of exit provided**

Proper means of exit is required in case of emergencies developed on account of the work or otherwise. Availability of an alternate route of escape should be considered.

#### **H. Precautionary tags / boards provided**

Cautionary boards of hazards i.e. .MEN WORKING ABOVE, WATCH YOUR STEPS etc. can be posted at the site. Before issuing permit for mechanical / electrical work in the operating area, it should be ensured that electrical switches are locked-out and duly signed with date and time are attached if the job is being done on electrical driven equipment.

#### **I. Standby person provided for supervision**

Whenever a person is working at height, it is necessary to keep standby person (company or contractor representative) at the site. In case of any emergency, the standby will be able to react fast

#### **J. Worker are trained in use of safety belts**

Executing authority should ensure that worker are trained in use of safety belts Help from safety dept can also be taken initially for arranging a training to workers at site.

#### **K. DCS control room kept informed.**

If the job involves working on equipment, which are in service, DCS Control room should be kept informed.

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#### L. Area cordoned off

In order to prevent the unauthorized entry of people and to avoid accidents due to fall of material during jobs at elevation, work area is to be cordoned off.

#### M. Precaution against public traffic taken

In case elevation job is to be carried out in close proximity of a unit road, it may be desirable to block-off/divert public traffic for the duration of the job as a precautionary measure

#### N. weather conditions are favorable for elevation work

Work at elevation should not be permitted in extreme weather conditions such as high wind, heavy rains, storms etc.

#### O. Additional safety measures

- During extensive work for long duration, like large tank LPG spheres painting jobs, Additional safety measures like providing Fall Arrestor type Safety belt, or Double life line belt, or safety net should be provided depending upon site conditions, job requirements.,
- Roof ladder/crawling board (in case working on fragile roof) When work is being carried out on sloping roofs, or other places covered with fragile material like AC sheets, through which they are liable to fall, to a distance more than 3 meters, workers should be provided with suitable roof ladders or crawling boards, or duck ladders spanning across the supports
- These crawling boards or roof ladders should be provided must be firmly secured in position and they must be strong enough to support those workers. This is also the requirement of 73 F Maharashtra factories rules.

#### 5.12.42 Explanatory notes on Confined Space Entry / Vassal Box up

- Equipment /work area inspected
- Stand by personnel provided for fire watch from process / maintenance / contractor / Fire Department.
- Equipment electrically isolated and tagged.
- Gas/O<sub>2</sub> deficiency test done and found okay
- Checked for oil or gas trapped behind lining in equipment.
- Equipment properly steamed and purged
- Fire water hose & Fire extinguisher provided
- Proper means of exit provided.
- Portable equipment/nozzle properly grounded.
- Iron sulphide removed or kept wet.
- Area cordoned off
- Clearance obtained for excavation from electrical/concerned department
- Clearance obtained for dyke cutting

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- Welding machine checked for safe location
- Checked for earthing return connection to the equipment being welded.
- ELCB provided on portable electrical equipment
- Fresh Air hose mask/ Life line provided.
- Identification of H2 line/lines in surrounding area.
- Contractor Equipment Certification & Tagging as per SWP
- Surrounding area checked/cleaned up oil/rags/grass etc. removed.
- Considered hazards from other routine/non routine operations and concerned person alerted
- Fire water system checked for readiness.
- Equipment blinded/disconnected/isolated/closed/wedge open.
- Equipment properly drained and depressurized.
- Equipment water flushed.
- Proper ventilation and lighting provided.
- Precautionary Tags/Boards provided.
- Two standby personnel provided for vessel entry.
- Sewer manholes, CBD etc. and hot surfaces nearby covered.
- Precaution against Public traffic taken
- Clearance obtained for road cutting from electrical/Fire and concerned department
- Checked spark arrester on mobile equipment
- Shield against sparks provided.
- Oxygen/Acetylene cylinder kept outside tank/vessel.
- Flash back arrestor provided on cutting set.
- In case of sewer box entry, Top cover of chamber removed
- Leak testing of flange/valves etc on hydrogen line in the area with soap solution.

### 5.13 Approved Fabrication and Scrap Yards

#### A. Fabrication Yard:

Following fabrication yards are identified and in-charge of fabrication yard is mentioned against each fab yard.

Sr No	Fab Yard Location	In charge of fab Yard
1.	Fabrication yards at Axle oil Terminal Area	CGM-Project
2.	Exchanger cleaning/ hydro-jetting area west of tank 117	GM-Maint-Onsite
3.	Fab Yard at LR Contractor Shed Area	GM-Maint-Offsite
4.	Area East of LOPL	GM-Maint-Offsite
5.	Hill Top	CGM-Project

#### B. Contractor Shed



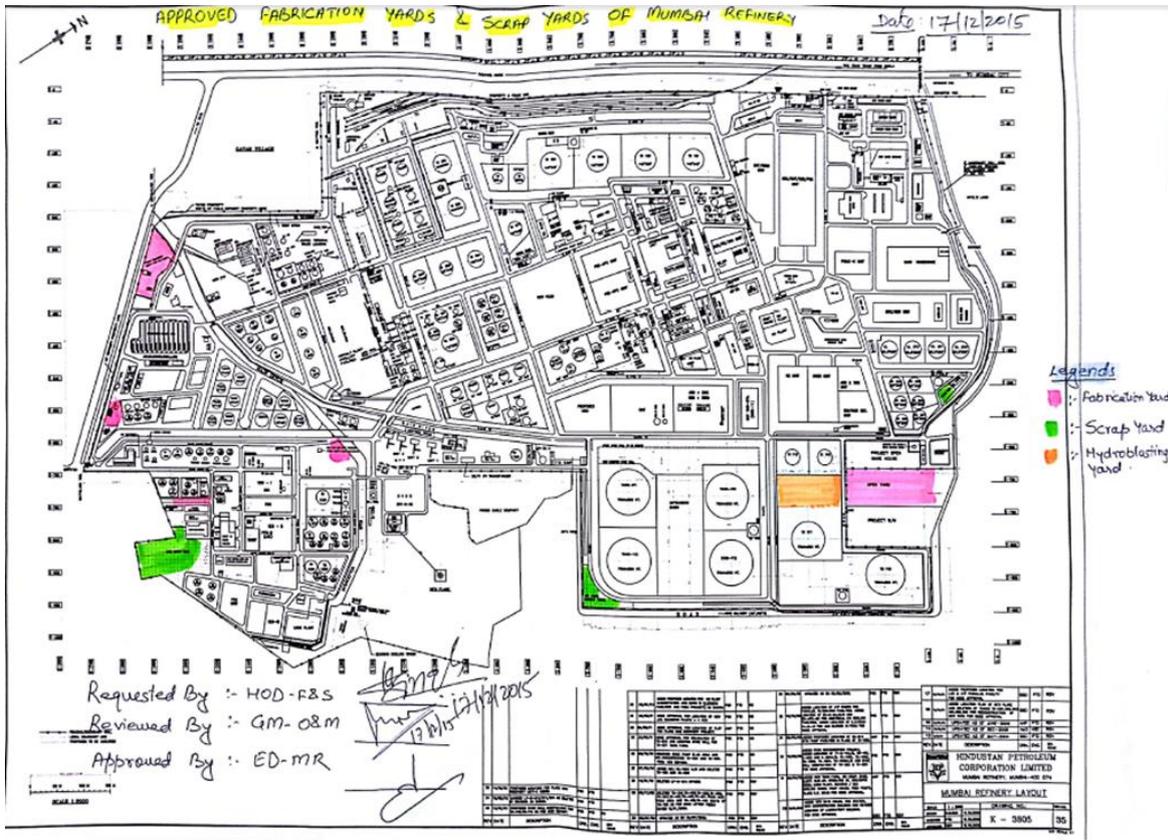
Following contractor sheds are identified and in-charge of contractor shed is mentioned against each shed.

Sr No	Contractor Shed	In-charge of Contractor Shed
1.	FR Contractor Shed	GM – Maintenance (Offsite)
2.	LR Contractor Shed	GM – Maintenance (Offsite)

**C. Scrap Yard:**

Following scrap yards are identified and in-charge of scrap yard is mentioned against each scrap yard.

Sr No	Scrap Yards	In-charge of Scrap Yard
1.	At 50 acre area south east of tank 113	DGM-Maint Rotary/ Garage/ Scrap
2.	At north of ATF Tank No 368 for Elect/Inst Cables, panels etc	GM- OMCC



Tender Inviting Authority:

Name of Work:

Contract No:

Note:

1. This sheet is only for obtaining prices. Evaluation shall be carried out as per provisions of enquiry document.
2. GST shall be extra on quoted prices.

Name of the Bidder/ Bidding Firm / Company :	
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**PRICE SCHEDULE**

(This BOQ template must not be modified/replaced by the bidder and the same should be uploaded after filling the relevant columns, else the bidder is liable to be rejected for this tender. Bidders are allowed to enter the Bidder Name and Values only )

NUMBER #	TEXT #	TEXT #	NUMBER #	TEXT #	NUMBER #	NUMBER #	TEXT #
Sl. No.	Item Description	Item Code / Make	Quantity	Units	BASIC RATE in Figures To be entered by the Bidder in Rs. P	TOTAL AMOUNT excluding taxes in Rs. P	TOTAL AMOUNT in Words
1	2	3	4	5	7	11	13
1	Supply Incl. Freight						
1.001	VLV.GATE, SHEET 51001 0.5 INCH	51001ZZZ004ZZZZZ	81	Nos		0.00	INR Zero Only
1.002	VLV.GATE, SHEET 51001 0.75 INCH, LOCK OPEN	51001ZZZ0051ZZZZZ	3	Nos		0.00	INR Zero Only
1.003	VLV.GATE, SHEET 51001 0.75 INCH	51001ZZZ005ZZZZZ	2357	Nos		0.00	INR Zero Only
1.004	VLV.GATE, SHEET 51001 1.0 INCH	51001ZZZ006ZZZZZ	17	Nos		0.00	INR Zero Only
1.005	VLV.GATE, SHEET 51001 1.5 INCH	51001ZZZ008ZZZZZ	90	Nos		0.00	INR Zero Only
1.006	VLV.GATE, SHEET 51002, IBR 0.5 INCH	51002ZZZ104ZZZZZ	12	Nos		0.00	INR Zero Only
1.007	VLV.GATE, SHEET 51002, IBR 0.75 INCH	51002ZZZ105ZZZZZ	222	Nos		0.00	INR Zero Only
1.008	VLV.GATE, SHEET 51004, H2 0.5 INCH	51004ZZZ704ZZZZZ	6	Nos		0.00	INR Zero Only
1.009	VLV.GATE, SHEET 51004, H2 0.75 INCH	51004ZZZ705ZZZZZ	159	Nos		0.00	INR Zero Only
1.010	VLV.GATE, SHEET 51004, H2 1.5 INCH	51004ZZZ708ZZZZZ	10	Nos		0.00	INR Zero Only
1.011	VLV.GATE, SHEET 51011, NAC6 0.5 INCH	51011ZZZM04ZZZZZ	67	Nos		0.00	INR Zero Only
1.012	VLV.GATE, SHEET 51011, NAC6 0.75 INCH, LOCK OPEN	51011ZZZM051ZZZZZ	10	Nos		0.00	INR Zero Only
1.013	VLV.GATE, SHEET 51011, NAC6 0.75 INCH	51011ZZZM05ZZZZZ	357	Nos		0.00	INR Zero Only
1.014	VLV.GATE, SHEET 51011, NAC6 1.0 INCH, LOCK OPEN	51011ZZZM061ZZZZZ	23	Nos		0.00	INR Zero Only
1.015	VLV.GATE, SHEET 51011, NAC6 1.0 INCH	51011ZZZM06ZZZZZ	10	Nos		0.00	INR Zero Only
1.016	VLV.GATE, SHEET 51011, NAC6 1.5 INCH	51011ZZZM08ZZZZZ	22	Nos		0.00	INR Zero Only
1.017	VLV.GATE, SHEET 51011, NACE 0.5 INCH	51011ZZZ204ZZZZZ	6	Nos		0.00	INR Zero Only
1.018	VLV.GATE, SHEET 51011, NACE 0.75 INCH	51011ZZZ205ZZZZZ	100	Nos		0.00	INR Zero Only
1.019	VLV.GATE, SHEET 51013 0.5 INCH	51013ZZZ004ZZZZZ	10	Nos		0.00	INR Zero Only
1.020	VLV.GATE, SHEET 51013 0.75 INCH	51013ZZZ005ZZZZZ	128	Nos		0.00	INR Zero Only
1.021	VLV.GATE, SHEET 51013 1.0 INCH, LOCK OPEN	51013ZZZ0061ZZZZZ	9	Nos		0.00	INR Zero Only
1.022	VLV.GATE, SHEET 51013 1.0 INCH	51013ZZZ006ZZZZZ	6	Nos		0.00	INR Zero Only
1.023	VLV.GATE, SHEET 51013 1.5 INCH	51013ZZZ008ZZZZZ	3	Nos		0.00	INR Zero Only
1.024	VLV.GATE, SHEET 51045 0.5 INCH	51045ZZZ004ZZZZZ	10	Nos		0.00	INR Zero Only
1.025	VLV.GATE, SHEET 51045 0.75 INCH	51045ZZZ005ZZZZZ	43	Nos		0.00	INR Zero Only
1.026	VLV.GATE, SHEET 51050 0.75 INCH	51050ZZZ005ZZZZZ	10	Nos		0.00	INR Zero Only
1.027	VLV.GATE, SHEET 51050 1.0 INCH	51050ZZZ006ZZZZZ	5	Nos		0.00	INR Zero Only
1.028	VLV.GATE, SHEET 51061 0.75 INCH	51061ZZZ005ZZZZZ	10	Nos		0.00	INR Zero Only
1.029	VLV.GATE, SHEET 51066 0.5 INCH	51066ZZZ004ZZZZZ	32	Nos		0.00	INR Zero Only
1.030	VLV.GATE, SHEET 51066 0.75 INCH	51066ZZZ005ZZZZZ	232	Nos		0.00	INR Zero Only
1.031	VLV.GATE, SHEET 51066 1.0 INCH, LOCK OPEN	51066ZZZ0061ZZZZZ	6	Nos		0.00	INR Zero Only
1.032	VLV.GATE, SHEET 51066 1.0 INCH	51066ZZZ006ZZZZZ	49	Nos		0.00	INR Zero Only
1.033	VLV.GATE, SHEET 51066 1.5 INCH	51066ZZZ008ZZZZZ	44	Nos		0.00	INR Zero Only

1.034	VLV.GATE, SHEET 51080 0.75 INCH	51080ZZZ005ZZZZZ	90	Nos		0.00	INR Zero Only
1.035	VLV.GATE, SHEET 51080 1.0 INCH	51080ZZZ006ZZZZZ	21	Nos		0.00	INR Zero Only
1.036	VLV.GATE, SHEET 51099, NAC4 0.75 INCH	51099ZZZE05ZZZZZ	10	Nos		0.00	INR Zero Only
1.037	VLV.GATE, SHEET 510LM, NACE 0.75 INCH	510LMZZZ205ZZZZZ	9	Nos		0.00	INR Zero Only
1.038	VLV.GATE, SHEET 5102C, NAC7 0.75 INCH	5102CZZZN05ZZZZZ	3	Nos		0.00	INR Zero Only
1.039	VLV.GATE, SHEET 5102D, H2 0.5 INCH	5102DZZZ704ZZZZZ	10	Nos		0.00	INR Zero Only
1.040	VLV.GATE, SHEET 5102D, H2 0.75 INCH	5102DZZZ705ZZZZZ	59	Nos		0.00	INR Zero Only
1.041	VLV.GATE, SHEET 51301 2.0 INCH, LOCK OPEN	51301ZZZ0091ZZZZZ	2	Nos		0.00	INR Zero Only
1.042	VLV.GATE, SHEET 51301 2.0 INCH	51301ZZZ009ZZZZZ	51	Nos		0.00	INR Zero Only
1.043	VLV.GATE, SHEET 51301 3.0 INCH	51301ZZZ011ZZZZZ	8	Nos		0.00	INR Zero Only
1.044	VLV.GATE, SHEET 51301 4.0 INCH, LOCK CLOSED	51301ZZZ013ZZZZZ	34	Nos		0.00	INR Zero Only
1.045	VLV.GATE, SHEET 51301 4.0 INCH	51301ZZZ013ZZZZZ	56	Nos		0.00	INR Zero Only
1.046	VLV.GATE, SHEET 51301 6.0 INCH	51301ZZZ015ZZZZZ	6	Nos		0.00	INR Zero Only
1.047	VLV.GATE, SHEET 51301 8.0 INCH, EXTENDED SPINDLE	51301ZZZ016EZZZZZ	4	Nos		0.00	INR Zero Only
1.048	VLV.GATE, SHEET 51301 8.0 INCH	51301ZZZ016ZZZZZ	30	Nos		0.00	INR Zero Only
1.049	VLV.GATE, SHEET 51301 10.0 INCH	51301ZZZ017ZZZZZ	8	Nos		0.00	INR Zero Only
1.050	VLV.GATE, SHEET 51301 12.0 INCH	51301ZZZ018ZZZZZ	8	Nos		0.00	INR Zero Only
1.051	VLV.GATE, SHEET 51301 16.0 INCH, EXTENDED SPINDLE	51301ZZZ020EZZZZZ	2	Nos		0.00	INR Zero Only
1.052	VLV.GATE, SHEET 51301 18.0 INCH	51301ZZZ021ZZZZZ	2	Nos		0.00	INR Zero Only
1.053	VLV.GATE, SHEET 51301 38.0 INCH, LOCK OPEN	51301ZZZ0311ZZZZZ	2	Nos		0.00	INR Zero Only
1.054	VLV.GATE, SHEET 51302, IBR 2.0 INCH, LOCK OPEN	51302ZZZ1091ZZZZZ	2	Nos		0.00	INR Zero Only
1.055	VLV.GATE, SHEET 51302, IBR 2.0 INCH	51302ZZZ109ZZZZZ	34	Nos		0.00	INR Zero Only
1.056	VLV.GATE, SHEET 51302, IBR 3.0 INCH	51302ZZZ111ZZZZZ	2	Nos		0.00	INR Zero Only
1.057	VLV.GATE, SHEET 51302, IBR 10.0 INCH	51302ZZZ117ZZZZZ	2	Nos		0.00	INR Zero Only
1.058	VLV.GATE, SHEET 51302, IBR 12.0 INCH	51302ZZZ118ZZZZZ	2	Nos		0.00	INR Zero Only
1.059	VLV.GATE, SHEET 51302, IBR 16.0 INCH	51302ZZZ120ZZZZZ	2	Nos		0.00	INR Zero Only
1.060	VLV.GATE, SHEET 51302, IBR 20.0 INCH	51302ZZZ122ZZZZZ	2	Nos		0.00	INR Zero Only
1.061	VLV.GATE, SHEET 51311, NAC6 2.0 INCH	51311ZZZM09ZZZZZ	65	Nos		0.00	INR Zero Only
1.062	VLV.GATE, SHEET 51311, NAC6 3.0 INCH, LOCK OPEN	51311ZZZM111ZZZZZ	3	Nos		0.00	INR Zero Only
1.063	VLV.GATE, SHEET 51311, NAC6 3.0 INCH	51311ZZZM11ZZZZZ	30	Nos		0.00	INR Zero Only
1.064	VLV.GATE, SHEET 51311, NAC6 4.0 INCH, LOCK OPEN	51311ZZZM131ZZZZZ	2	Nos		0.00	INR Zero Only
1.065	VLV.GATE, SHEET 51311, NAC6 4.0 INCH, LOCK CLOSED	51311ZZZM132ZZZZZ	2	Nos		0.00	INR Zero Only
1.066	VLV.GATE, SHEET 51311, NAC6 4.0 INCH	51311ZZZM13ZZZZZ	16	Nos		0.00	INR Zero Only
1.067	VLV.GATE, SHEET 51311, NAC6 6.0 INCH, EXTENDED SPINDLE, LOCK OPEN	51311ZZZM15E1ZZZZ	2	Nos		0.00	INR Zero Only
1.068	VLV.GATE, SHEET 51311, NAC6 6.0 INCH	51311ZZZM15ZZZZZ	16	Nos		0.00	INR Zero Only
1.069	VLV.GATE, SHEET 51311, NAC6 8.0 INCH, LOCK OPEN	51311ZZZM161ZZZZZ	4	Nos		0.00	INR Zero Only
1.070	VLV.GATE, SHEET 51311, NAC6 8.0 INCH	51311ZZZM16ZZZZZ	28	Nos		0.00	INR Zero Only
1.071	VLV.GATE, SHEET 51311, NAC6 12.0 INCH	51311ZZZM18ZZZZZ	7	Nos		0.00	INR Zero Only
1.072	VLV.GATE, SHEET 51311, NAC6 14.0 INCH, LOCK OPEN	51311ZZZM191ZZZZZ	1	Nos		0.00	INR Zero Only
1.073	VLV.GATE, SHEET 51311, NACE 2.0 INCH	51311ZZZ209ZZZZZ	4	Nos		0.00	INR Zero Only
1.074	VLV.GATE, SHEET 51311, NACE 3.0 INCH	51311ZZZ211ZZZZZ	4	Nos		0.00	INR Zero Only
1.075	VLV.GATE, SHEET 51313 2.0 INCH	51313ZZZ009ZZZZZ	25	Nos		0.00	INR Zero Only
1.076	VLV.GATE, SHEET 51313 3.0 INCH, LOCK OPEN	51313ZZZ0111ZZZZZ	3	Nos		0.00	INR Zero Only
1.077	VLV.GATE, SHEET 51313 3.0 INCH	51313ZZZ011ZZZZZ	4	Nos		0.00	INR Zero Only
1.078	VLV.GATE, SHEET 51313 4.0 INCH	51313ZZZ013ZZZZZ	2	Nos		0.00	INR Zero Only
1.079	VLV.GATE, SHEET 51313 6.0 INCH, LOCK OPEN	51313ZZZ0151ZZZZZ	1	Nos		0.00	INR Zero Only
1.080	VLV.GATE, SHEET 51313 6.0 INCH, LOCK CLOSED	51313ZZZ0152ZZZZZ	1	Nos		0.00	INR Zero Only
1.081	VLV.GATE, SHEET 51313 10.0 INCH, LOCK OPEN	51313ZZZ0171ZZZZZ	4	Nos		0.00	INR Zero Only
1.082	VLV.GATE, SHEET 51313 12.0 INCH, LOCK OPEN	51313ZZZ0181ZZZZZ	1	Nos		0.00	INR Zero Only
1.083	VLV.GATE, SHEET 51313 12.0 INCH	51313ZZZ018ZZZZZ	22	Nos		0.00	INR Zero Only
1.084	VLV.GATE, SHEET 51313 16.0 INCH, LOCK OPEN	51313ZZZ0201ZZZZZ	1	Nos		0.00	INR Zero Only
1.085	VLV.GATE, SHEET 51321 2.0 INCH	51321ZZZ009ZZZZZ	28	Nos		0.00	INR Zero Only
1.086	VLV.GATE, SHEET 51321 3.0 INCH	51321ZZZ011ZZZZZ	14	Nos		0.00	INR Zero Only
1.087	VLV.GATE, SHEET 51321 4.0 INCH	51321ZZZ013ZZZZZ	8	Nos		0.00	INR Zero Only
1.088	VLV.GATE, SHEET 51321 6.0 INCH	51321ZZZ015ZZZZZ	8	Nos		0.00	INR Zero Only
1.089	VLV.GATE, SHEET 51321 8.0 INCH	51321ZZZ016ZZZZZ	18	Nos		0.00	INR Zero Only
1.090	VLV.GATE, SHEET 51321 14.0 INCH	51321ZZZ019ZZZZZ	2	Nos		0.00	INR Zero Only
1.091	VLV.GATE, SHEET 51345 2.0 INCH	51345ZZZ009ZZZZZ	5	Nos		0.00	INR Zero Only
1.092	VLV.GATE, SHEET 51345 3.0 INCH	51345ZZZ011ZZZZZ	2	Nos		0.00	INR Zero Only
1.093	VLV.GATE, SHEET 51361 3.0 INCH	51361ZZZ011ZZZZZ	4	Nos		0.00	INR Zero Only
1.094	VLV.GATE, SHEET 51366 2.0 INCH, LOCK OPEN	51366ZZZ0091ZZZZZ	3	Nos		0.00	INR Zero Only
1.095	VLV.GATE, SHEET 51366 2.0 INCH, LOCK CLOSED	51366ZZZ0092ZZZZZ	2	Nos		0.00	INR Zero Only

1.096	VLV.GATE, SHEET 51366 2.0 INCH	51366ZZ009ZZZZZ	23	Nos		0.00	INR Zero Only
1.097	VLV.GATE, SHEET 51366 3.0 INCH	51366ZZ011ZZZZZ	7	Nos		0.00	INR Zero Only
1.098	VLV.GATE, SHEET 51366 4.0 INCH	51366ZZ013ZZZZZ	5	Nos		0.00	INR Zero Only
1.099	VLV.GATE, SHEET 51366 6.0 INCH, LOCK OPEN	51366ZZ0151ZZZZZ	1	Nos		0.00	INR Zero Only
1.100	VLV.GATE, SHEET 51366 6.0 INCH, LOCK CLOSED	51366ZZ0152ZZZZZ	3	Nos		0.00	INR Zero Only
1.101	VLV.GATE, SHEET 51366 6.0 INCH	51366ZZ0152ZZZZZ	19	Nos		0.00	INR Zero Only
1.102	VLV.GATE, SHEET 51366 8.0 INCH, LOCK OPEN	51366ZZ0161ZZZZZ	5	Nos		0.00	INR Zero Only
1.103	VLV.GATE, SHEET 51384 2.0 INCH	51384ZZ009ZZZZZ	6	Nos		0.00	INR Zero Only
1.104	VLV.GATE, SHEET 51384 3.0 INCH	51384ZZ011ZZZZZ	13	Nos		0.00	INR Zero Only
1.105	VLV.GATE, SHEET 51384 4.0 INCH	51384ZZ013ZZZZZ	38	Nos		0.00	INR Zero Only
1.106	VLV.GATE, SHEET 51384 6.0 INCH	51384ZZ0152ZZZZZ	72	Nos		0.00	INR Zero Only
1.107	VLV.GATE, SHEET 51384 8.0 INCH	51384ZZ0162ZZZZZ	3	Nos		0.00	INR Zero Only
1.108	VLV.GATE, SHEET 51384 10.0 INCH	51384ZZ017ZZZZZ	5	Nos		0.00	INR Zero Only
1.109	VLV.GATE, SHEET 51384 12.0 INCH	51384ZZ0182ZZZZZ	2	Nos		0.00	INR Zero Only
1.110	VLV.GATE, SHEET 51384 14.0 INCH	51384ZZ0192ZZZZZ	1	Nos		0.00	INR Zero Only
1.111	VLV.GATE, SHEET 51384 16.0 INCH	51384ZZ0202ZZZZZ	1	Nos		0.00	INR Zero Only
1.112	VLV.GATE, SHEET 51401 2.0 INCH	51401ZZ009ZZZZZ	71	Nos		0.00	INR Zero Only
1.113	VLV.GATE, SHEET 51401 3.0 INCH, LOCK OPEN	51401ZZ0111ZZZZZ	2	Nos		0.00	INR Zero Only
1.114	VLV.GATE, SHEET 51401 3.0 INCH	51401ZZ0112ZZZZZ	25	Nos		0.00	INR Zero Only
1.115	VLV.GATE, SHEET 51401 4.0 INCH	51401ZZ0132ZZZZZ	98	Nos		0.00	INR Zero Only
1.116	VLV.GATE, SHEET 51401 6.0 INCH	51401ZZ0152ZZZZZ	40	Nos		0.00	INR Zero Only
1.117	VLV.GATE, SHEET 51401 8.0 INCH	51401ZZ0162ZZZZZ	63	Nos		0.00	INR Zero Only
1.118	VLV.GATE, SHEET 51401 10.0 INCH	51401ZZ017ZZZZZ	40	Nos		0.00	INR Zero Only
1.119	VLV.GATE, SHEET 51402, IBR 2.0 INCH	51402ZZ109ZZZZZ	3	Nos		0.00	INR Zero Only
1.120	VLV.GATE, SHEET 51402, IBR 3.0 INCH	51402ZZ111ZZZZZ	2	Nos		0.00	INR Zero Only
1.121	VLV.GATE, SHEET 51402, IBR 4.0 INCH	51402ZZ113ZZZZZ	4	Nos		0.00	INR Zero Only
1.122	VLV.GATE, SHEET 51402, IBR 18.0 INCH	51402ZZ121ZZZZZ	2	Nos		0.00	INR Zero Only
1.123	VLV.GATE, SHEET 51404, H2 2.0 INCH	51404ZZ709ZZZZZ	28	Nos		0.00	INR Zero Only
1.124	VLV.GATE, SHEET 51404, H2 3.0 INCH	51404ZZ711ZZZZZ	39	Nos		0.00	INR Zero Only
1.125	VLV.GATE, SHEET 51404, H2 4.0 INCH	51404ZZ713ZZZZZ	25	Nos		0.00	INR Zero Only
1.126	VLV.GATE, SHEET 51404, H2 12.0 INCH	51404ZZ718ZZZZZ	1	Nos		0.00	INR Zero Only
1.127	VLV.GATE, SHEET 51411, NAC6 2.0 INCH	51411ZZM09ZZZZZ	27	Nos		0.00	INR Zero Only
1.128	VLV.GATE, SHEET 51411, NAC6 3.0 INCH	51411ZZM11ZZZZZ	66	Nos		0.00	INR Zero Only
1.129	VLV.GATE, SHEET 51411, NAC6 4.0 INCH, LOCK CLOSED	51411ZZM132ZZZZZ	2	Nos		0.00	INR Zero Only
1.130	VLV.GATE, SHEET 51411, NAC6 4.0 INCH	51411ZZM13ZZZZZ	16	Nos		0.00	INR Zero Only
1.131	VLV.GATE, SHEET 51411, NAC6 6.0 INCH	51411ZZM15ZZZZZ	2	Nos		0.00	INR Zero Only
1.132	VLV.GATE, SHEET 51411, NACE 2.0 INCH	51411ZZZ029ZZZZZ	7	Nos		0.00	INR Zero Only
1.133	VLV.GATE, SHEET 51411, NACE 4.0 INCH	51411ZZZ13ZZZZZ	2	Nos		0.00	INR Zero Only
1.134	VLV.GATE, SHEET 51413 2.0 INCH	51413ZZ009ZZZZZ	14	Nos		0.00	INR Zero Only
1.135	VLV.GATE, SHEET 51413 3.0 INCH	51413ZZ011ZZZZZ	3	Nos		0.00	INR Zero Only
1.136	VLV.GATE, SHEET 51466 2.0 INCH	51466ZZ009ZZZZZ	34	Nos		0.00	INR Zero Only
1.137	VLV.GATE, SHEET 51466 6.0 INCH	51466ZZ0152ZZZZZ	20	Nos		0.00	INR Zero Only
1.138	VLV.GATE, SHEET 51466 8.0 INCH	51466ZZ0162ZZZZZ	2	Nos		0.00	INR Zero Only
1.139	VLV.GATE, SHEET 51499, NAC4 2.0 INCH	51499ZZE09ZZZZZ	4	Nos		0.00	INR Zero Only
1.140	VLV.GATE, SHEET 5142C, NAC7 2.0 INCH	5142CZZN09ZZZZZ	11	Nos		0.00	INR Zero Only
1.141	VLV.GATE, SHEET 5142C, NAC7 6.0 INCH	5142CZZN15ZZZZZ	3	Nos		0.00	INR Zero Only
1.142	VLV.GATE, SHEET 5142D, H2 2.0 INCH	5142DZZ709ZZZZZ	11	Nos		0.00	INR Zero Only
1.143	VLV.GATE, SHEET 5142D, H2 3.0 INCH	5142DZZ711ZZZZZ	2	Nos		0.00	INR Zero Only
1.144	VLV.GATE, SHEET 5142D, H2 6.0 INCH	5142DZZ715ZZZZZ	16	Nos		0.00	INR Zero Only
1.145	VLV.GATE, SHEET 5142D, H2 12.0 INCH	5142DZZ718ZZZZZ	18	Nos		0.00	INR Zero Only
1.146	VLV.GATE, SHEET 51502, IBR 6.0 INCH	51502ZZ115ZZZZZ	1	Nos		0.00	INR Zero Only
1.147	VLV.GLOBE, SHEET 52001 0.75 INCH	52001ZZZ005ZZZZZ	3	Nos		0.00	INR Zero Only
1.148	VLV.GLOBE, SHEET 52001 1.0 INCH	52001ZZZ006ZZZZZ	20	Nos		0.00	INR Zero Only
1.149	VLV.GLOBE, SHEET 52001 1.5 INCH	52001ZZZ008ZZZZZ	22	Nos		0.00	INR Zero Only
1.150	VLV.GLOBE, SHEET 52002, IBR 1.0 INCH	52002ZZZ106ZZZZZ	3	Nos		0.00	INR Zero Only
1.151	VLV.GLOBE, SHEET 52004, H2 0.75 INCH	52004ZZZ705ZZZZZ	6	Nos		0.00	INR Zero Only
1.152	VLV.GLOBE, SHEET 52011, NAC6 1.0 INCH	52011ZZZM06ZZZZZ	10	Nos		0.00	INR Zero Only
1.153	VLV.GLOBE, SHEET 52011, NAC6 1.5 INCH	52011ZZZM08ZZZZZ	6	Nos		0.00	INR Zero Only
1.154	VLV.GLOBE, SHEET 52013 0.75 INCH	52013ZZZ005ZZZZZ	10	Nos		0.00	INR Zero Only
1.155	VLV.GLOBE, SHEET 52013 1.0 INCH	52013ZZZ006ZZZZZ	3	Nos		0.00	INR Zero Only
1.156	VLV.GLOBE, SHEET 52066 1.0 INCH	52066ZZZ006ZZZZZ	13	Nos		0.00	INR Zero Only
1.157	VLV.GLOBE, SHEET 52066 1.5 INCH	52066ZZZ008ZZZZZ	5	Nos		0.00	INR Zero Only

1.158	VLV.GLOBE, SHEET 52301 2.0 INCH	52301ZZZ009ZZZZZ	6	Nos		0.00	INR Zero Only
1.159	VLV.GLOBE, SHEET 52302, IBR 2.0 INCH	52302ZZZ109ZZZZZ	10	Nos		0.00	INR Zero Only
1.160	VLV.GLOBE, SHEET 52311, NAC6 2.0 INCH	52311ZZZM09ZZZZZ	12	Nos		0.00	INR Zero Only
1.161	VLV.GLOBE, SHEET 52311, NAC6 3.0 INCH	52311ZZZM11ZZZZZ	2	Nos		0.00	INR Zero Only
1.162	VLV.GLOBE, SHEET 52311, NAC6 4.0 INCH	52311ZZZM13ZZZZZ	2	Nos		0.00	INR Zero Only
1.163	VLV.GLOBE, SHEET 52311, NAC6 6.0 INCH	52311ZZZM15ZZZZZ	1	Nos		0.00	INR Zero Only
1.164	VLV.GLOBE, SHEET 52313 2.0 INCH	52313ZZZ009ZZZZZ	7	Nos		0.00	INR Zero Only
1.165	VLV.GLOBE, SHEET 52313 8.0 INCH	52313ZZZ016ZZZZZ	1	Nos		0.00	INR Zero Only
1.166	VLV.GLOBE, SHEET 52313 12.0 INCH	52313ZZZ018ZZZZZ	1	Nos		0.00	INR Zero Only
1.167	VLV.GLOBE, SHEET 52321 3.0 INCH	52321ZZZ011ZZZZZ	4	Nos		0.00	INR Zero Only
1.168	VLV.GLOBE, SHEET 52321 6.0 INCH	52321ZZZ015ZZZZZ	2	Nos		0.00	INR Zero Only
1.169	VLV.GLOBE, SHEET 52345 2.0 INCH	52345ZZZ009ZZZZZ	2	Nos		0.00	INR Zero Only
1.170	VLV.GLOBE, SHEET 52366 2.0 INCH	52366ZZZ009ZZZZZ	9	Nos		0.00	INR Zero Only
1.171	VLV.GLOBE, SHEET 52384 4.0 INCH	52384ZZZ013ZZZZZ	4	Nos		0.00	INR Zero Only
1.172	VLV.GLOBE, SHEET 52384 6.0 INCH	52384ZZZ015ZZZZZ	2	Nos		0.00	INR Zero Only
1.173	VLV.GLOBE, SHEET 52401 2.0 INCH	52401ZZZ009ZZZZZ	3	Nos		0.00	INR Zero Only
1.174	VLV.GLOBE, SHEET 52402, IBR 2.0 INCH	52402ZZZ109ZZZZZ	5	Nos		0.00	INR Zero Only
1.175	VLV.GLOBE, SHEET 52402, IBR 4.0 INCH	52402ZZZ113ZZZZZ	2	Nos		0.00	INR Zero Only
1.176	VLV.GLOBE, SHEET 52404, H2 2.0 INCH	52404ZZZ709ZZZZZ	2	Nos		0.00	INR Zero Only
1.177	VLV.GLOBE, SHEET 52404, H2 3.0 INCH	52404ZZZ711ZZZZZ	2	Nos		0.00	INR Zero Only
1.178	VLV.GLOBE, SHEET 52411, NAC6 2.0 INCH	52411ZZZM09ZZZZZ	2	Nos		0.00	INR Zero Only
1.179	VLV.GLOBE, SHEET 52411, NAC6 3.0 INCH	52411ZZZM11ZZZZZ	2	Nos		0.00	INR Zero Only
1.180	VLV.GLOBE, SHEET 52411, NAC6 4.0 INCH	52411ZZZM13ZZZZZ	2	Nos		0.00	INR Zero Only
1.181	VLV.GLOBE, SHEET 52466 3.0 INCH	52466ZZZ011ZZZZZ	2	Nos		0.00	INR Zero Only
1.182	VLV.GLOBE, SHEET 52466 6.0 INCH	52466ZZZ015ZZZZZ	1	Nos		0.00	INR Zero Only
1.183	VLV.GLOBE, SHEET 524ZD, H2 2.0 INCH	524ZDZZZ709ZZZZZ	2	Nos		0.00	INR Zero Only
1.184	VLV.GLOBE, SHEET 524ZD, H2 4.0 INCH	524ZDZZZ713ZZZZZ	2	Nos		0.00	INR Zero Only
1.185	VLV.GLOBE, SHEET 524ZD, H2 6.0 INCH	524ZDZZZ715ZZZZZ	1	Nos		0.00	INR Zero Only
1.186	VLV.GLOBE, SHEET 52502, IBR 2.0 INCH	52502ZZZ109ZZZZZ	1	Nos		0.00	INR Zero Only
1.187	VLV.CHECK, SHEET 53001 1.0 INCH	53001ZZZ006ZZZZZ	10	Nos		0.00	INR Zero Only
1.188	VLV.CHECK, SHEET 53004, H2 0.75 INCH	53004ZZZ705ZZZZZ	6	Nos		0.00	INR Zero Only
1.189	VLV.CHECK, SHEET 53011, NAC6 1.0 INCH	53011ZZZM06ZZZZZ	15	Nos		0.00	INR Zero Only
1.190	VLV.CHECK, SHEET 53011, NAC6 1.5 INCH	53011ZZZM08ZZZZZ	10	Nos		0.00	INR Zero Only
1.191	VLV.CHECK, SHEET 53013 0.75 INCH	53013ZZZ005ZZZZZ	10	Nos		0.00	INR Zero Only
1.192	VLV.CHECK, SHEET 53013 1.0 INCH	53013ZZZ006ZZZZZ	10	Nos		0.00	INR Zero Only
1.193	VLV.CHECK, SHEET 53050 1.0 INCH	53050ZZZ006ZZZZZ	5	Nos		0.00	INR Zero Only
1.194	VLV.CHECK, SHEET 53066 1.0 INCH	53066ZZZ006ZZZZZ	7	Nos		0.00	INR Zero Only
1.195	VLV.CHECK, SHEET 53066 1.5 INCH	53066ZZZ008ZZZZZ	8	Nos		0.00	INR Zero Only
1.196	VLV.CHECK, SHEET 53301 2.0 INCH	53301ZZZ009ZZZZZ	2	Nos		0.00	INR Zero Only
1.197	VLV.CHECK, SHEET 53301 3.0 INCH	53301ZZZ011ZZZZZ	3	Nos		0.00	INR Zero Only
1.198	VLV.CHECK, SHEET 53301 4.0 INCH	53301ZZZ013ZZZZZ	2	Nos		0.00	INR Zero Only
1.199	VLV.CHECK, SHEET 53301 6.0 INCH	53301ZZZ015ZZZZZ	1	Nos		0.00	INR Zero Only
1.200	VLV.CHECK, SHEET 53301 8.0 INCH	53301ZZZ016ZZZZZ	4	Nos		0.00	INR Zero Only
1.201	VLV.CHECK, SHEET 53301 10.0 INCH	53301ZZZ017ZZZZZ	1	Nos		0.00	INR Zero Only
1.202	VLV.CHECK, SHEET 53301 12.0 INCH	53301ZZZ018ZZZZZ	3	Nos		0.00	INR Zero Only
1.203	VLV.CHECK, SHEET 53302, IBR 2.0 INCH	53302ZZZ109ZZZZZ	6	Nos		0.00	INR Zero Only
1.204	VLV.CHECK, SHEET 53302, IBR 3.0 INCH	53302ZZZ111ZZZZZ	2	Nos		0.00	INR Zero Only
1.205	VLV.CHECK, SHEET 53302, IBR 8.0 INCH	53302ZZZ116ZZZZZ	1	Nos		0.00	INR Zero Only
1.206	VLV.CHECK, SHEET 53302, IBR 16.0 INCH	53302ZZZ120ZZZZZ	1	Nos		0.00	INR Zero Only
1.207	VLV.CHECK, SHEET 53311, NAC6 2.0 INCH	53311ZZZM09ZZZZZ	13	Nos		0.00	INR Zero Only
1.208	VLV.CHECK, SHEET 53311, NAC6 3.0 INCH	53311ZZZM11ZZZZZ	7	Nos		0.00	INR Zero Only
1.209	VLV.CHECK, SHEET 53311, NAC6 4.0 INCH	53311ZZZM13ZZZZZ	3	Nos		0.00	INR Zero Only
1.210	VLV.CHECK, SHEET 53311, NAC6 6.0 INCH	53311ZZZM15ZZZZZ	7	Nos		0.00	INR Zero Only
1.211	VLV.CHECK, SHEET 53311, NAC6 8.0 INCH	53311ZZZM16ZZZZZ	8	Nos		0.00	INR Zero Only
1.212	VLV.CHECK, SHEET 53311, NAC6 12.0 INCH	53311ZZZM18ZZZZZ	3	Nos		0.00	INR Zero Only
1.213	VLV.CHECK, SHEET 53311, NACE 2.0 INCH	53311ZZZ029ZZZZZ	2	Nos		0.00	INR Zero Only
1.214	VLV.CHECK, SHEET 53311, NACE 3.0 INCH	53311ZZZ211ZZZZZ	2	Nos		0.00	INR Zero Only
1.215	VLV.CHECK, SHEET 53313 2.0 INCH	53313ZZZ009ZZZZZ	6	Nos		0.00	INR Zero Only
1.216	VLV.CHECK, SHEET 53313 3.0 INCH	53313ZZZ011ZZZZZ	2	Nos		0.00	INR Zero Only
1.217	VLV.CHECK, SHEET 53313 6.0 INCH	53313ZZZ015ZZZZZ	1	Nos		0.00	INR Zero Only
1.218	VLV.CHECK, SHEET 53313 10.0 INCH	53313ZZZ017ZZZZZ	1	Nos		0.00	INR Zero Only
1.219	VLV.CHECK, SHEET 53313 12.0 INCH	53313ZZZ018ZZZZZ	1	Nos		0.00	INR Zero Only



DETAILS OF BUILT-IN-CIF VALUE OF IMPORT CONTENT (RAW MATERIALS) (INDIAN BIDDER)									
RFQ NO.									Rev-0
ITEM:									
NAME OF BIDDER:									
Sl. No.	DESCRIPTION					CIF value of Import Content included in quoted supply prices	RATE OF CUSTOM DUTY INCLUDED IN QUOTED SUPPLY PRICES		
	For Item Sl. No. as per Price Schedule format	Description of Imported items	UOM	Quantity	Currency of import (*) Note 5 below	%age of quoted INR prices	HSN CODE / CUSTOM TARRIF NO.	BASIC CUSTOMS DUTY (%)	Social Welfare Surcharge ON CUSTOM DUTY (%)
<b>Notes:</b>									
1	The Customs Duty and other custom related duties as indicated above shall be included in the quoted price as per the provisions of the Bidding Document.								
2	Bidder to furnish the above details for each item Sl. No. of MR wherein import content is applicable.								
3	Statutory variations on Custom Duty shall be payable on CIF value quoted above as per provisions of GTC.								
4	<b>For the purpose of calculation of Foreign Exchange Variation, the "SBI Bill selling rate on the date of bid due date" shall be taken for conversion of foreign currency to INR. Bidder shall quote the percentage of CIF value portion in Indian Rupees accordingly.</b>								
5	Bidder to quote currency of import in USD or EURO or YEN or Pound Sterling or in these combinations only.								



# HINDUSTAN PETROLEUM CORPORATION LIMITED

## LUBE MODERNIZATION & BOTTOM UPGRADATION (LMBU) PROJECT

Part - I: TECHNICAL SECTION

Prepared by:



# MATERIAL REQUISITION(TOP SHEET)

**ITEM : GATE,GLOBE & CHECK VALVES**

**Issue Status (Fill 1 or 2 from below in this bracket) [ ]**

1. -> Entire Requisition Issued

2. -> Only Revised Pages are Issued

**MR Category : I**

**PDD ITEM CODE : 50AA,50AD,50AH,50BA,50BD,50CA,50CD**

## DOCUMENT NUMBER

( Always quote this document number given below as reference )

<b>C068</b>	<b>000</b>	<b>WB</b>	<b>MR</b>	<b>3005</b>	<b>A</b>	<b>08-01-2026</b>	<b>1643</b>
<b>JOB NO.</b>	<b>UNIT / AREA</b>	<b>COST CENTRE</b>	<b>DOC CODE</b>	<b>SR. NO</b>	<b>REV</b>	<b>DATE</b>	<b>ORIGINATING DIVN./DEPT</b>

<b>VENDOR CODE</b>	<b>VENDOR NAME</b>

Material to be delivered at (job site) HPCL,MUMBAI within the delivery period specified in the "Request For Quotation"(RFQ).

**Notes :**

1. This page is a record of all the Revisions of this Requisition.
2. The nature of the Revision is briefly stated in the "Details" column below, the Requisition in its entirety shall be considered for contractual purposes.
3. When a Requisition is revised, only the revised pages may be issued.
4. When revised pages only are issued, the revised pages shall form part of the original Requisition. The original requisition alongwith the revised pages shall be considered in its entirety for contractual purposes.
5. Vendors are required to quote strictly as per technical specifications / notes stipulated in the material requisition. The offers with deviations are likely to be summarily rejected.

REV	DATE	BY	CHK	APPD.	DETAILS
A	08-01-2026	SR	BKT	PM	ISSUED FOR BIDS

**This is a system generated approved document and does not require Signature**

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**ENGINEERS INDIA LIMITED**  
NEW DELHI

**Project : LMBU PROJECT**

**Client : HPCL**

**Requisition No.**

**C068-000-WB-MR-3005**

Page 1 of 13

**Rev**

**A**

# LIST OF ATTACHMENT

SR. NO.	DOCUMENT TITLE	DOCUMENT NO.	REVISION	
			NO.	DATE
1	TECHNICAL NOTES FOR VALVES	6-44-0052	8	15-FEB-2023
2	INSPECTION AND TEST PLAN FOR VALVES	6-81-0004	7	08-MAY-2023
3	STANDARD SPECIFICATION FOR POSITIVE MATERIAL IDENTIFICATION (PMI) AT SUPPLIER'S WORK	6-81-0001	4	23-DEC-2021
4	SPECIFICATION FOR DOCUMENTATION REQUIREMENTS FROM SUPPLIERS	6-78-0003	2	12-JUN-2020
5	SPECIFICATION FOR QUALITY MANAGEMENT SYSTEM REQUIREMENTS FROM BIDDERS	6-78-0001	2	12-JUN-2020
6	ADDITIONAL TECHNICAL REQUIREMENTS	C068-000-16-43-ATR-3005	A	11-FEB-2026
7	VENDOR DATA REQUIREMENTS	C068-000-16-43-VDR-3005	A	11-FEB-2026
8	EXTENDED SPINDLE VALVE DRAWING	C068-261-81-45-44753	B	18-DEC-2025
9	EXTENDED SPINDLE VALVE DRAWING	C068-203-81-45-44752	A	17-DEC-2025
10	EXTENDED SPINDLE VALVE DRAWING	C068-203-81-45-44751	B	18-DEC-2025
11	VMS FOR MR 3001	C068-6-44-0006-3001	A	11-FEB-2026

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**ENGINEERS INDIA LIMITED**  
NEW DELHI

**Project : LMBU PROJECT**  
**Client : HPCL**

**Requisition No.**  
**C068-000-WB-MR-3005**

**Rev**  
**A**

# MR ATTACHMENT

SR.NO.	ITEMCODE	DETAIL DESCRIPTION	QTY.	U.RATE	TOT.VALUE	CDD
<b>Item Description : VLV.GATE, SHEET 51001</b>						
1	51001ZZZ004ZZZZZZ	0.5 INCH	81 NOS			
2	51001ZZZ0051ZZZZZ	0.75 INCH, LOCK OPEN	3 NOS			
3	51001ZZZ005ZZZZZZ	0.75 INCH	2357 NOS			
4	51001ZZZ006ZZZZZZ	1.0 INCH	17 NOS			
5	51001ZZZ008ZZZZZZ	1.5 INCH	90 NOS			
<b>Item Description : VLV.GATE, SHEET 51002, IBR</b>						
6	51002ZZZ104ZZZZZZ	0.5 INCH	12 NOS			
7	51002ZZZ105ZZZZZZ	0.75 INCH	222 NOS			
<b>Item Description : VLV.GATE, SHEET 51004, H2</b>						
8	51004ZZZ704ZZZZZZ	0.5 INCH	6 NOS			
9	51004ZZZ705ZZZZZZ	0.75 INCH	159 NOS			
10	51004ZZZ708ZZZZZZ	1.5 INCH	10 NOS			
<b>Item Description : VLV.GATE, SHEET 51011, NAC6</b>						
11	51011ZZZM04ZZZZZZ	0.5 INCH	67 NOS			
12	51011ZZZM051ZZZZZ	0.75 INCH, LOCK OPEN	10 NOS			
13	51011ZZZM05ZZZZZZ	0.75 INCH	357 NOS			
14	51011ZZZM061ZZZZZ	1.0 INCH, LOCK OPEN	23 NOS			
15	51011ZZZM06ZZZZZZ	1.0 INCH	10 NOS			
16	51011ZZZM08ZZZZZZ	1.5 INCH	22 NOS			
<b>Item Description : VLV.GATE, SHEET 51011, NACE</b>						
17	51011ZZZ204ZZZZZZ	0.5 INCH	6 NOS			
18	51011ZZZ205ZZZZZZ	0.75 INCH	100 NOS			
<b>Item Description : VLV.GATE, SHEET 51013</b>						
19	51013ZZZ004ZZZZZZ	0.5 INCH	10 NOS			
20	51013ZZZ005ZZZZZZ	0.75 INCH	128 NOS			
21	51013ZZZ0061ZZZZZ	1.0 INCH, LOCK OPEN	9 NOS			
22	51013ZZZ006ZZZZZZ	1.0 INCH	6 NOS			
23	51013ZZZ008ZZZZZZ	1.5 INCH	3 NOS			
<b>Item Description : VLV.GATE, SHEET 51045</b>						
24	51045ZZZ004ZZZZZZ	0.5 INCH	10 NOS			

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**ENGINEERS INDIA LIMITED**  
NEW DELHI

**Project : LMBU PROJECT**

**Client : HPCL**

**Requisition No.**

**C068-000-WB-MR-3005**

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**Rev**

**A**

# MR ATTACHMENT

SR.NO.	ITEMCODE	DETAIL DESCRIPTION	QTY.	U.RATE	TOT.VALUE	CDD
25	51045ZZZ005ZZZZZZ	0.75 INCH	43 NOS			
<b>Item Description : VLV.GATE, SHEET 51050</b>						
26	51050ZZZ005ZZZZZZ	0.75 INCH	10 NOS			
27	51050ZZZ006ZZZZZZ	1.0 INCH	5 NOS			
<b>Item Description : VLV.GATE, SHEET 51061</b>						
28	51061ZZZ005ZZZZZZ	0.75 INCH	10 NOS			
<b>Item Description : VLV.GATE, SHEET 51066</b>						
29	51066ZZZ004ZZZZZZ	0.5 INCH	32 NOS			
30	51066ZZZ005ZZZZZZ	0.75 INCH	232 NOS			
31	51066ZZZ0061ZZZZZ	1.0 INCH, LOCK OPEN	6 NOS			
32	51066ZZZ006ZZZZZZ	1.0 INCH	49 NOS			
33	51066ZZZ008ZZZZZZ	1.5 INCH	44 NOS			
<b>Item Description : VLV.GATE, SHEET 51080</b>						
34	51080ZZZ005ZZZZZZ	0.75 INCH	90 NOS			
35	51080ZZZ006ZZZZZZ	1.0 INCH	21 NOS			
<b>Item Description : VLV.GATE, SHEET 51099, NAC4</b>						
36	51099ZZZE05ZZZZZZ	0.75 INCH	10 NOS			
<b>Item Description : VLV.GATE, SHEET 510LM, NACE</b>						
37	510LMZZZ205ZZZZZZ	0.75 INCH	9 NOS			
<b>Item Description : VLV.GATE, SHEET 510ZC, NAC7</b>						
38	510ZCZZZN05ZZZZZZ	0.75 INCH	3 NOS			
<b>Item Description : VLV.GATE, SHEET 510ZD, H2</b>						
39	510ZDZZZ704ZZZZZZ	0.5 INCH	10 NOS			
40	510ZDZZZ705ZZZZZZ	0.75 INCH	59 NOS			
<b>Item Description : VLV.GATE, SHEET 51301</b>						
41	51301ZZZ0091ZZZZZ	2.0 INCH, LOCK OPEN	2 NOS			
42	51301ZZZ009ZZZZZZ	2.0 INCH	51 NOS			
43	51301ZZZ011ZZZZZZ	3.0 INCH	8 NOS			
44	51301ZZZ0132ZZZZZ	4.0 INCH, LOCK CLOSED	34 NOS			
45	51301ZZZ013ZZZZZZ	4.0 INCH	56 NOS			
46	51301ZZZ015ZZZZZZ	6.0 INCH	6 NOS			

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**ENGINEERS INDIA LIMITED**  
NEW DELHI

**Project : LMBU PROJECT**

**Client : HPCL**

**Requisition No.**

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SR.NO.	ITEMCODE	DETAIL DESCRIPTION	QTY.	U.RATE	TOT.VALUE	CDD
47	51301ZZZ016EZZZZZ	8.0 INCH, EXTENDED SPINDLE	4 NOS			
48	51301ZZZ016ZZZZZZ	8.0 INCH	30 NOS			
49	51301ZZZ017ZZZZZZ	10.0 INCH	8 NOS			
50	51301ZZZ018ZZZZZZ	12.0 INCH	8 NOS			
51	51301ZZZ020EZZZZZ	16.0 INCH, EXTENDED SPINDLE	2 NOS			
52	51301ZZZ021ZZZZZZ	18.0 INCH	2 NOS			
53	51301ZZZ0311ZZZZZ	38.0 INCH, LOCK OPEN	2 NOS			

**Item Description : VLV.GATE, SHEET 51302, IBR**

54	51302ZZZ1091ZZZZZ	2.0 INCH, LOCK OPEN	2 NOS			
55	51302ZZZ109ZZZZZZ	2.0 INCH	34 NOS			
56	51302ZZZ111ZZZZZZ	3.0 INCH	2 NOS			
57	51302ZZZ117ZZZZZZ	10.0 INCH	2 NOS			
58	51302ZZZ118ZZZZZZ	12.0 INCH	2 NOS			
59	51302ZZZ120ZZZZZZ	16.0 INCH	2 NOS			
60	51302ZZZ122ZZZZZZ	20.0 INCH	2 NOS			

**Item Description : VLV.GATE, SHEET 51311, NAC6**

61	51311ZZZM09ZZZZZZ	2.0 INCH	65 NOS			
62	51311ZZZM111ZZZZZ	3.0 INCH, LOCK OPEN	3 NOS			
63	51311ZZZM11ZZZZZZ	3.0 INCH	30 NOS			
64	51311ZZZM131ZZZZZ	4.0 INCH, LOCK OPEN	2 NOS			
65	51311ZZZM132ZZZZZ	4.0 INCH, LOCK CLOSED	2 NOS			
66	51311ZZZM13ZZZZZZ	4.0 INCH	16 NOS			
67	51311ZZZM15E1ZZZZ	6.0 INCH, EXTENDED SPINDLE, LOCK OPEN	2 NOS			
68	51311ZZZM15ZZZZZZ	6.0 INCH	16 NOS			
69	51311ZZZM161ZZZZZ	8.0 INCH, LOCK OPEN	4 NOS			
70	51311ZZZM16ZZZZZZ	8.0 INCH	28 NOS			
71	51311ZZZM18ZZZZZZ	12.0 INCH	7 NOS			
72	51311ZZZM191ZZZZZ	14.0 INCH, LOCK OPEN	1 NOS			

**Item Description : VLV.GATE, SHEET 51311, NACE**

73	51311ZZZ209ZZZZZZ	2.0 INCH	4 NOS			
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**ENGINEERS INDIA LIMITED**  
NEW DELHI

**Project : LMBU PROJECT**

**Client : HPCL**

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SR.NO.	ITEMCODE	DETAIL DESCRIPTION	QTY.	U.RATE	TOT.VALUE	CDD
74	51311ZZZ211ZZZZZZ	3.0 INCH	4 NOS			
<b>Item Description : VLV.GATE, SHEET 51313</b>						
75	51313ZZZ009ZZZZZZ	2.0 INCH	25 NOS			
76	51313ZZZ0111ZZZZZZ	3.0 INCH, LOCK OPEN	3 NOS			
77	51313ZZZ011ZZZZZZ	3.0 INCH	4 NOS			
78	51313ZZZ013ZZZZZZ	4.0 INCH	2 NOS			
79	51313ZZZ0151ZZZZZZ	6.0 INCH, LOCK OPEN	1 NOS			
80	51313ZZZ0152ZZZZZZ	6.0 INCH, LOCK CLOSED	1 NOS			
81	51313ZZZ0171ZZZZZZ	10.0 INCH, LOCK OPEN	4 NOS			
82	51313ZZZ0181ZZZZZZ	12.0 INCH, LOCK OPEN	1 NOS			
83	51313ZZZ018ZZZZZZ	12.0 INCH	22 NOS			
84	51313ZZZ0201ZZZZZZ	16.0 INCH, LOCK OPEN	1 NOS			
<b>Item Description : VLV.GATE, SHEET 51321</b>						
85	51321ZZZ009ZZZZZZ	2.0 INCH	28 NOS			
86	51321ZZZ011ZZZZZZ	3.0 INCH	14 NOS			
87	51321ZZZ013ZZZZZZ	4.0 INCH	8 NOS			
88	51321ZZZ015ZZZZZZ	6.0 INCH	8 NOS			
89	51321ZZZ016ZZZZZZ	8.0 INCH	18 NOS			
90	51321ZZZ019ZZZZZZ	14.0 INCH	2 NOS			
<b>Item Description : VLV.GATE, SHEET 51345</b>						
91	51345ZZZ009ZZZZZZ	2.0 INCH	5 NOS			
92	51345ZZZ011ZZZZZZ	3.0 INCH	2 NOS			
<b>Item Description : VLV.GATE, SHEET 51361</b>						
93	51361ZZZ011ZZZZZZ	3.0 INCH	4 NOS			
<b>Item Description : VLV.GATE, SHEET 51366</b>						
94	51366ZZZ0091ZZZZZZ	2.0 INCH, LOCK OPEN	3 NOS			
95	51366ZZZ0092ZZZZZZ	2.0 INCH, LOCK CLOSED	2 NOS			
96	51366ZZZ009ZZZZZZ	2.0 INCH	23 NOS			
97	51366ZZZ011ZZZZZZ	3.0 INCH	7 NOS			
98	51366ZZZ013ZZZZZZ	4.0 INCH	5 NOS			
99	51366ZZZ0151ZZZZZZ	6.0 INCH, LOCK OPEN	1 NOS			

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**ENGINEERS INDIA LIMITED**  
NEW DELHI

**Project : LMBU PROJECT**  
**Client : HPCL**

**Requisition No.**  
**C068-000-WB-MR-3005**

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# MR ATTACHMENT

SR.NO.	ITEMCODE	DETAIL DESCRIPTION	QTY.	U.RATE	TOT.VALUE	CDD
100	51366ZZZ0152ZZZZZ	6.0 INCH, LOCK CLOSED	3 NOS			
101	51366ZZZ015ZZZZZZ	6.0 INCH	19 NOS			
102	51366ZZZ0161ZZZZZ	8.0 INCH, LOCK OPEN	5 NOS			

**Item Description : VLV.GATE, SHEET 51384**

103	51384ZZZ009ZZZZZZ	2.0 INCH	6 NOS			
104	51384ZZZ011ZZZZZZ	3.0 INCH	13 NOS			
105	51384ZZZ013ZZZZZZ	4.0 INCH	38 NOS			
106	51384ZZZ015ZZZZZZ	6.0 INCH	72 NOS			
107	51384ZZZ016ZZZZZZ	8.0 INCH	3 NOS			
108	51384ZZZ017ZZZZZZ	10.0 INCH	5 NOS			
109	51384ZZZ018ZZZZZZ	12.0 INCH	2 NOS			
110	51384ZZZ019ZZZZZZ	14.0 INCH	1 NOS			
111	51384ZZZ020ZZZZZZ	16.0 INCH	1 NOS			

**Item Description : VLV.GATE, SHEET 51401**

112	51401ZZZ009ZZZZZZ	2.0 INCH	71 NOS			
113	51401ZZZ011ZZZZZZ	3.0 INCH, LOCK OPEN	2 NOS			
114	51401ZZZ011ZZZZZZ	3.0 INCH	25 NOS			
115	51401ZZZ013ZZZZZZ	4.0 INCH	98 NOS			
116	51401ZZZ015ZZZZZZ	6.0 INCH	40 NOS			
117	51401ZZZ016ZZZZZZ	8.0 INCH	63 NOS			
118	51401ZZZ017ZZZZZZ	10.0 INCH	40 NOS			

**Item Description : VLV.GATE, SHEET 51402, IBR**

119	51402ZZZ109ZZZZZZ	2.0 INCH	3 NOS			
120	51402ZZZ111ZZZZZZ	3.0 INCH	2 NOS			
121	51402ZZZ113ZZZZZZ	4.0 INCH	4 NOS			
122	51402ZZZ121ZZZZZZ	18.0 INCH	2 NOS			

**Item Description : VLV.GATE, SHEET 51404, H2**

123	51404ZZZ709ZZZZZZ	2.0 INCH	28 NOS			
124	51404ZZZ711ZZZZZZ	3.0 INCH	39 NOS			
125	51404ZZZ713ZZZZZZ	4.0 INCH	25 NOS			
126	51404ZZZ718ZZZZZZ	12.0 INCH	1 NOS			

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**Project : LMBU PROJECT**

**Client : HPCL**

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SR.NO.	ITEMCODE	DETAIL DESCRIPTION	QTY.	U.RATE	TOT.VALUE	CDD
<b>Item Description : VLV.GATE, SHEET 51411, NAC6</b>						
127	51411ZZZM09ZZZZZZ	2.0 INCH	27 NOS			
128	51411ZZZM11ZZZZZZ	3.0 INCH	66 NOS			
129	51411ZZZM132ZZZZZ	4.0 INCH, LOCK CLOSED	2 NOS			
130	51411ZZZM13ZZZZZZ	4.0 INCH	16 NOS			
131	51411ZZZM15ZZZZZZ	6.0 INCH	2 NOS			
<b>Item Description : VLV.GATE, SHEET 51411, NACE</b>						
132	51411ZZZ209ZZZZZZ	2.0 INCH	7 NOS			
133	51411ZZZ213ZZZZZZ	4.0 INCH	2 NOS			
<b>Item Description : VLV.GATE, SHEET 51413</b>						
134	51413ZZZ009ZZZZZZ	2.0 INCH	14 NOS			
135	51413ZZZ011ZZZZZZ	3.0 INCH	3 NOS			
<b>Item Description : VLV.GATE, SHEET 51466</b>						
136	51466ZZZ009ZZZZZZ	2.0 INCH	34 NOS			
137	51466ZZZ015ZZZZZZ	6.0 INCH	20 NOS			
138	51466ZZZ016ZZZZZZ	8.0 INCH	2 NOS			
<b>Item Description : VLV.GATE, SHEET 51499, NAC4</b>						
139	51499ZZZE09ZZZZZZ	2.0 INCH	4 NOS			
<b>Item Description : VLV.GATE, SHEET 514ZC, NAC7</b>						
140	514ZCZZZN09ZZZZZZ	2.0 INCH	11 NOS			
141	514ZCZZZN15ZZZZZZ	6.0 INCH	3 NOS			
<b>Item Description : VLV.GATE, SHEET 514ZD, H2</b>						
142	514ZDZZZ709ZZZZZZ	2.0 INCH	11 NOS			
143	514ZDZZZ711ZZZZZZ	3.0 INCH	2 NOS			
144	514ZDZZZ715ZZZZZZ	6.0 INCH	16 NOS			
145	514ZDZZZ718ZZZZZZ	12.0 INCH	18 NOS			
<b>Item Description : VLV.GATE, SHEET 51502, IBR</b>						
146	51502ZZZ115ZZZZZZ	6.0 INCH	1 NOS			
<b>Item Description : VLV.GLOBE, SHEET 52001</b>						
147	52001ZZZ005ZZZZZZ	0.75 INCH	3 NOS			
148	52001ZZZ006ZZZZZZ	1.0 INCH	20 NOS			

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NEW DELHI

**Project : LMBU PROJECT**  
**Client : HPCL**

**Requisition No.**  
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SR.NO.	ITEMCODE	DETAIL DESCRIPTION	QTY.	U.RATE	TOT.VALUE	CDD
149	52001ZZZ008ZZZZZZ	1.5 INCH	22 NOS			
<b>Item Description : VLV.GLOBE, SHEET 52002, IBR</b>						
150	52002ZZZ106ZZZZZZ	1.0 INCH	3 NOS			
<b>Item Description : VLV.GLOBE, SHEET 52004, H2</b>						
151	52004ZZZ705ZZZZZZ	0.75 INCH	6 NOS			
<b>Item Description : VLV.GLOBE, SHEET 52011, NAC6</b>						
152	52011ZZZM06ZZZZZZ	1.0 INCH	10 NOS			
153	52011ZZZM08ZZZZZZ	1.5 INCH	6 NOS			
<b>Item Description : VLV.GLOBE, SHEET 52013</b>						
154	52013ZZZ005ZZZZZZ	0.75 INCH	10 NOS			
155	52013ZZZ006ZZZZZZ	1.0 INCH	3 NOS			
<b>Item Description : VLV.GLOBE, SHEET 52066</b>						
156	52066ZZZ006ZZZZZZ	1.0 INCH	13 NOS			
157	52066ZZZ008ZZZZZZ	1.5 INCH	5 NOS			
<b>Item Description : VLV.GLOBE, SHEET 52301</b>						
158	52301ZZZ009ZZZZZZ	2.0 INCH	6 NOS			
<b>Item Description : VLV.GLOBE, SHEET 52302, IBR</b>						
159	52302ZZZ109ZZZZZZ	2.0 INCH	10 NOS			
<b>Item Description : VLV.GLOBE, SHEET 52311, NAC6</b>						
160	52311ZZZM09ZZZZZZ	2.0 INCH	12 NOS			
161	52311ZZZM11ZZZZZZ	3.0 INCH	2 NOS			
162	52311ZZZM13ZZZZZZ	4.0 INCH	2 NOS			
163	52311ZZZM15ZZZZZZ	6.0 INCH	1 NOS			
<b>Item Description : VLV.GLOBE, SHEET 52313</b>						
164	52313ZZZ009ZZZZZZ	2.0 INCH	7 NOS			
165	52313ZZZ016ZZZZZZ	8.0 INCH	1 NOS			
166	52313ZZZ018ZZZZZZ	12.0 INCH	1 NOS			
<b>Item Description : VLV.GLOBE, SHEET 52321</b>						
167	52321ZZZ011ZZZZZZ	3.0 INCH	4 NOS			
168	52321ZZZ015ZZZZZZ	6.0 INCH	2 NOS			
<b>Item Description : VLV.GLOBE, SHEET 52345</b>						

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**ENGINEERS INDIA LIMITED**  
NEW DELHI

Project : LMBU PROJECT  
Client : HPCL

**Requisition No.**  
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SR.NO.	ITEMCODE	DETAIL DESCRIPTION	QTY.	U.RATE	TOT.VALUE	CDD
169	52345ZZZ009ZZZZZZ	2.0 INCH	2 NOS			
<b>Item Description : VLV.GLOBE, SHEET 52366</b>						
170	52366ZZZ009ZZZZZZ	2.0 INCH	9 NOS			
<b>Item Description : VLV.GLOBE, SHEET 52384</b>						
171	52384ZZZ013ZZZZZZ	4.0 INCH	4 NOS			
172	52384ZZZ015ZZZZZZ	6.0 INCH	2 NOS			
<b>Item Description : VLV.GLOBE, SHEET 52401</b>						
173	52401ZZZ009ZZZZZZ	2.0 INCH	3 NOS			
<b>Item Description : VLV.GLOBE, SHEET 52402, IBR</b>						
174	52402ZZZ109ZZZZZZ	2.0 INCH	5 NOS			
175	52402ZZZ113ZZZZZZ	4.0 INCH	2 NOS			
<b>Item Description : VLV.GLOBE, SHEET 52404, H2</b>						
176	52404ZZZ709ZZZZZZ	2.0 INCH	2 NOS			
177	52404ZZZ711ZZZZZZ	3.0 INCH	2 NOS			
<b>Item Description : VLV.GLOBE, SHEET 52411, NAC6</b>						
178	52411ZZZM09ZZZZZZ	2.0 INCH	2 NOS			
179	52411ZZZM11ZZZZZZ	3.0 INCH	2 NOS			
180	52411ZZZM13ZZZZZZ	4.0 INCH	2 NOS			
<b>Item Description : VLV.GLOBE, SHEET 52466</b>						
181	52466ZZZ011ZZZZZZ	3.0 INCH	2 NOS			
182	52466ZZZ015ZZZZZZ	6.0 INCH	1 NOS			
<b>Item Description : VLV.GLOBE, SHEET 524ZD, H2</b>						
183	524ZDZZZ709ZZZZZZ	2.0 INCH	2 NOS			
184	524ZDZZZ713ZZZZZZ	4.0 INCH	2 NOS			
185	524ZDZZZ715ZZZZZZ	6.0 INCH	1 NOS			
<b>Item Description : VLV.GLOBE, SHEET 52502, IBR</b>						
186	52502ZZZ109ZZZZZZ	2.0 INCH	1 NOS			
<b>Item Description : VLV.CHECK, SHEET 53001</b>						
187	53001ZZZ006ZZZZZZ	1.0 INCH	10 NOS			
<b>Item Description : VLV.CHECK, SHEET 53004, H2</b>						
188	53004ZZZ705ZZZZZZ	0.75 INCH	6 NOS			

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**ENGINEERS INDIA LIMITED**  
NEW DELHI

Project : LMBU PROJECT  
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# MR ATTACHMENT

SR.NO.	ITEMCODE	DETAIL DESCRIPTION	QTY.	U.RATE	TOT.VALUE	CDD
<b>Item Description : VLV.CHECK, SHEET 53011, NAC6</b>						
189	53011ZZZM06ZZZZZZ	1.0 INCH	15 NOS			
190	53011ZZZM08ZZZZZZ	1.5 INCH	10 NOS			
<b>Item Description : VLV.CHECK, SHEET 53013</b>						
191	53013ZZZ005ZZZZZZ	0.75 INCH	10 NOS			
192	53013ZZZ006ZZZZZZ	1.0 INCH	10 NOS			
<b>Item Description : VLV.CHECK, SHEET 53050</b>						
193	53050ZZZ006ZZZZZZ	1.0 INCH	5 NOS			
<b>Item Description : VLV.CHECK, SHEET 53066</b>						
194	53066ZZZ006ZZZZZZ	1.0 INCH	7 NOS			
195	53066ZZZ008ZZZZZZ	1.5 INCH	8 NOS			
<b>Item Description : VLV.CHECK, SHEET 53301</b>						
196	53301ZZZ009ZZZZZZ	2.0 INCH	2 NOS			
197	53301ZZZ011ZZZZZZ	3.0 INCH	3 NOS			
198	53301ZZZ013ZZZZZZ	4.0 INCH	2 NOS			
199	53301ZZZ015ZZZZZZ	6.0 INCH	1 NOS			
200	53301ZZZ016ZZZZZZ	8.0 INCH	4 NOS			
201	53301ZZZ017ZZZZZZ	10.0 INCH	1 NOS			
202	53301ZZZ018ZZZZZZ	12.0 INCH	3 NOS			
<b>Item Description : VLV.CHECK, SHEET 53302, IBR</b>						
203	53302ZZZ109ZZZZZZ	2.0 INCH	6 NOS			
204	53302ZZZ111ZZZZZZ	3.0 INCH	2 NOS			
205	53302ZZZ116ZZZZZZ	8.0 INCH	1 NOS			
206	53302ZZZ120ZZZZZZ	16.0 INCH	1 NOS			
<b>Item Description : VLV.CHECK, SHEET 53311, NAC6</b>						
207	53311ZZZM09ZZZZZZ	2.0 INCH	13 NOS			
208	53311ZZZM11ZZZZZZ	3.0 INCH	7 NOS			
209	53311ZZZM13ZZZZZZ	4.0 INCH	3 NOS			
210	53311ZZZM15ZZZZZZ	6.0 INCH	7 NOS			
211	53311ZZZM16ZZZZZZ	8.0 INCH	8 NOS			
212	53311ZZZM18ZZZZZZ	12.0 INCH	3 NOS			

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SR.NO.	ITEMCODE	DETAIL DESCRIPTION	QTY.	U.RATE	TOT.VALUE	CDD
<b>Item Description : VLV.CHECK, SHEET 53311, NACE</b>						
213	53311ZZZ209ZZZZZZ	2.0 INCH	2 NOS			
214	53311ZZZ211ZZZZZZ	3.0 INCH	2 NOS			
<b>Item Description : VLV.CHECK, SHEET 53313</b>						
215	53313ZZZ009ZZZZZZ	2.0 INCH	6 NOS			
216	53313ZZZ011ZZZZZZ	3.0 INCH	2 NOS			
217	53313ZZZ015ZZZZZZ	6.0 INCH	1 NOS			
218	53313ZZZ017ZZZZZZ	10.0 INCH	1 NOS			
219	53313ZZZ018ZZZZZZ	12.0 INCH	1 NOS			
<b>Item Description : VLV.CHECK, SHEET 53321</b>						
220	53321ZZZ009ZZZZZZ	2.0 INCH	2 NOS			
221	53321ZZZ011ZZZZZZ	3.0 INCH	3 NOS			
222	53321ZZZ013ZZZZZZ	4.0 INCH	2 NOS			
223	53321ZZZ015ZZZZZZ	6.0 INCH	1 NOS			
224	53321ZZZ016ZZZZZZ	8.0 INCH	2 NOS			
<b>Item Description : VLV.CHECK, SHEET 53345</b>						
225	53345ZZZ009ZZZZZZ	2.0 INCH	2 NOS			
<b>Item Description : VLV.CHECK, SHEET 53361</b>						
226	53361ZZZ011ZZZZZZ	3.0 INCH	2 NOS			
<b>Item Description : VLV.CHECK, SHEET 53366</b>						
227	53366ZZZ009ZZZZZZ	2.0 INCH	3 NOS			
228	53366ZZZ011ZZZZZZ	3.0 INCH	2 NOS			
229	53366ZZZ015ZZZZZZ	6.0 INCH	1 NOS			
<b>Item Description : VLV.CHECK, SHEET 53401</b>						
230	53401ZZZ011ZZZZZZ	3.0 INCH	16 NOS			
231	53401ZZZ013ZZZZZZ	4.0 INCH	29 NOS			
232	53401ZZZ015ZZZZZZ	6.0 INCH	16 NOS			
233	53401ZZZ016ZZZZZZ	8.0 INCH	16 NOS			
234	53401ZZZ017ZZZZZZ	10.0 INCH	3 NOS			
<b>Item Description : VLV.CHECK, SHEET 53402, IBR</b>						
235	53402ZZZ111ZZZZZZ	3.0 INCH	2 NOS			

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# MR ATTACHMENT

SR.NO.	ITEMCODE	DETAIL DESCRIPTION	QTY.	U.RATE	TOT.VALUE	CDD
236	53402ZZZ113ZZZZZZ	4.0 INCH	2 NOS			
<b>Item Description : VLV.CHECK, SHEET 53404, H2</b>						
237	53404ZZZ709ZZZZZZ	2.0 INCH	2 NOS			
238	53404ZZZ711ZZZZZZ	3.0 INCH	3 NOS			
<b>Item Description : VLV.CHECK, SHEET 53411, NAC6</b>						
239	53411ZZZM09ZZZZZZ	2.0 INCH	6 NOS			
240	53411ZZZM11ZZZZZZ	3.0 INCH	11 NOS			
241	53411ZZZM13ZZZZZZ	4.0 INCH	6 NOS			
<b>Item Description : VLV.CHECK, SHEET 53411, NACE</b>						
242	53411ZZZ209ZZZZZZ	2.0 INCH	2 NOS			
<b>Item Description : VLV.CHECK, SHEET 53466</b>						
243	53466ZZZ009ZZZZZZ	2.0 INCH	3 NOS			
244	53466ZZZ015ZZZZZZ	6.0 INCH	2 NOS			
<b>Item Description : VLV.CHECK, SHEET 53499, NAC4</b>						
245	53499ZZZE09ZZZZZZ	2.0 INCH	2 NOS			
<b>Item Description : VLV.CHECK, SHEET 534ZD, H2</b>						
246	534ZDZZZ709ZZZZZZ	2.0 INCH	2 NOS			
247	534ZDZZZ715ZZZZZZ	6.0 INCH	2 NOS			

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**ENGINEERS INDIA LIMITED**  
NEW DELHI

**Project : LMBU PROJECT**

**Client : HPCL**

**Requisition No.**

**C068-000-WB-MR-3005**

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**Rev**

**A**

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## TECHNICAL NOTES FOR VALVES

9	09.07.24	REVISED AND ISSUED AS STANDARD SPECIFICATION	 PK	 SH	 GB	MN
8	15.02.23	REVISED AND ISSUED AS STANDARD SPECIFICATION	PK	SH	GB	SM
7	13.07.17	REVISED AND ISSUED AS STANDARD SPECIFICATION	PK	SH	MI	RN
6	04.08.10	REVISED AND ISSUED AS STANDARD SPECIFICATION	RN	ATD	SC	
5	04.07.08	REVISED AND ISSUED AS STANDARD SPECIFICATION	RN	SC	DM	VC
4	15.11.00	REVISED AND ISSUED AS STANDARD SPECIFICATION	RN	BRB	NS	MI
<b>Rev. No</b>	<b>Date</b>	<b>Purpose</b>	<b>Prepared by</b>	<b>Checked by</b>	<b>Standards Committee Convenor</b>	<b>Standards Bureau Chairman</b>
					<b>Approved by</b>	

**Abbreviations:**

AARH :	Arithmetic Average Roughness Height
API :	American Petroleum Institute
ASME :	American Society of Mechanical Engineers
ASTM :	American Society for Testing & Materials
BGO :	Bevel Gear Operator
BHN :	Brinell Hardness Number
BIS :	Bureau of Indian Standards
BS :	British Standard
BVIS :	Bureau Veritas Industrial Services
BW :	Butt Weld
CAT :	Category
CEIL :	Certification Engineers International Limited
CS :	Carbon Steel
DFT :	Dry Film Thickness
DNV :	Det Norske Veritas
DP :	Dye-Penetrant
eDMS :	Electronic Document Management System
IBR :	Indian Boiler Regulations
IGC :	Inter Granular Corrosion
IS :	Indian Standard
ISO :	International Organisation for Standardisation
LC :	Lock Closed
LO :	Lock Open
LT :	Low Temperature
LTCS :	Low Temperature Carbon Steel
MOV :	Motor Operated Valve
MP :	Magnetic Particle
MR :	Material Requisition
NACE :	National Association for Corrosion engineers
NDT :	Non Destructive Testing
NPT :	National Pipe Thread
PMI :	Positive Material Identification
PO :	Purchase Order
PR :	Purchase Requisition
Ra :	Roughness average
RFQ :	Request for Quotation
SCRD :	Screwed
SS :	Stainless Steel
SW :	Socket Weld
TUV :	Technischer Überwachungsverein
WAFL :	Lugged Wafer Type

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## 1.0 GENERAL

- 1.1 Vendor shall supply valves in accordance with the valve specification sheets along with auxiliaries, if any, such as gear operator, bypasses, drains, locking etc. wherever specified in the specification sheets, subject notes and other enclosures to the material requisition (MR).
- 1.2 Vendor shall quote in strict accordance with the valve data / specification sheets, subject technical notes and all other enclosures to the MR. For 'Cat-I valves', no deviations whatsoever shall be accepted. For Cat-II Valves, if exceptions/ deviations become absolutely must, the same shall be requested as explained in clause 2.3.6 giving reasons for seeking such exceptions/ deviations. In case Post order concessions/ deviations are unavoidable, the request must be made by BIDDER through online system of EIL eDMS in accordance with 6-78-0001.
- 1.3 All codes and standards for manufacture, testing, inspection etc. shall be of latest editions as on issue date of RFQ.
- 1.4 In case of any conflict amongst documents attached with the MR, the most stringent shall govern and Owner's/ EIL decision shall be final in this regard.

## 2.0 DOCUMENTATION

- 2.1 All document submissions to EIL shall be through EIL eDMS.
- 2.2 For 'Cat-I' valves, no documents shall be submitted with the offer.
- 2.3 For 'Cat-II' valves, vendor shall submit the following documents with the offer:
- 2.3.1 Manufacturer's complete descriptive and illustrative catalogue / literature.
- 2.3.2 Detailed dimensioned cross section drawing with parts / material lists, weight etc.
- 2.3.3 Drawings for valves with accessories like gear operator, hydraulic / pneumatic operator, motor, extension bonnet, extended stems with stands, bypass etc. giving major salient dimensions and weights.
- 2.3.4 One copy of the valve specification sheets signed as "Accepted" by the manufacturer. Deviations, if any shall be marked as applicable on the valve specification sheet.
- 2.3.5 If the valve is regretted or has no deviation, the manufacturer shall write clearly on valve specification sheets as "Regret" or "No Deviation".
- 2.3.6 If there is any deviation, the same shall be listed clausewise.
- 2.3.7 On failure to submit documents as specified in clauses 2.3.1 to 2.3.6 above, the offer is likely to be rejected.
- 2.4 The following documents shall be submitted through eDMS of EIL after placement of the order:

- 2.4.1 For Cat-I valves of size 2" and above where end-to-end/ face-to-face dimensions are to manufacturers' standards, detailed dimensioned cross section drawing with parts, materials, weight, etc. shall be submitted for records/ information.
- 2.4.2 For 'Cat-II' valves, Vendor shall submit for review drawings mentioned in clauses 2.3.2 & 2.3.3 before start of manufacture. No other drawings shall be submitted for review unless otherwise mentioned in MR.
- 2.4.3 Test report shall be supplied for all mandatory tests as per the applicable code. Test reports shall also be furnished for any supplementary tests as specified in clauses 3.13, 3.14 & 3.15.
- 2.4.4 Material test certificates (physical properties, chemical composition & heat treatment report including Chart) of the pressure containing parts shall be furnished for the valves supplied. Material test certificates for the other parts shall also be furnished for verification during inspection.
- 2.5 In addition to submissions through EIL eDMS, Catalogues/Drawings shall be submitted in hard copies (6 sets) and soft copies (2 CDs/DVDs) along with delivery for Purchaser's record for all categories/types of valves.

### 3.0 DESIGN AND CONSTRUCTION

- 3.1 Valve shall be designed, manufactured, tested, inspected and marked as per the manufacturing standards, design codes and standards indicated in the respective valve specification sheets. Any conflict between the requisition, enclosures, specification sheets and referred standards/ codes shall be brought to the notice of the purchaser for clarifications and resolution, before proceeding with the manufacture. The purchaser's decision shall be final and binding to the vendor. The drawings submitted for review shall not include any deviations except as communicated in writing in Deviation permits. The Drawings shall be reviewed only for design and construction features.
- 3.2 All flanged valves shall have flanges integral (except forged valves) with the valve body. Flange face finish shall be normally specified in the valve specification sheet as 125 AARH etc. The interpretation for range of face finish shall be as follows:

Stock Finish	:	1000 $\mu$ in AARH max.
125 AARH	:	Serrations with 125 to 250 $\mu$ in AARH
63 AARH	:	32 to 63 $\mu$ in AARH

- 3.3 For all weld end valves with bevel end as per ASME B16.25, the contour of bevel shall be as follows:

Material	Wall Thickness	Weld Contour
Carbon Steel (Except Low Temp. Carbon Steel)	Upto 22 mm	Figure 2 Type A
	> 22 mm	Figure 3 Type A
Alloy Steel, Stainless Steel & Low Temp. Carbon Steel	Upto 10 mm	Figure 4
	> 10 mm & Upto 25 mm	Figure 5 Type A
	> 25 mm	Figure 6 Type A

Valve ends shall match thickness of the connecting pipe. Sloping of inside contour of valves shall be done wherever necessary to achieve this.

**3.4** For flanged valves with ring joint flanges the hardness shall be as follows:

Flange Material	Min. Hardness of Groove (BHN)
Carbon Steel	140
1% Cr to 5% Cr, 9% Cr	150
9Cr-1Mo-V	190
Type 304, 316, 321, 347	160
Type 304L, 316L	150
Inconel UNS N06625	220
Incoloy UNS N08825	210
Duplex SS UNS S32205, UNS S31803	250

**3.5** Following requirements for check valves shall be met over and above the valve specification sheet requirements:

**3.5.1** Unless specified otherwise in the data sheet all check valves 3" & above (except in Class 900, Class 1500 & Class 2500 rating) shall have a drain boss at location "G" (Refer Fig.No.1 of ASME B16.34) where pocket is formed in valve body. A tapped drain hole with plug shall be provided as per ASME B16.34. Threads shall be as per ASME B1.20.1 (Taper) NPT.

**3.5.2** For heavy check valves, provisions shall be available for lifting by way of lugs, eye bolts and other such standard devices.

**3.6** If an overlay weld-deposit is used for the body seat ring seating surface, the corrosion resistance of the seat ring base material shall be at least equal to the corrosion resistance of the material of the shell.

**3.7** Following valve bypass requirements shall be met:

**3.7.1** By-pass requirement for Gate valves shall be as follows unless otherwise mentioned.

ASME 150 Class	On sizes 26" and above
ASME 300 Class	On sizes 16" and above
ASME 600 Class	On sizes 6" and above
ASME 900 Class	On sizes 4" and above
ASME 1500 Class	On sizes 4" and above
ASME 2500 Class	On sizes 3" and above

**3.7.2** The by-pass piping arrangement shall be such that clearance between main valve body and by-pass assembly shall be the minimum possible for layout reasons. Vendor shall follow the sketch enclosed in Specification No. 6-44-0052-A1.

**3.7.3** By-pass valve shall be a globe valve. The sizes shall be as under:

On main valve  $\leq$  4" : 1/2"

On main valve 6" to 8"	:	3/4"
On main valve 10"& above	:	1"

By-pass piping shall be of same metallurgy as main valve. The by-pass piping, fittings and valve tag numbers shall be as specified in Specification No. 6-44-0052-A2. In case details of by-pass arrangement for any Valve tag number is missing, Vendor shall bring the same to notice of EIL and provide by-pass as per details specified. Bends are not acceptable in place of elbows except in the location specified in 6-44-0052-A1.

- 3.7.4 Vendor shall supply the by-pass valve duly tested and fitted to the main valve with proper supporting from the main valve body, as required. Valves with by-pass shall have the direction of flow marked on the bypass valve only. By-pass attachment to the main valve body shall not be screwed. All fillet welds for by-pass installation shall be 100% examined by DP/MP test and Butt-weld joints shall be 100% examined by radiography.
- 3.8 Valve body / bonnet shall be forged / cast as specified. Forgings are acceptable in place of casting but not vice-versa.
- 3.9 Stem shall be forged or machined from forged / rolled bar. No casting is permitted. However, integral stem of cast material is acceptable for Plug valves.
- 3.10 Stellite / hardfacing by deposition, shall be minimum 1.6 mm.
- 3.11 Renewable seat rings shall be seal welded for valves of size 3" and above to prevent loosening in service.
- 3.12 For Low Temperature & Cryogenic valve requirements, refer Specification. No. 6-44-0052-A3 unless otherwise specified.
- 3.13 For Hydrogen service valve requirements, refer Specification. No. 6-44-0052-A4 unless otherwise specified.
- 3.14 Valves under 'NACE' category shall meet the requirements specified in MR-0103 unless otherwise specified.
- 3.15 For all austenitic stainless steel valves Inter Granular Corrosion (IGC) test shall be conducted as per the following:
- 3.15.1 ASTM A262 Practice 'B' with acceptance criteria of '60 mils/year (max.)' for all materials - forged, rolled, wrought and casting.
- Or
- ASTM A262 Practice 'E' with acceptance criteria of 'No cracks as observed from 20X magnification' for all materials other than castings. 'Microscopic structure to be observed from 250X magnification' in addition.
- 3.15.2 When specifically asked for in MR for high temperature application of some grades of austenitic stainless steel (eg. SS309, 310, 316, 316H etc.) ASTM A262 Practice 'C' with acceptance criteria of '15 mils/year (max.)' shall be conducted.
- 3.15.3 For the IGC test as described in Clauses 3.15.1 & 3.15.2, two sets of samples shall be drawn from each solution annealing lot. One set shall correspond to the highest Carbon content and the other to the highest pressure rating. When testing is conducted as per practice 'E', photograph of the microscopic structure shall be submitted for record.

- 3.16** All types of 321 or 347 stainless steel valves shall be in a stabilised heat treated condition. Stabilising heat treatment shall be carried out subsequent to the normal solution annealing. Soaking temperature and holding time for stabilising heat treatment shall be 900°C and 4 hours respectively.
- 3.17** Spiral wound bonnet gaskets are to be provided with inner/outer ring except when encapsulated gaskets type body-bonnet joints are employed. Outer ring may be avoided in case of non-circular spiral wound gasket used in Class 150 valve provided the outermost layer of spiral touches the bolts ascertaining the centering.
- 3.18** All Stainless Steel Castings shall be solution heat treated.
- 3.19** Only normalized and tempered material shall be used in the following specifications:

**Castings** : A217 Gr.WC1, A217 Gr.WC4, A217 Gr.WC5, A217 Gr.WC6, A217 Gr.WC9, A217 Gr.C5, A217 Gr.C12

**Forgings** : A182 Gr.F11 Cl.2, A182 Gr.F12 Cl.2

### 3.20 Ball / Plug / Butterfly Valves

- 3.20.1 As a prequalification, fire safe test as per API 607 / API 6FA / BS EN ISO 10497 (Supersedes BS 6755 Part II) shall be carried out on soft seated ball, plug & butterfly valves and also on lubricated plug valves. The test shall be witnessed and certified by a third party inspection agency like Lloyds, BVIS, DNV, TUV or EIL/ CEIL unless otherwise specified. The vendor has to submit test certificate for the particular design of the valve offered, if fire safe design is required as per the Valve Material Specification sheet.
- 3.20.2 Each valve shall be supplied with a lever / wrench except for gear operated / motor operated valves.
- 3.20.3 Soft-seated ball, plug & butterfly valves shall be supplied with antistatic devices.
- 3.20.4 BW / SW end ball valves shall have a 100 mm long seamless pipe nipple welded to each end of the valve. Nipples are to be welded prior to assembling soft seats / seals. Specifications of the nipples shall be as indicated in the MR.
- 3.20.5 The ball of ball valve shall not protrude outside the end flanges of valve.
- 3.20.6 Ball valves shall be of floating ball/trunnion mounted type as per following:
- |                   |              |                  |
|-------------------|--------------|------------------|
| Class 150         | 8" & below   | Floating ball    |
|                   | 10" & above  | Trunnion mounted |
| Class 300         | 4" & below   | Floating ball    |
|                   | 6" & above   | Trunnion mounted |
| Class 600 & above | 1.5" & below | Floating ball    |
|                   | 2" & above   | Trunnion mounted |
- 3.20.7 Unless otherwise specified in the data sheets, bore of all reduced bore ball valves shall be limited to one size lower than the nominal bore.

3.20.8 In case of ball valves, the ball shall have a cylindrical bore and shall be of solid construction except in the case of rising stem ball valves or where otherwise specified.

### 3.21 Motor Operated Valves:

3.21.1 The MOVs are to be installed in an open area and the actuators shall be suitable for all weather conditions. The testing of complete assemblies of MOVs along with the actuators shall be done by the supplier at his works.

3.21.2 Vendor shall be solely responsible for selection of suitable actuators & actuator control system. Vendor shall be single point responsible for the complete system (i.e. valves, actuators, actuators control system etc.).

3.21.3 Valve with motorized actuators shall be suitable for installation in horizontal/vertical lines.

3.21.4 All MOVs shall be provided with hand wheel for manual operation.

3.22 In case flange dimension standard / Butt weld end thickness have not been specified in Valve Material Specification attached with the MR, Vendor to obtain the same from EIL and supply strictly in line with specifications.

3.23 Yoke material shall be same as bonnet material where maximum temperature specified is more than 427°C.

### 3.24 Face to Face / End to End Dimensions of Valves:

The Face to Face dimensions for Flanged valves and End to End Dimensions for Butt Welded Valves shall be strictly as given below unless otherwise specified in the VMS sheet. Valves with Face-to-Face/End-to-End dimensions as per Manufacturers' Standards are acceptable only where not covered in the Dimension Standards listed below.

#### 3.24.1 Gate Valves:

Type	Face-to-Face/End-to-End Dimension
Flanged End	Dimension 'A' for Solid Wedge & Double Disc Gate Valves as per ASME B16.10
Butt Welding End	Dimension 'B' for Short Pattern Gate Valves up to the sizes covered in ASME B16.10.  For sizes not covered under Short Pattern, Dimension 'B' for Long Pattern Gate Valves as per ASME B16.10 shall be followed.

#### 3.24.2 Globe Valves:

Type	Face-to-Face/End-to-End Dimension
Flanged End	Dimension 'A' for Globe Valves as per ASME B16.10
Butt Welding End	Dimension 'B' for Short Pattern Globe Valves up to the sizes covered in ASME B16.10.  For sizes not covered under Short pattern, Dimension 'B' for Long Pattern Globe Valves as per ASME B16.10 shall be followed.



3.27.2 Quarter turn valves shall comply with Fugitive emission requirement of API 641. Quarter turn valves where API-641 is not applicable due to non-graphite stem packing material, shall comply with Fugitive emission requirement of ISO-15848-1.

3.27.3 As a prequalification, Fugitive emission type test as per Cl. 3.27.1 & 3.27.2 above shall have been carried out and the test shall have been witnessed and certified by a third party inspection agency like Lloyds, BVIS, DNV, TUV or EIL/ CEIL unless otherwise specified. The vendor has to submit test certificate covering the entire range of valves to be supplied.

Vendors who do not have Fugitive emission type test certificate covering the range of valves to be supplied, shall conduct the requisite test within 12 weeks from the date of purchase order or within contractual delivery date, whichever is earlier.

In case of non-conductance of Fugitive emission type test(s) within time frame specified above or failure in the test(s) conducted after receipt of order, the owner reserves the right to invoke any of the provisions of the purchase order including cancellation of the purchase order at the risk and cost of vendor.

3.28 Valves specified as LO (Lock open) and LC (Lock closed) shall be supplied with suitable arrangement for locking in open as well as in closed position. Lock is included in vendor's scope of supply.

3.29 For Lugged Wafer Type (WAFL) Butterfly Valves, lug shall be provided for each bolt.

3.30 For butterfly valves, where bolting for tapped hole in body is being supplied by Vendor and diameter of the bolting is more than or equal to 1", the bolting supplied shall be studs to ASME B18.2.1 with two nuts.

3.31 For Gate and Globe valves, the stem surface area in contact with the packing shall have a surface finish, Ra, of 0.80µm (32µin.) or smoother, unless otherwise specified.

#### 4.0 OPERATION

4.1 Gear operation shall be provided as under as a minimum, unless otherwise specified:

Valve Type	Class	Size Requiring Gear-Operator
Gate Valve, Globe Valve & Diaphragm Valve	150 Class	12" and larger
	300 Class	12" and larger
	600 Class	10" and larger
	900 Class	6" and larger
	1500 Class	3" and larger
	2500 Class	3" and larger
Ball Valve / Plug Valve (Other than pressure balance plug valves)	150 Class	6" and larger
	300 Class	6" and larger
	600 Class	4" and larger
Ball Valve / Plug Valve (Other than pressure balance plug valves)	900 Class	3" and larger
	1500 Class	3" and larger
Butterfly Valve	150, 300 Class	6" and larger

For sizes lower than these ranges, hand wheel / lever / wrench shall be provided. For pressure balance plug valves manufacturer's recommendation shall be acceptable provided the requirements specified in clause 4.6 are met.

- 4.2 Gear operator shall be provided, with position indicators for open / close positions and with limit stops. (Limit stops are not applicable for gate valves). Gear box shall be fully encased and weather proof.
- 4.3 Where gear operator is not called for as per Clause 4.1 but vendor recommends a gear operator, the same shall be highlighted.
- 4.4 Gear operator shall be so designed as to operate effectively with the differential pressure across the closed valve equal to the cold non-shock pressure rating.
- 4.5 Ball, plug and butterfly valves, shall have "Open" position indicators with limit stops.
- 4.6 Hand-wheel diameter shall not exceed 750mm and lever length shall not exceed 500mm on either side. Effort to operate shall not exceed 35 Kg at hand-wheel periphery. However, failing to meet the above requirements, vendor shall offer gear operated valve and quote as per clause 4.3.

## 5.0 INSPECTION AND TESTING

- 5.1 Every valve shall be subjected to all the mandatory tests and checks called in the respective codes / data sheet by EIL inspection or any third party as approved by the purchaser. For IBR valves refer clause 7.0.
- 5.2 Every valve, its components and auxiliaries must be subjected to all the mandatory tests and checks called for in the respective codes, data sheets etc. by the manufacturer.
- 5.3 Though the extent of inspection shall be as under, exact extent with hold points shall be decided by EIL regional inspection office and recorded in the form of inspection plan. In case of third party inspection, the inspection plan shall be approved by the purchaser.

### Forged Valves:

1. Visual and dimensional inspection.
2. Review of material test certificates.
3. Any mandatory or supplementary test.
4. Hydrostatic test on 10% valves selected on random basis.
5. Strip check is required for 1% of total ordered quantity of Gate & Globe valves (min. 1 No.) for each Valve sheet no., however, strip check is not required for CS/ Brass/ Bronze material valves with 13% Cr/ Brass/ Bronze trims.
6. Type test certificate for Fugitive Emissions as per Cl. 3.27.3.
7. Positive Material Identification
8. Type test certificates for cryogenic & Fire safe test to be submitted.

### Cast Steel Valves:

1. Visual inspection with acceptance standards as per MSS SP-55 and dimensional inspection.
2. Review of material test certificates.

3. Review of radiographs and radiographic reports or any other NDT tests wherever applicable as per data sheet.
4. Any mandatory or supplementary test.
5. Hydrostatic test 100% for body, 10% other test.
6. Strip check is required for 1% of total ordered quantity of Gate & Globe valves (min. 1 No.) for each Valve sheet no., however, strip check is not required for CS/ Brass/ Bronze material valves with 13% Cr/ Brass/ Bronze trims.
7. Type test certificate for Fugitive Emissions as per Cl. 3.27.3.
8. Positive Material Identification
9. Type test certificates for cryogenic & Fire safe test to be submitted.

Samples for strip check shall be selected at random and shall generally be in the highest size in the lot.

- 5.4 In case of motor operated or actuator operated valves, functional / operational checks as per the requirements of the specifications shall be made on each valve.

## 6.0 RADIOGRAPHY OF CAST VALVES

- 6.1 Valve castings shall undergo radiographic examination as specified below.

Material	Rating	Size Range	Radiography
All	Class 150	24" and below	NIL**
		26" and above*	100%
	Class 300	16" and below	NIL**
		18" and above	100%
	Class 600& above	All sizes	100%

\* No radiography is required for valves of size 26" and above in cooling water service.

\*\*For sizes 24" & below in Class 150 and 16" & below in Class 300, radiography percentage if specifically mentioned in individual valve material spec sheet shall govern.

Radiography specified as random 10% or 20% etc. in the respective valve data sheet implies 10% or 20% etc. of number of valves ordered against each item number with a minimum of one valve against each item.

- 6.2 Radiography procedure, areas of casting to be radiographed shall be as per ASME B16.34 and acceptance criteria shall be as per ASME B16.34. However for areas of casting to be radiographed for types of valves not covered in ASME B16.34, vendor shall radiograph castings in line with ASME B16.34.
- 6.3 For random radiography wherever specified in individual data sheets, the sampling shall be per size of the quantity ordered for each foundry.
- 6.4 Radiography wherever specified in the data sheets or as per clause 6.1 shall be done by X-ray /  $\gamma$ -ray to get the required sensitivity.

## 7.0 IBR CERTIFICATION

7.1 For valves described "IBR", valves shall be in accordance with the latest IBR (Indian Boiler Regulation) including the requirements specified in the specification.

7.2 For SW / BW end carbon steel valves under IBR, the chemical composition shall conform to the following:

Carbon (Max)	:	0.25%
Others (S, P, Mn)	:	As per IBR

7.3 Valves coming under the purview of "IBR" (Indian Boiler Regulations) shall each be individually accompanied by IBR certificate original in Form III-C duly approved by IBR authority / local authority empowered by the Central Boiler Board of India. Photocopy of original certificate duly attested by the local boiler inspector where the supplier is located is the minimum requirement for acceptance.

7.4 All "IBR" valves shall be painted red in body-bonnet / body-cover joint.

## 8.0 MARKING

8.1 Valve markings, symbols, abbreviations etc. shall be in accordance with MSS-SP-25 or the standard referred in specification sheet as applicable. Vendor's name, valve rating, material designation, nominal size, direction of flow (if any) etc. shall be integral on the body.

8.2 Each valve shall have a corrosion resistant tag giving size, valve tag / code no., securely attached to the valve body.

8.3 Paint or ink for marking shall not contain any harmful metal or metal salts such as zinc, lead or copper which cause corrosive attack on heating.

8.4 Carbon Steel / Alloy Steel valves shall be painted with one coat of inorganic zinc silicate (minimum DFT 65 to 75 microns).

## 9.0 DESPATCH

9.1 Valve shall be dry, clean and free from moisture, dirt and loose foreign materials of any kind.

9.2 Valves shall be protected from rust, corrosion and any mechanical damage during transportation, shipment and storage.

9.3 Rust preventive on machined surfaces to be welded shall be easily removable with a petroleum solvent or shall not be harmful to welding.

9.4 Each end of valve shall be protected with the following materials:

Flange Face	:	Wood or Plastic Cover
Bevelled End	:	Wood or Plastic Cover
SW & SCRD. End	:	Plastic Cap

9.5 End protectors of wood / plastic to be used on flange faces shall be attached by at least three bolts and shall not be smaller than the outside diameter of the flange. However, plastic caps for SW & SCRD end valves shall be press fit type.

9.6 End protectors to be used on bevelled end shall be securely and tightly attached.

9.7 For special service valves additional requirement for despatch shall be as prescribed in data sheet.

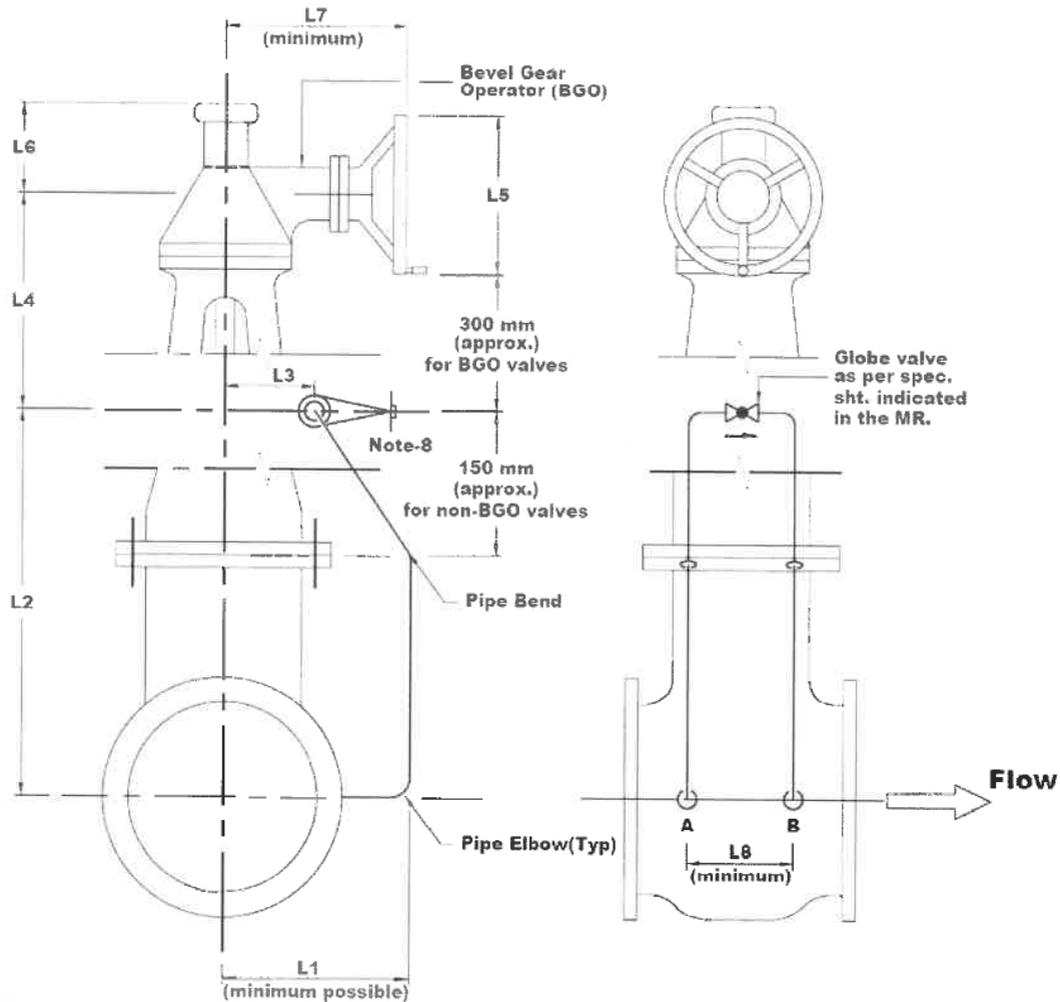
#### 10.0 ATTACHMENTS

6-44-0052-A1	:	Bypass Piping Arrangement
6-44-0052-A2	:	Specifications for Bypass Piping, Fittings and Valves
6-44-0052-A3	:	Special Requirements for Low Temperature and Cryogenic Valves
6-44-0052-A4	:	Special Requirements for Hydrogen Service Valves

#### 11.0 REFERENCES

6-78-0001	:	Specification for Quality management system requirements from bidders
6-78-0003	:	Specification for documentation requirements from suppliers
6-81-0001	:	Specification for Positive Material Identification (PMI) at Supplier's Works
6-81-0004	:	Inspection and Test plan for Valves

BYPASS PIPING ARRANGEMENT



NOTES:

1. The orientation & location of handwheel of bevel gear operator & the bypass arrangement shall be strictly as per this sketch.
2. The bypass connection ends including connection to boss in main valve body shall be socket welded upto 600# and butt welded for 900# and above rating.
3. The bypass arrangement shall be properly clamped to & supported by the body of the main valve.
4. Basic design of bypass shall be to MSS-SP-45.
5. Material of bypass pipe & 90° elbows shall be same or equivalent to the body material as indicated in Specification No. 6-44-0052-A2.
6. This sketch is applicable for both BGO & NON-BGO Valves.
7. Vendor shall furnish dimensions L1 to L8.
8. Stem shall not be horizontal in the case of CRYO Valves.

SPECIFICATIONS FOR BYPASS PIPING, FITTINGS AND VALVES

Class (Main Valve Sht.no.)	Pipe	Fittings	Bypass Valve Sht.no.	Remarks
A1A(51301), A3A(51321), A39A (51321), A9A(51301), A11A(51301), A33A(51301), B1A(51401), B9A(51401), D1A(51501), D9A (51501)	ASTM A106 Gr.B (SMLS) 0.5"-1.5": S160	ASTM A105 0.5"-1.5": SW 6000#	52001	
A6A(51301), B6A(51401)	ASTM A106 Gr.B (SMLS) 0.5"-0.5" : XXS 0.75"-1.5": S160	ASTM A105 0.5"-0.5" : SW 9000# 0.75"-1.5": SW 6000#	52001	
A13A(51301), B13A(51401)	ASTM A106 Gr.B (SMLS) 0.5"-1.5" : XXS	ASTM A105 0.5"-1.5" : SW 9000#	52001	
A2A(51302), B2A(51402), D2A (51502)	ASTM A106 Gr.B (SMLS)- IBR 0.5"-0.75": S160 1.0"-1.5" : XS	ASTM A105 - IBR 0.5"-0.75": SW 6000# 1.0"-1.5" : SW 3000#	52002	
A4A (51303), B4A (51403), D4A (51503)	ASTM A333 Gr.6 (SMLS)- LT 0.5"-0.75": S160 1.0"-1.5" : XS	ASTM A350Gr.LF2CL.1-LT 0.5"-0.75": SW 6000# 1.0"-1.5" : SW 3000#	52003	
B5A (51404), D5A (51504)	ASTM A106 Gr.B (SMLS) -H2 0.5"-0.75": S160 1.0"-1.5": XS	ASTM A105 - H2 0.5"-0.75": SW 6000# 1.0"-1.5" : SW 3000#	52004	Note-1
A7A (51307)	ASTM A106 Gr.B (SMLS) 0.5"-0.75" : S160 1.0"-1.5": XS	ASTM A105 0.5"-0.75": SW 6000# 1.0"-1.5" : SW 3000#	52007	
A16A (51311), B16A (51411), D16A (51511)	ASTM A106 Gr.B (SMLS) - NACE 0.5"-0.75" : XXS 1.0"-1.5": S160	ASTM A105 - NACE 0.5"-0.75" : SW 9000# 1.0"-1.5": SW 6000#	52011	Note-1
A19A (51313), B19A (51413), D19A (51513)	ASTM A106 Gr.B (SMLS) 0.5"-1.5" : S160	ASTM A105 0.5"-1.5": SW 6000#	52013	Note-1
E1A (51601), F1A (51701)	ASTM A106 Gr.B (SMLS) 0.5"-1.5" : S160	ASTM A234 Gr.WPB/ ASTM A105 0.5"-1.5" : BW, S160	52101	
E2A (51602), F2A (51702)	ASTM A106 Gr.B (SMLS) - IBR 0.5"-1.5" : S160	ASTM A234 Gr.WPB/ ASTM A105 - IBR 0.5"-1.5" : BW, S160	52102	
E5A (51604), F5A (51704)	ASTM A106 Gr.B (SMLS) - H2 0.5"-1.5" : S160	ASTM A234 Gr.WPB/ ASTM A105 - H2 0.5"-1.5" : BW, S160	52104	Note-1
E9A (51605), F9A (51705)	ASTM A106 Gr.B (SMLS) 0.5"-1.5" : SCH XXS	ASTM A234 Gr.WPB/ ASTM A105 0.5"-1.5" : BW, SCH XXS	52105	

Class (Main Valve Sht.no.)	Pipe	Fittings	Bypass Valve Sht.no.	Remarks
E19A (51613), F19A (51713)	ASTM A106 Gr.B (SMLS) 0.5"-1.5" : SCH XXS	ASTM A234 Gr.WPB/ ASTM A105 0.5"-1.5" : BW, SCH XXS	52113	Note-1
A5Y (51384), A33Y (51384)	ASTM A106 Gr.B (SMLS) 0.5"-0.75" : S160 1.0"-1.5": XS	ASTM A105 0.5"-0.75": SW 6000# 1.0"-1.5" : SW 3000#	52085	
B1D (51430), D1D (51530)	ASTM A335Gr.P11(SMLS) 0.5"-0.75" : S160 1.0"-1.5": XS	ASTM A182 Gr.F11Cl.2 0.5"-0.75": SW 6000# 1.0"-1.5" : SW 3000#	52030	
D2D (51531)	ASTM A335Gr.P11 (SMLS) - IBR 0.5"-0.75" : S160 1.0"-1.5": XS	ASTM A182 Gr.F11Cl.2 - IBR 0.5"-0.75": SW 6000# 1.0"-1.5" : SW 3000#	52031	Note-1
B5D (51432), D5D (51532)	ASTM 335Gr.P11(SMLS)- H2 0.5"-0.75" : S160 1.0"-1.5": XS	ASTM A182 Gr.F11Cl.2 - H2 0.5"-0.75": SW 6000# 1.0"-1.5" : SW 3000#	52032	Note-1
B1E (51433)	ASTM A335Gr.P22(SMLS) 0.5"- 0.75" : S160 1.0"-1.5": XS	ASTM A182 Gr.F22Cl.3 0.5"-0.75": SW 6000# 1.0"-1.5" : SW 3000#	52033	
D5E (51534)	ASTM A335Gr.P22(SMLS) - H2 0.5"-0.75" : S160 1.0"-1.5": XS	ASTM A182 Gr.F22Cl.3 - H2 0.5"-0.75": SW 6000# 1.0"-1.5" : SW 3000#	52034	Note-1
A4F (51336), B4F (51436)	ASTM A335 Gr.P5(SMLS) 0.5"-0.75" : S160 1.0"-1.5": XS	ASTM A182 Gr.F5 0.5"-0.75": SW 6000# 1.0"-1.5" : SW 3000#	52036	Note-1
B3F (51436)	ASTM A335 Gr.P5(SMLS) 0.5"-1.5" : XXS	ASTM A182 Gr.F5 0.5"-1.5" : SW 9000#	52036	Note-1
A4G (51339), B4G (51439)	ASTM A335 Gr.P9(SMLS) 0.5"-0.75" : S160 1.0"-1.5": XS	ASTM A182 Gr.F9 0.5"-0.75": SW 6000# 1.0"-1.5" : SW 3000#	52039	Note-1
F2D (51731)	ASTM A335 Gr.P11 (SMLS) - IBR 0.5"-1.5" : S160	ASTM A234Gr.WP11Cl.1/ A182 Gr.F11Cl.2 - IBR 0.5"-1.5" : BW, S160	52131	Note-1
F2G (517GG)	ASTM A335 Gr.P91 (SMLS) - IBR 0.5"-0.75" : S160 1.0"-1.5": XS	ASTM A234Gr.WP91/ A182 Gr.F91 - IBR 0.5"-0.75" : S160 1.0"-1.5": XS	52140	Note-1
G2G (518GG)	ASTM A335 Gr.P91 (SMLS) - IBR 0.5"-1.0" : S160 1.5"-1.5": XXS	ASTM A234Gr.WP91/ A182 Gr.F91 - IBR 0.5"-1.0" : S160 1.5"-1.5": XXS	52240	Note-1
E5E (51634)	ASTM A335 Gr.P22(SMLS) - H2 0.5"-0.75" : S160 1.0"-1.5": XS	ASTM A234Gr.WP22Cl.1/ A182 Gr.F22Cl.3 - H2 0.5"-0.75" : BW, S160 1.0"-1.5" : BW, XS	52134	Note-1

Class (Main Valve Sht.no.)	Pipe	Fittings	Bypass Valve Sht.no.	Remarks
A1K (51345), A3K (51345), B1K (51445), D1K (51545)	ASTM A312TP304(SMLS) 0.5"-0.75" : 80S 1.0"-1.5": 40S	ASTM A182 Gr.F304 0.5"-1.5" : SW 3000#	52045	
A2K (51346), B2K (51446), D2K (51546)	ASTM A312TP304(SMLS) - CRYO 0.5"-0.75" : 80S 1.0"-1.5": 40S	ASTM A182 Gr.F304 - CRYO 0.5"-1.5" : SW 3000#	52046	
B4K (51448), B5K (51448)	ASTM A312TP304H(SMLS) 0.5"-1.5" : 80S	ASTM A182 Gr.F304H 0.5"-1.5": SW 3000#	52048	
A6K (51350), A11K (51350), B6K (51450)	ASTMA312TP304L(SMLS) 0.5"-0.75" : 80S 1.0"-1.5": 40S	ASTM A182 Gr.F304L 0.5"-1.5": SW 3000#	52050	
A1M (51361), B1M (51461)	ASTM A312 TP316(SMLS) 0.5"-0.75" : 80S 1.0"-1.5": 40S	ASTM A182 Gr.F316 0.5"-1.5": SW 3000#	52061	
B5M (51462)	ASTMA312TP316H(SMLS) - H2 0.5"-0.75" : 80S 1.0"-1.5": 40S	ASTM A182 Gr.F316H - H2 0.5"-1.5": SW 3000#	52062	
B3M (51463)	ASTM A312 TP321(SMLS) 0.5"-0.75" : 80S 1.0"-1.5": 40S	ASTM A182 Gr.F321 0.5"-1.5": SW 3000#	52063	
A1N (51366), B1N (51466)	ASTMA312TP316L(SMLS) 0.5"-0.75" : 80S 1.0"-1.5": 40S	ASTM A182 Gr.F316L 0.5"-1.5": SW 3000#	52066	
B6N (51471)	ASTM A312 TP316L (SMLS) 0.5"-0.75" : 80S 1.0"-1.5": 40S	ASTM A182 Gr.F316L 0.5"0.5"-1.5": SW 3000#	52071	

In case specifications for bypass of any specific VMS sheets are not available in the MR, Vendor to obtain the same from EIL and supply strictly in line with specifications.

Notes:

1. All welded joints shall be post weld heat treated. Procedure for Post weld heat treatment shall be in accordance with ASME B31.3.

## SPECIAL REQUIREMENTS FOR LOW TEMPERATURE & CRYOGENIC VALVES

### 1.0 SCOPE

All valves of Low Temperature Carbon Steel (LTCS) and all grades of austenitic SS (CRYO) material are categorized as cryogenic valves. All these valves shall have extended bonnet. The bonnet extension shall be as per VMS sheets (BS 6364/ BS EN ISO 28921-1) except check valves.

### 2.0 QUALIFICATION CRITERIA

#### For Limited Enquiries (Non NIT enquiries)

- 2.1 Vendors who satisfy both the requirements given below shall be considered qualified :
  - a. Vendor should be enlisted with EIL for any cryogenic valve irrespective of type, size, rating and metallurgy
  - b. Vendors should be enlisted with EIL for the same type, material, size and rating of non-cryogenic/cryogenic valve as the cryogenic valve quoted for
- 2.2 Qualified Vendors who do not have cryogenic test reports covering the range of Cryogenic valves quoted for, shall conduct cryogenic test per clauses 3.0 within 12 weeks from the date of purchase order.
- 2.3 Clauses 2.1 and 2.2 of this Annexure shall be read in conjunction.

### 3.0 CRYOGENIC TEST

#### 3.1 Vendors to furnish copies of cryogenic test certificate for tests as per details given below:

- 3.1.1 Test shall be as per VMS sheets (BS 6364/ BS EN ISO 28921-2).
- 3.1.2 Test temperature, unless specifically called for otherwise in the individual MR, shall be -45°C for LTCS and -196°C for all grades of austenitic stainless steel.
- 3.1.3 Tests carried out on a particular size of one type of valve, pressure rating and material shall qualify all sizes equal to and below the test valve size for the same type, pressure rating and material. In case of austenitic SS any one grade would qualify for all other grades of austenitic SS.
- 3.1.4 Tests should have been witnessed and certified by any third party inspection agencies like M/s Lloyd, BV, DNV, TUV or EIL/ CEIL.
- 3.1.5 Test conducted previously and witnessed by inspection agencies listed above shall be considered acceptable and need not be repeated.

#### 3.2 Post Order Testing Procedure

- 3.2.1. Before conducting post order testing, vendor shall obtain approval for the following from TPIA:

a. Test procedure and Schematic of test rig with complete details as per standard specified in VMS sheet (BS 6364/ BS EN ISO 28921-2).

b. Cross-section drawing of the valve with material of construction.

3.2.2. Test has to be conducted irrespective of the service on largest size for each type of valve and for each material and class rating. Vendor shall offer one, two or three valves for selection of test valve by inspector depending upon whether quantity of largest valve in the order is one, two or three and more than three respectively.

In the event of failure of the test valve to meet the specification requirements, the vendor shall conduct test on two more valves. These two valves which pass test successfully, are of lower size, then the qualification will be valid only to sizes upto which test has been conducted successfully.

3.2.3. In case of non-conductance of cryogenic test(s) within 12 weeks or failure in the test(s) conducted after receipt of order, the owner reserves the right to invoke any of the provisions of the purchase order including cancellation of the purchase order at the risk and cost of vendor.

4.0 Bonnet extension, wherever specified in the valve sheet shall be for “non cold box application” unless otherwise specified in the MR. Even if not called for in VMS, valves indicated as “LT” or “CRYO” shall be supplied with bonnet extension.

If the valves are supplied in accordance with BS EN ISO 28921-1, Bonnet extension in LT service shall be as per values specified for -51 Deg.C to -109 Deg.C.

5.0 Bonnet and Gland extension joints shall be of butt welded/integrally cast construction.

6.0 Repair welding procedure for austenitic stainless steel valves in “CRYO” service shall have to be qualified for impact test as per ASME B31.3. Minimum acceptable impact energy shall be 20 J or lateral expansion of 0.38 mm at temperature of -196°C.

7.0 Wherever impact test of SS studs / nuts is called for in the data sheet, the impact value shall be 27 J at the intended service temperature specified in the data sheets.

## SPECIAL REQUIREMENTS FOR HYDROGEN SERVICE

### 1.0 GENERAL

- 1.1 These requirements are applicable for valves used in Hydrogen service. These are in addition to the requirements described in "Technical Notes for Valves" Spec. No. 6-44-0052, and shall be read in conjunction with this specification.
- 1.2 All cast valve flanges & bodies with flange rating of Class 900 or greater shall be examined in accordance with paragraphs 7.2 through 7.5 of Appendix-VII of ASME SEC-VIII, DIV.1, regardless of casting quality factor.
- 1.3 Body / bonnet / cover joints & stuffing box of all valves shall have low emission. One valve per metallurgy, per rating, per size shall be helium leak tested as per ASME Sec.V, Subsection A, Article 10 (Detector Probe Technique), Appendix IV at a minimum of 25% of the allowable (rated) cold working pressure. Selection of valves for helium leak test shall be at random. Test duration shall be as follows:

Test Duration in Minutes					
Nominal Size	Pressure Class				
	Upto 300	600	800 & 900	1500	2500
Upto 2"	3	6	9	12	12
3" to 6"	6	9	12	15	18
8" to 16"	9	9	12	15	18
18" to 24"	9	12	15	18	21

The valve shall show no leakage. No leakage is defined as a total leakage rate of less than 0.0001 ml/s of helium.

- 2.0 Only normalized and tempered material shall be used in the following specifications:

**Castings** : A217 Gr.WC1, A217 Gr.WC4, A217 Gr.WC5, A217 Gr.WC6, A217 Gr.WC9, A217 Gr.C5, A217 Gr.C12

**Forgings** : A182 Gr.F11 Cl.2

### 3.0 CS & AS VALVES

- 3.1 Bend test and Magnetic Particle inspection of the entire surface of body and bonnet casting shall be in accordance with ASTM A217. Supplementary requirement S3 & S4 evaluation of magnetic particle, inspection shall be in accordance with MSS-SP-53 except that no linear discontinuities shall be allowed.
- 3.2 The Brinell hardness of heat treated casting shall not exceed 200 BHN for carbon steel & 225 BHN for alloy steel.
- 3.3 Repair to defective casting shall be outlined in writing to the purchaser before repair starts. Repair method to be approved prior to welding.
- 3.4 Casting shall be preheated to a minimum of 400°F prior to welding and all Chromium-Molybdenum alloys shall be postweld heat treated after welding is complete. Stress relieving is essential for welds.

- 3.5 Carbon steel shall be normalised and alloy steels shall be normalised & tempered.
- 3.6 Dye Penetrant test of welds shall be in accordance with ASTM B165 Procedure B-2. Interpretation as per Appendix-8 of ASME-VIII Div.1.
- 3.7 The tensile stress for AS shall be less than 100,000 psi.
- 3.8 Charpy V-notch impact testing is to be done for valve material (average 20 ft-lb for set of 3 [minimum value 15 ft-lb] at 30°F).
- 3.9 For radiography and acceptance criteria for valve castings, refer Cl. 4.2.
- 4.0 **SS VALVES**
- 4.1 Valve casting shall be in solution heat treated and pickled condition.
- 4.2 Critical body and bonnet casing section typically defined by ASME B16.34 shall be radiographed and shall meet ASTM E446 (upto 2" thick) Category A, B & CA Level 2, Category CB, OC & CD Level 3, Category D, B & F Level 0. For wall thickness 2" to 4.5" comparable plates of ASTM E186 shall be used. ASTM E94 and ASTM E142 shall be used for recommended practice & controlling quality of radiography as guide. The entire surface of all castings shall be dye-penetrant inspected after pickling.
- 4.3 Repair Welds shall be 100% radiographed and evaluated in accordance with paragraph 344.5 of ASME B31.3 with a minimum casting quality factor of 0.95. Dye Penetration test shall be as per ASTM E165 Procedure B-2, Interpretation as per Appendix-8 of ASME-VIII Div.1.



# विक्रेता कार्यशाला में सकारात्मक सामग्री पहचान के लिए मानक विनिर्देश

## STANDARD SPECIFICATION FOR POSITIVE MATERIAL IDENTIFICATION (PMI) AT SUPPLIER'S WORKS

4	23.12.21	REVISED AND RE-ISSUED	HKM	CS	RK	S Maumdar
3	19.09.16.	REVISED AND RE-ISSUED	TKK	HP	RKS	RN
2	20.10.11	REVISED AND RE-ISSUED	RKS	SCG	AKC	DM
1	15.07.08	REVISED AND RE-ISSUED	NKR	SSL	SKP	VC
0	07.12.00	ISSUED AS STANDARD SPECIFICATION	AKC	AKB	AKB	MI
Rev. No	Date	Purpose	Prepared by	Checked by	Standards Committee Convenor	Standards Bureau Chairman
						Approved by

**Abbreviations:**

API	:	American Petroleum Institute
AS	:	Alloy Steel
HIC	:	Hydrogen Induced Cracking
LSTK	:	Lump Sum Turn Key
NACE	:	National Association of Corrosion Engineers
PMI	:	Positive Material Identification
RTJ	:	Ring Type Joint
Sch	:	Schedule
SS	:	Stainless Steel
TPI or TPIA	:	Third Party Inspection Agency

**Inspection Standards Committee**

**Convenor:** Mr. Rajeev Kumar

**Members:** Mr. Rajesh Sinha  
Mr. Himangshu Pal  
Mr. R. Muthuramalingam (RPO Representative)  
Mr. Chandrashekhar  
Mr. Avdhesh Agrawal  
Mr. P V Satyanarayana (Engg. Representative)  
Mr. Mahendra Mittal

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## 1.0 SCOPE

- 1.1 This specification applies to the requirements for Positive Material Identification (PMI) to be performed at the Supplier's works on Metallic Materials procured either directly by the Owner/EIL/ LSTK contractor or indirectly through the sub-Suppliers.
- 1.2 This specification covers the procedures and methodology to be adopted to assure that the chemical composition of the material is consistent with the material specifications as specified in purchase documents using 'Alloy Analyzer' at the time of final inspection before dispatch.
- 1.3 The scope of this specification shall include but shall not be limited to Positive Material Identification (PMI) to be performed on Materials listed below:
- 1.3.1 For alloy Steel materials as below:
- Alloy Steel Pipes including Clad Pipes
  - Alloy Steel Flanges & Forgings
  - Alloy Steel Fittings including Clad Fittings
  - Alloy Steel Fasteners
  - Alloy Cast & Forged steel valves
  - Alloy Steel Instrumentation Items (Control Valves, Safety Valves etc.)
  - Longitudinal Pipe & Fittings Welds.
  - Gaskets (for Ring Type Joints)
- 1.3.2 For Carbon Steel materials as below:
- All Carbon Steel Piping items under NACE or HIC or H<sub>2</sub> or Wet Hydrogen Sulfide (H<sub>2</sub>S), Hydrofluoric acid (HF), Sulfuric acid (H<sub>2</sub> SO<sub>4</sub>) services etc.
  - Carbon Steel flanges and valves (Rating 900# and above)
  - LTCS items

Following items shall be excluded from scope of PMI examination.

- Gaskets other than for Ring Type Joints
  - Internal Components of Valves
- 1.4 All grades of material supplies including Stainless Steels shall be liable for PMI test at site. In case of any defective materials being found at site, the Supplier shall be responsible to effect replacement of such defective materials at project site without any delays to the satisfaction of EIL site RCM (Resident Construction Manager).

## 2.0 REFERENCE DOCUMENTS

- 2.1 API Recommended Practice 578 (Third Edition, Feb 2018) - Material Verification Program for New and Existing Alloy Piping Systems.

## 3.0 DEFINITIONS

- 3.1 **Supplier:** Any Supplier or Manufacturer on whom an order is placed for the supply of referred items. This definition shall also include any sub-Supplier or manufacturer on whom a sub-order is placed by the Supplier.
- 3.2 **Inspection Lot:** A group of items offered for inspection covered under same size, Heat and Heat treatment lot.

3.3 **Alloy Material:** Any metallic material (including welding filler materials) that contains alloying elements such as Chromium, Nickel, Molybdenum or Vanadium, which are intentionally added to enhance mechanical or physical properties and/or corrosion resistance.

#### 4.0 PMI EXAMINATION

4.1 The Supplier shall submit a procedure of PMI to comply with the requirements of this Specification. Approval of PMI Procedure shall be obtained from Owner / EIL / TPIA prior to commencing manufacture / inspection of product.

4.2 PMI examination of materials is independent of any certification, markings or colour coding that may exist and is aimed at verifying that the alloy used are as per specified grades.

4.3 The Supplier shall identify all incoming alloy materials and maintain full traceability of all alloy materials, including all off-cuts. Transfer of identification marks shall be undertaken prior to cutting to ensure maintenance of identification on off-cuts.

4.4 The Supplier shall ensure that all alloy materials are segregated and stored in separately identified locations to prevent the mix up of materials of different alloy specifications or alloy material with carbon steel. Non ferro-magnetic materials shall be segregated at all times from ferro-magnetic materials.

4.5 PMI examination is subject to surveillance inspection by Owner / EIL / TPIA.

#### 5.0 ACCEPTABLE METHODS FOR PMI

5.1 The method used for PMI examination shall provide a quantitative determination of the alloying elements like Chromium, Nickel, Molybdenum or Vanadium in Alloy Steel items.

5.2 Instruments or methods used for PMI examination shall be able to provide quantitative, recordable, elemental composition results for positive identification of alloying elements present.

5.3 The acceptable instruments for alloy analyzer shall be either "Portable X-Ray fluorescence" or "Optical Emission" type each capable of verifying the percentage of alloy elements within specified range.

5.4 Chemical spot testing, magnets, alloy sorters and other methods using eddy current or triboelectric testing methods are not acceptable for PMI examination.

5.5 The PMI instrument used shall have the sensitivity to detect the alloying elements in the specified range.

5.6 All PMI instruments shall have been serviced within a 6 month period of the time of use to verify the suitability of batteries, sources etc., and the data of the last service shall be stated on the PMI Report Form (Sample enclosed).

5.7 Each analyzer must be calibrated according to the manufacturer's specification at the beginning and end of each shift. Instrument must be checked against known standard for each alloy type to be inspected during the shift.

5.8 Certified samples, with full traceability, of a known alloy materials shall be available for use as a random spot check on the instrument calibration.

- 5.9 The surfaces to be examined shall be prepared by light grinding or abrasive paper and solvent cleaner. Evidence of Arc burn resulting from examination shall be removed by light grinding or abrasive paper. No permanent marks, which are injurious to the usage of product in service, are acceptable.
- 5.10 Alloy Steel ring type joint Gaskets shall be inspected by using portable X-Ray fluorescence instrument.
- 5.11 Testing shall be done as per the procedures outlined by the manufactures of alloy analyzer being used. Modification of these procedures if any must be approved by Owner/EIL.
- 5.12 The persons performing PMI shall demonstrate their capabilities to the satisfaction of Owner/EIL/TPIA visiting engineer. If the Supplier has qualified operator on their rolls, he may perform the examination. Otherwise PMI examination shall be sub-contracted to an independent testing agency approved by EIL.
- 5.13 Whenever material is identified as not meeting requirements by the visiting engineer a rejection note shall be issued.

## 6.0 EXTENT OF PMI EXAMINATION

Following sampling plans shall be applicable for PMI examination of various items.

- |    |                                          |   |                                                                                                                                      |
|----|------------------------------------------|---|--------------------------------------------------------------------------------------------------------------------------------------|
| A. | Flanges, Fittings<br>Valves, RTJ Gaskets | - | 100% by Supplier and 10% @ random witness by<br>EIL/TPIA                                                                             |
| B. | Pipes                                    | - | 100% (for pipes procured from traders)<br>2 random samples drawn from each<br>Size/Heat/Lot (for pipes procured directly from mills) |
| C. | Fasteners                                | - |                                                                                                                                      |

Lot Size	Sample Size for EIL/TPIA	Sample size for Supplier
Upto 100	2% (Min 2)	Min 10%
101 to 500	1% (Min 3)	Min 10%
501 and above	0.5% (Min 5)	Min 10%

### Note:

- a. For Welded Pipes and Fittings and flanges like Fig 8, Spacer and blinds etc. PMI shall be performed on Base Metal as well as weldments.

## 7.0 ACCEPTANCE CRITERIA

### 7.1 Base Metal

PMI test results showing presence of characteristic elements upto 10% less than the minimum specified value in the material specification and upto 10% more than the maximum specified value in the material specification shall be acceptable.

### 7.2 Deposited Weld Metal

For deposited weld metal using welding consumables matching with base metals, the recorded presence of characteristic elements upto 12.5% less than the minimum specified value in the

welding consumable specification and upto 12.5% more than the maximum specified value in the welding consumable specification shall be acceptable.

#### **8.0 REJECTION CRITERIA**

**8.1** If PMI test results fall outside the acceptable range as specified in 7.0 above, the supplier shall obtain a quantitative check analysis performed by a laboratory acceptable to Owner / EIL / TPIA for a complete chemical analysis. Alternatively, the item can be tested with a spark analyser for verification. Results of this analysis shall be submitted to Owner / EIL / TPIA for final decision.

Decision of Owner / EIL / TPIA shall be final in this regard.

**8.2** If any sample drawn to PMI test on the basis of percentage selection as per 6.0 above, fails to meet specification requirements, 100% of items of lot shall be tested for PMI by supplier. Any failure thereafter during sample check shall mean rejection of whole lot.

#### **9.0 RECORDING AND DOCUMENTATION**

The results of PMI examination shall be recorded in a Report Format as enclosed with this specification.

#### **10.0 MARKING**

**10.1** All alloy materials tested by PMI shall be identified using either of the following methods by indicating "PMI OK"

- a) Bar Code/Hologram Sticker
- b) A low stress stamp marking

POSITIVE MATERIAL IDENTIFICATION REPORT BULK MATERIALS								Page	of
Project:		Client						Job No.	
PMI Report No.		Supplier/Sub-Supplier							
Purchase Order No.		Testing Agency							
Purchase Requisition No:		PMI Location							
Bulk Item Type (as per Requisition)									
Material Specification/Grade									
Number of items in Lot									
Requisition Item No./ Description		Major content, Weight Percent						Remarks Accept/Reject	
Element	Cr	Ni	Mo	V	Ti *	Cb/ Nb **	Mn ***		
Specified Range									
Actual observations									
1.									
2.									
3.									
4.									
5.									
6.									
7.									
8.									
Instrument Type / ID									
Last Service Date		Inspection Agency						Witnessed By	

\* To be reported in case of SS321 Material

\*\* To be reported in case of SS347 Material

\*\*\* To be reported in case of LTCS Material

वाल्वों के लिए  
निरीक्षण एवं परीक्षण योजना

INSPECTION AND TEST PLAN  
FOR  
VALVES

7	08.05.2023	REVISED AND RE-ISSUED	<i>Nataraj</i>	<i>AK</i>	<i>RK</i>	<i>SM</i>
			NK	AK	RK	SM
6	14.11.2018	REVISED AND RE-ISSUED				
			KC	NM	RKS	RKT
5	17.06.2013	REVISED AND RE-ISSUED				
			TKK	RKS	SCG	DM
4	15.07.2011	REVISED AND RE-ISSUED				
			TKK	SCG	AKC	DM
3	30.06.2010	REVISED AND RE-ISSUED				
			RKB	VKJ	SKP	ND
2	31.01.2008	REVISED AND RE-ISSUED				
			CS	SS	MVKK	VC
Rev. No.	Date	Purpose	Prepared by	Checked by	Standards Committee Convenor	Standards Bureau Chairman
Approved by						

**Abbreviations:**

CEIL	:	Certification Engineers International Limited	MRT	:	Mechanical Run Test
CIMFR	:	Central Institute of Mining & Fuel Research	NDT	:	Non Destructive Testing
CE	:	Carbon Equivalent	NPSH	:	Net Positive Suction Head
DFT	:	Dry Film Thickness	PO	:	Purchase Order
DPT	:	Dye Penetrant Testing	PESO	:	Petroleum Explosive Safety Organization
DHT	:	De-hydrogen Heat Treatment	PQR	:	Procedure Qualification Record
ERTL	:	Electronics Regional Test Laboratory	PR	:	Purchase Requisition
FCRI	:	Fluid Control Research Institute	PMI	:	Positive Material Identification
HT	:	Heat Treatment	RT	:	Radiography Testing
HIC	:	Hydrogen Induced Cracking	SSCC	:	Sulphide Stress Corrosion Cracking
ITP	:	Inspection and Test Plan	TC	:	Test Certificate
IP	:	Ingress Protection	TPI or TPIA	:	Third Party Inspection Agency
IHT	:	Intermediate Heat Treatment	UT	:	Ultrasonic Testing
IC	:	Inspection Certificate	VDR	:	Vendor Data Requirement
IGC	:	Inter Granular Corrosion	WPS	:	Welding Procedure Specification
MPT/MT	:	Magnetic Particle Testing	WPQ	:	Welders Performance Qualification
MTC	:	Material Test Certificate			

**Inspection Standards Committee**

**Convenor :** Mr. Rajeev Kumar

**Members:**

Mr. Rajesh Sinha  
Mr. Avdhesh Agrawal

Mr. Himangshu Pal  
Mr. Mahendra Mittal

Mr. Chandrashekar  
Ms Sulakshna Hundekari  
(Piping)

Mr. R Muthu Ramalingam (RPO Rep.)

### 1.0 SCOPE

This Inspection and Test Plan covers the minimum testing requirements of Valves.

### 2.0 REFERENCE DOCUMENTS

PO/PR/Standards referred therein/ Job specifications /Approved documents.

### 3.0 INSPECTION AND TEST REQUIREMENTS

SL NO	STAGE / ACTIVITY	CHARACTERISTICS	QUANTUM OF CHECK	RECORD	SCOPE OF INSPECTION		
					SUB SUPPLIER	SUPPLIER	EIL/TPIA
1.0	<b>Procedure</b>						
1.1	Hydrostatic Test, Heat Treatment, NDT, Helium Leak Test, Fugitive Emission Test, Internal/ External Coating Procedures & Other Procedures (Wherever applicable. as per MR/ PR)	NDT Level III Approved Documented Procedures	100%	NDT Level III Approved Procedure Documents	-	H	R
1.2	WPS, PQR & WPQ and NDT operator Qualification Record	Welding Parameters & Qualification Record	100%	WPS, PQR & WPQ	-	H	W- New R- Existing

INSPECTION AND TEST PLAN  
FOR  
VALVES

SL NO	STAGE / ACTIVITY	CHARACTERISTICS	QUANTUM OF CHECK	RECORD	SCOPE OF INSPECTION		
					SUB SUPPLIER	SUPPLIER	EIL/TPIA
1.3	Pre-Qualification Tests	Fire safe, Cryogenic, Fugitive Emission Test, Internal Epoxy Coating, Glass Lined Coating & Other Test as applicable	As per PR / Purchase Specification	Acceptance Report	-	H	H (If new)
<b>2.0</b>	<b>Material Inspection</b>						
2.1	Castings & Forgings (Body, Bonnet, Disc, Stem, Body ring)	Chemical, Mechanical (Tensile, Hardness, Impact Test etc. ), Heat Treatment, NDT, IGC & Other Properties as applicable	100%	Test Certificates	H	R	R
2.2	Castings & Forgings (Body, Bonnet, Disc, Stem, Body ring)	Visual & Dimension	100%	Inspection Report	H	H	-
2.3	Body and Bonnet Castings	Radiography Examination after Heat Treatment	As per PR / Purchase Specification	RT Films and NDT reports	H	R	R
2.4	Bars for Trim material	Chemical Analysis	Each Heat	Test Certificates & Lab Report	H	R	-

INSPECTION AND TEST PLAN  
FOR  
VALVES

SL NO	STAGE / ACTIVITY	CHARACTERISTICS	QUANTUM OF CHECK	RECORD	SCOPE OF INSPECTION		
					SUB SUPPLIER	SUPPLIER	EIL/TPIA
2.5	Gaskets, Gear units, Fasteners, Gland, Packings, etc.	Physical / Chemical Properties	100%	Test Certificates & Lab Report	H	R	-
2.6	Actuators as applicable	Performance, Statutory Certificates etc. As per EIL ITP. 6-81-1091	100%	Test Certificates, Inspection report	H	H	R
<b>3.0</b>	<b>In Process Inspection</b>						
3.1	Welding, Weld Overlay, Stelliteing, Hardfacing (As applicable)	Welding Parameters as per WPS / PQR	100%	Inspection Reports	-	H	-
3.2	Machining of components	Visual / Dimension	100%	Inspection Reports	-	H	-
3.3	DP Test for all weld joints, Bevel Ends & Bypass (as applicable)	Dye Penetrant Test	100%	NDT Report	-	H	RW
3.4	Hardness Check	Heat Treat Castings, Weld Joints, Groove Joints etc.	100%	Inspection Reports	-	H	R
<b>4.0</b>	<b>Final Inspection</b>						

INSPECTION AND TEST PLAN  
FOR  
VALVES

SL NO	STAGE / ACTIVITY	CHARACTERISTICS	QUANTUM OF CHECK	RECORD	SCOPE OF INSPECTION		
					SUB SUPPLIER	SUPPLIER	EIL/TPIA
4.1	a. Shell Hydrotest b. Seat Hydro Test (Both Sides) c. Backseat Hydrotest (Gate & Globe Valves) d. Seat Pneumatic/ Air Test	Leak Check	100%	Pressure Test Report, Water quality Report		H	RW (Note 1)
4.2	Helium Leak test / Vacuum Test ( as applicable)	Leak Check	As per PR / Purchase Specification	Test Report	-	H	RW (Note 1)
4.3	Visual & Dimensional Check	Surface Verification & Dimension Measurement	100%	Test Report	-	H	RW (Note 1)
4.4	Functional Test for Motor/ Actuator Operated Valves	Satisfactory Performance	100%	Test Report	-	H	RW
4.5	Marking Verification	Verification of Marking, Valve Tagging & Name Plate Checking	100%	Marking & Tagging Report		H	RW (Note-1)
4.6	PMI Check	Chemical Check	As per EIL Spec. 6-81-0001	PMI Report	-	H	RW

INSPECTION AND TEST PLAN  
FOR  
VALVES

SL NO	STAGE / ACTIVITY	CHARACTERISTICS	QUANTUM OF CHECK	RECORD	SCOPE OF INSPECTION		
					SUB SUPPLIER	SUPPLIER	EIL/TPIA
4.7	Strip Check (As applicable)	Verify Components for wear, damage , harmful defects & Differential hardness as applicable	As per PR / Purchase Specification	Inspection Report	-	H	RW (Note-1)
4.8	Final Stamping	Stamping of Accepted Valves	Stamping of Valves which are witnessed by EIL/TPIA.	Inspection Report	-	H	H (Note-1)
<b>5.0</b>	<b>Painting</b>						
5.1	Painting/ Pickling & Passivation and Color coding as applicable	Visual / DFT Check	100%	Inspection Report	-	H	-
<b>6.0</b>	<b>PACKING &amp; PROTECTION</b>						
6.1	Packing & Protection	Dispatch Instructions as per Technical Notes for Valves	100%	Compliance Report with photographs		H	RW
<b>7.0</b>	<b>Documentation &amp; Inspection Certificate</b>						

SL NO	STAGE / ACTIVITY	CHARACTERISTICS	QUANTUM OF CHECK	RECORD	SCOPE OF INSPECTION		
					SUB SUPPLIER	SUPPLIER	EIL/TPIA
7.1	Documentation & Inspection Certificate (IC)	Review of Stage Inspection Reports / Test Reports & Issue of IC	100%	Supplier TC & IC	-	H	H

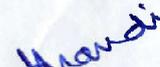
**Legend:** H- Hold (Do not proceed without approval), P-Perform, RW - Random Witness (As specified or 10% ( min.1 no. of each size and type of Bulk item)), R-Review, W-Witness (Give due notice, work may proceed after scheduled date).

**NOTES (As applicable):**

1. Non NACE & Non Hydrogen service Carbon Steel Cast Valves up to size 12"-300ANSI Class and Carbon Steel Forged Valves up to size 1.5"- 800 ANSI Class will be accepted on review of Supplier Test Certificates.  
Supplier Test Certificate along with back up reports to be reviewed by EIL/TPIA.
2. This document describes the generic test requirements. Any additional test or Inspection scope if specified in contract documents shall also be applicable. (Unless otherwise agreed upon)
3. Acceptance Norms for all the activities shall be as per PO/PR/STANDARDS referred therein /Job Specification /Approved Documents.

बोलीकर्ता / आपूर्तिकर्ताओं / ठेकेदारों से गुणवत्ता प्रबंधन  
प्रणाली अपेक्षाओं हेतु विनिर्देश

## SPECIFICATION FOR QUALITY MANAGEMENT SYSTEM REQUIREMENTS FROM BIDDERS / SUPPLIERS / CONTRACTORS

3	29-09-2025	General Revision	 QMS Standards Committee	 QMS Standards Committee	 AK	 MN
2	12-06-2020	General Revision	QMS Standards Committee	QMS Standards Committee	SKB	SKS
1	12-03-2015	General Revision	QMS Standards Committee	QMS Standards Committee	MPJ	SC
0	04-06-2009	Issued as Standard Specification	QMS Standards Committee	QMS Standards Committee	SCT	ND
Rev. No.	Date	Purpose	Prepared by	Checked by	Standards Committee Convener	Standards Bureau Chairman
Approved by						

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## Abbreviations:

EIL	Engineers India Limited
ISO	International Organization for Standardization
MR	Material Requisition
PO	Purchase Order
PR	Purchase Requisition
QMS	Quality Management System

## QMS Standards Committee

**Convener:** Mr. Anil Kumar

**Members:** Mr. Himangshu Pal (SCM-Inspection)  
Mr. Ravindra Kumar (Const.)  
Mr. Vinod Kumar (CQA)  
Mr. Swapnil Vaishnav (Projects)  
Mr. Vijay Kumar Garg (SCM)  
Mr. Raju Kumar Pandey (Equipment Division)

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## 1.0 SCOPE

This specification establishes the Quality Management System requirements to be met by BIDDER for following purpose:

- QMS requirements to be met by suppliers/contractors after award of work/during contract execution.

## 2.0 DEFINITIONS

### 2.1 Bidder

For the purpose of this specification, the word “BIDDER” means the person(s), firm, company or organization who is under the process of being contracted by EIL / Owner for delivery of some products (including service). The word “Bidder” is considered synonymous to supplier, contractor or vendor.

### 2.2 Project Quality Plan (PQP)

Document tailored from Standard Quality Management System Manual of BIDDER, specifying how the quality requirements of the project will be met.

### 2.3 Owner

Owner means the owner of the project for which services / products are being purchased and includes their representatives, successors and assignees.

## 3.0 REFERENCE DOCUMENTS

- Specification for Documentation Requirements from Contractors (Doc. No. 6-78-0002)
- Specification for Documentation Requirements from Suppliers (Doc. No. 6-78-0003)

## 4.0 QUALITY MANAGEMENT SYSTEM – GENERAL

Unless otherwise agreed with EIL / Owner, the BIDDER proposed quality system shall fully satisfy all relevant requirements of ISO 9001 “Quality Management Systems – Requirements.” Evidence of compliance shall be current certificate of quality system registration to ISO 9001 or a recent compliance audit recommending registration from a certification agency. The quality system shall provide the planned and systematic control of all quality related activities for execution of contract. Implementation of the system shall be in accordance with BIDDER’S Quality Manual and PROJECT specific Quality Plan.

## 5.0 QUALITY SYSTEM REQUIREMENTS

5.1 BIDDER shall prepare and submit for review / record, Project Quality Plan / Quality Assurance Plan for contracted scope / job. The BIDDER’S Quality Plan shall address all of the applicable elements of ISO 9001, identify responsible parties within BIDDER’S organization, for the implementation / control of each area, reference the applicable procedures used to control / assure each area, and verify the documents produced for each area. The Project Quality Plan shall necessarily define control or make reference to the relevant procedures, for design and engineering, purchase, documentation, record control, bid evaluation, inspection, production/manufacturing, preservation, packaging and storage, quality control at construction site, pre-commissioning, commissioning and handing over (as applicable) in line with contract requirement and scope of work.

- 5.2 BIDDER shall identify all specified or implied statutory and regulatory requirements and communicate the same to all concerned in his organization and his sub contractor's organization for compliance.
- 5.3 BIDDER shall deploy competent and trained personnel for various activities for fulfilment of PO / contract. BIDDER shall arrange adequate infrastructure and work environment to ensure that the specification and quality of the deliverable are maintained.
- 5.4 BIDDER shall do the quality planning for all activities involved in delivery of order. The quality planning shall cover as minimum the following:
- Resources
  - Product / deliverable characteristics to be controlled.
  - Process characteristics to ensure the identified product characteristics are realized
  - Identification of any measurement requirements, acceptance criteria
  - Records to be generated
  - Need for any documented procedure
- The quality planning shall result into the quality assurance plan, inspection and test plans (ITPs) and job procedures for the project activities in the scope of bidder. These documents shall be submitted to EIL/Owner for review/approval, before commencement of work.
- 5.5 Requirements for sub-ordering of outsourced items /sub-contracting / purchasing of services specified in MR/ contract / tender shall be adhered to. In general all outsourced items will be from approved vendors of EIL. Wherever requirements are not specified, or approved sub vendors do not exist, the sub-contractor shall establish and maintain a system for purchasing / sub-contracting to ensure that purchased product / service conforms to specified requirements in concurrence with EIL / Owner. Criteria for selection of sub-contractor, evaluation, re-evaluation, maintenance of purchasing data and verification of purchased product (sub-contractor services), constitute important components of this requirement.
- 5.6 BIDDER shall plan and carry production and service provision under controlled conditions. Controlled conditions shall include, as applicable
- a) the availability of information that describes the characteristics of the product
  - b) the availability of work instructions
  - c) the use of suitable equipment
  - d) the availability and use of monitoring and measuring devices
  - e) the implementation of monitoring and measurement
  - f) the implementation of release, delivery and post-delivery activities
- 5.7 BIDDER shall validate any processes for production and service provision where resulting output cannot be verified by subsequent monitoring and measurement. This includes any process where deficiencies become apparent only after the product is in use or service has been delivered.
- 5.8 BIDDER shall establish a system for identification and traceability of product / deliverable throughout product realization. Product status with respect to inspection and testing requirements shall be identified.
- 5.9 BIDDER shall identify, verify, protect and safeguard EIL / Owner property (material / document) provided for use or incorporation into the product. If any Owner / EIL property is lost, damaged or otherwise found to be unsuitable for use, this shall be reported to the EIL / Owner.

BIDDER shall ensure the conformity of product / deliverable during internal processing and delivery to the intended destination. Requirements mentioned in the MR/ tender shall be adhered to.

- 5.10 BIDDER shall establish system to ensure that inspection and testing activities are carried out in line with requirements. Where necessary, measuring equipment shall be calibrated at specified frequency, against national or international measurement standards; where no such standard exists, the basis used for calibration shall be recorded. The measuring equipment shall be protected from damage during handling, maintenance and storage.
- 5.11 BIDDER shall ensure effective monitoring, using suitable methods, of the processes involved in production and other related processes for delivery of the scope of contract.
- 5.12 BIDDER shall monitor and measure the characteristics of the product/deliverable to verify that product requirement has been met. The inspection (stage as well as final) by BIDDER and EIL / Owner personnel shall be carried out strictly as per the approved ITPs or ITPs forming part of the contract. Product release or service delivery shall not proceed until the planned arrangements have been satisfactorily completed, unless otherwise approved by relevant authority and where applicable by Owner / EIL.
- 5.13 BIDDER shall establish and maintain a documented procedure to ensure that the product which does not conform to requirements is identified and controlled to prevent its unintended use or delivery
- 5.14 All non-conformities (NCs) / deficiencies found by the BIDDER'S inspection / surveillance staff shall be duly recorded, including their disposal action shall be recorded and resolved suitably. Effective corrective actions shall be implemented by the BIDDER so that similar NCs including deficiencies do not recur. The BIDDER shall take appropriate actions to address the Risks and Opportunities in the project.
- 5.15 All deficiencies noticed and reported by EIL / Owner shall be analysed by the BIDDER and appropriate corrective actions shall be implemented. BIDDER shall intimate EIL / Owner of all such corrective action implemented by him.
- 5.16 BIDDER should follow the standards, specifications and approved drawings. Concessions/Deviations shall be allowed only in case of unavoidable circumstances. In such situations Concession/deviation request must be made by the BIDDER through online system of EIL vendor portal for document exchange. URL of EIL vendor portal for document exchange is <http://edocx.eil.co.in/vportal>. BIDDER shall have documented procedure for control of documents.
- 5.17 All project records shall be carefully kept, maintained and protected for any damage or loss until the project completion, then handed over to EIL / Owner as per contract requirement (Refer Specification Nos. 6-78-0002 - Specification for Documentation Requirements from Contractors and 6-78-0003 - Specification for Documentation Requirements from Suppliers), or disposed as per relevant project procedure.

## 6.0 AUDITS

BIDDER shall plan and carry out the QMS audit for the job. Quality audit program shall cover design, procurement, construction management and commissioning as applicable including activities carried out by sub-vendors and sub-contractors. This shall be additional to the certification body surveillance audits carried out under BIDDER'S own ISO 9001 certification scheme.

The audit programs and audit reports shall be available with bidder for scrutiny by EIL / Owner. EIL or Owner's representative reserves the right to attend, as a witness, any audit conducted during the execution of the WORKS.

In addition to above, EIL, Owner and third party appointed by EIL/Owner may also perform Quality and Technical compliance audits. BIDDER shall provide assistance and access to their systems and sub-contractor / vendor systems as required for this purpose. Any deficiencies noted shall be immediately rectified by BIDDER.

## 7.0 DOCUMENTATION REQUIREMENTS

BIDDER shall submit following QMS documents immediately after award of work (Within one week) for record / review by EIL / Owner/ TPIA(Third Party Inspection Agency), as applicable:

- Organization chart (for complete organization structure and for the project)
- Project Quality Plan/Quality Assurance Plan
- Job specific Inspection Test Plans, if not attached with PR
- Job Procedures
- Inspection/Test Formats

In addition to above QMS documents, following documentation shall be maintained by the BIDDER for submission to EIL / Owner on demand at any point of time during execution of the project:

- Quality Manual
- Certificate of approval for compliance to ISO9001 standard
- Procedure for Control of Non-conforming Product
- Procedure for Control of Documents
- Sample audit report of the QMS internal and external audits conducted during last one year
- Customer satisfaction reports from at least 2 customers
- Project QMS audit report
- Technical audit reports for the project
- Corrective action report on the audits

Documents as specified above are minimum requirements. BIDDER shall submit any other document/data required for completion of the job as per EIL/Owner instructions.

आपूर्तिकर्ताओं से प्रलेखन  
अपेक्षाओं हेतु विनिर्देश

## SPECIFICATION FOR DOCUMENTATION REQUIREMENTS FROM SUPPLIERS

3	29-09-2025	General Revision	QMS Standards Committee	QMS Standards Committee	AK	MN
2	01-06-2020	General Revision	QMS Standards Committee	QMS Standards Committee	SKB	SKS
1	12-03-2015	General Revision	QMS Standards Committee	QMS Standards Committee	MPJ	SC
0	04-06-2009	Issued as Standard Specification	QMS Standards Committee	QMS Standards Committee	SCT	ND
<b>Rev. No.</b>	<b>Date</b>	<b>Purpose</b>	<b>Prepared by</b>	<b>Checked by</b>	<b>Standards Committee Convener</b>	<b>Standards Bureau Chairman</b>
<b>Approved by</b>						

## Abbreviations:

DCI	Document Control Index
EIL	Engineers India Limited
EPS	Electronic Procurement System
FOA	Fax of Acceptance
IC	Inspection Certificate
IRN	Inspection Release Note
ITP	Inspection and Test Plan
LOA	Letter of Acceptance
LR	Lorry Receipt
MR	Material Requisition
ODC	Over Dimension Consignment
PO	Purchase Order
PR	Purchase Requisition
PVC	Polyvinyl Chloride
QAP	Quality Assurance Plan
QMS	Quality Management System
RPO	Regional Procurement Office
TPIA	Third Party Inspection Agency
URL	Universal Resource Locator
V-Portal	Vendor Portal

## QMS Standards Committee

**Convener:** Mr. Anil Kumar

**Members:** Mr. Himangshu Pal (SCM-Inspection)  
Mr. Ravindra Kumar (Const.)  
Mr. Vinod Kumar (CQA)  
Mr. Swapnil Vaishnav (Projects)  
Mr. Vijay Kumar Garg (SCM)  
Mr. Raju Kumar Pandey (Equipment Division)



## 1.0 SCOPE

This specification establishes the Documentation Requirements from Suppliers.

All documents/data against the PO / PR / MR shall be developed and submitted to EIL/Owner by the suppliers for review / records, in line with this specification.

## 2.0 DEFINITIONS

### 2.1 Supplier

For the purpose of this specification, the word “SUPPLIER” means the person(s), firm, company or organization who has entered into a contract with EIL / Owner for delivery of some products and/or services. The word is considered synonymous to bidder, contractor or vendor.

### 2.2 Owner

Owner means the owner of the project for which services / products are being purchased and includes their representatives, successors and assignees.

## 3.0 REFERENCE DOCUMENTS

- Specification for Quality Management System Requirements from Bidders (Doc. No. 6-78-0001)

## 4.0 DOCUMENTATION REQUIREMENTS

### 4.1 Order Acknowledgement and Assigning Project Manager

After placement of order, Supplier shall acknowledge order through V-Portal within 7 days of receipt of FOA/PO. Supplier shall assign a Project Manager for that order through online portal and provide requisite details. Project Manager details shall include e-mail address, mailing address, mobile/telephone nos., fax nos. and name of Project Manager. All the system generated emails pertaining to that order shall be sent to the assigned Project Manager.

### 4.2 Documents/Data to be submitted by the Supplier

4.2.1 The Supplier shall submit the documents and data against the PO/PR/MR as per the list given in respective PO/PR/MR.

4.2.2 Review of the supplier drawings/ documents by EIL would be only to review the compatibility with basic designs and concepts and in no way absolve the supplier of his responsibility/contractual obligation to comply with PR requirements, applicable codes, specifications and statutory rules/regulations. Any error/deficiency noticed during any stage of manufacturing/execution/inspection/ installation shall be promptly corrected by the supplier without any time and cost implications, irrespective of comments on the same were received from EIL during the drawing review stage or not.

4.2.3 Unless otherwise specified, submission of documents for Review/Records shall commence as follows from the date of Fax of Intent /Letter of Intent/ Fax of Acceptance (FOA)/ Letter of Acceptance (LOA):

QMS	-	1 week
Document Control Index	-	2 weeks
Other Documents/Drawings	-	As per approved Document Control Index

4.2.4 Documents as specified in PO/PR/MR are minimum requirements. Supplier shall submit any other document/data required for completion of the job as per EIL/Owner instructions.

#### 4.3 Style and Formatting

4.3.1 All Documents shall be in ENGLISH language and in M.K.S(Meter-Kilogram-Second) System of units.

4.3.2 Before forwarding the drawings and documents, contractor shall obtain the title block from EIL and ensure that the following information are properly mentioned in each drawing:

- Purchase Requisition Number
- Name of Equipment / Package
- Equipment / Package Tag No.
- Name of Project
- Client
- Drawing / Document Title
- Drawing / Document No.
- Drawing / Document Revision No. and Date

#### 4.4 Review and Approval of Documents by Supplier

4.4.1 All, the Drawing/Documents shall be reviewed, checked, approved and duly signed/stamped by supplier before submission. Revision number shall be changed during submission of the revised supplier documents and all revisions shall be highlighted by clouds. Whenever the supplier requires any sub-supplier drawings to be reviewed by EIL, the same shall be submitted by the supplier duly reviewed, approved and stamped by the supplier. Direct submission of sub-supplier's drawings without contractor's / suppliers' approval shall not be entertained.

#### 4.5 Document Category

Following review codes shall be used for review of supplier Drawings/Documents:

- |               |   |                                                                                                                 |
|---------------|---|-----------------------------------------------------------------------------------------------------------------|
| <b>Code 1</b> | - | No comments. Proceed with Manufacture / Fabrication / Construction as per the document.                         |
| <b>Code 2</b> | - | Proceed with Manufacture / Fabrication / Construction as per commented document. Revised document required.     |
| <b>Code 3</b> | - | Document does not conform to basic requirements as marked. Resubmit for review.                                 |
| <b>Code R</b> | - | Document is retained for Records. Proceed with Manufacturing / fabrication as per Tender/ Contract Requirement. |
| <b>Code V</b> | - | Void, Document is returned as invalid.                                                                          |

Document is marked as Void under following conditions:

- a) Wrong item drawing uploaded.
- b) Superseded or obsolete submission.
- c) Duplicate submission.
- d) Out of sequence submission.
- e) Mismatch in document name and title under which document uploaded.
- f) Document not legible.
- g) For PMC projects, document not signed and stamped by contractor and DEC

## 4.6 Methodology for Submission of Documents to EIL/Owner

### 4.6.1 Document Control Index (DCI)

Supplier shall create and submit Document Control Index (DCI) for review based on PO/PR/MR along with schedule date of submission of each drawing/document on EIL Vendor Portal. The DCI shall be specific with regard to drawing/document no. and the exact title. Proper sequencing of the drawings/documents should be ensured in schedule date of submission.

### 4.6.2 Submission of Drawings/Documents / Data

Drawings/documents, data and DCI shall be uploaded on the EIL Vendor Portal as per approved DCI. The detailed guidelines for uploading documents on EIL Vendor Portal are available on URL: <http://edocx.eil.co.in/vportal>

### 4.6.3 Statutory Approvals

Wherever approval by any statutory body is required to be taken by Supplier, the Supplier shall submit copy of approval by the authority to EIL.

### 4.6.4 Manufacturing Schedule

Supplier shall prepare milestone based (milestones such as document submission, sub ordering, manufacturing, Inspection, dispatches, etc.) manufacturing schedule for the order, to meet delivery as per FOA/PO terms. Supplier shall submit manufacturing schedule to concerned Regional Procurement Office (RPO) of EIL, with a copy to Head office monitoring team/Owner for review within 7 days from date of FOA/PO. Same shall be uploaded in the EPS portal of EIL i.e., <https://www6.eil.co.in/epsinspection/supp>

### 4.6.5 Schedule and Progress Reporting

Supplier shall submit Monthly Progress Report (MPR) on or before the 9<sup>th</sup> of every month indicating following milestone-based progress details as minimum:

- Drawing submission and approval status and schedule for submission of revised drawing / fresh Drawing requiring approval as per approved DCI
- Sub-ordering plan/details for all major items indicating item description, sub-order number, Date of sub-ordering, sub-vendor name, Location, contractual delivery data and expected delivery dates at main vendor's shop and other critical details requiring timely receipt of sub-ordered items at shop.
- Shop manufacturing progress indicating major milestone progress, in case of missing any milestone date, catch up plan for the same and expected dispatch date from shop and expected delivery date at site.
- Area requiring special attention/concern and proposed action plan to resolve the same.

First Monthly Progress Report (MPR) shall be submitted within 2 weeks from FOA/LOA. In case of exigencies, EIL/Owner can ask for report submission as required on weekly/fortnightly/ad-hoc basis depending upon supply status and supplier shall furnish such reports promptly without any price implication. Format for progress report shall be submitted by the Supplier during kick off meeting or within 2 weeks of receiving FOA/LOA, whichever is earlier.



- d) Compliance statement by TPIA that product meets the requirement as specified in EIL PR, standard specifications, Inspection Test Plan/QAP and approved documents.

#### 4.8 Transportation Plan

Transportation Plan for Over Dimensional Consignments (ODC), if any, shall be submitted within 2 weeks of receiving FOA/LOA, for approval. Unless otherwise specified, consignments with parameters greater than following shall be considered as over dimensional.

Dimensions : 4 meters width x 4 meters height x 20 meters length

Weight : 32 MT (Metric Ton)

Dimensions and weight provided above are inclusive of all nozzles, attachments, transportation saddles etc.

Physical Rout survey for ODC movement shall be submitted to EIL within 8 weeks of receiving FOA / LOA.

#### 4.9 Dispatch Details

Upon receipt of IRN/IC from EIL inspector/TPIA, supplier shall dispatch items within 2 days. Item wise dispatch details shall be uploaded in EIL's EPS module within 24 hours of any item dispatched from shop, indicating PR item no, Quantity dispatched, Transporter's name, LR Number/ LR date.

- 4.10 Vendor shall ensure timely uploading of Manufacturing Schedule, Monthly Progress Report, Inspection Certificate (IRN) issued by the TPIA (as applicable for PO where Inspection is under nominated Third Party Inspection Agency) and updation of item wise dispatch details in EPS portal of EIL (<https://www6.eil.co.in/epsinspection>).

#### 4.11 Final Documentation

- 4.11.1 Supplier shall prepare final documents in line with VDR (Vendor Document Requirements) attached with PR/Tender. A copy of final document along with filled in Format for Completeness of Final Documentation (Format No. 3-78-0004) to be submitted to EIL Inspector/TPIA for review & approval within 2 weeks from dispatch. Upon receipt of EIL/TPIA endorsement on Completeness of Final Documents, supplier shall submit soft/hard copies of Final documents to EIL/Owner in requisite quantity as per PO/PR details, along with covering letter. A copy of covering letter to be submitted to the concerned Regional Procurement Office (RPO) of EIL/Owner.

##### 4.11.2 As Built Drawings

Minor Shop changes made by Supplier after approval of drawings under 'Code 1' by EIL and deviations granted through online system, if any, shall be marked in hard copies of drawings which shall then be stamped 'As-built' by the supplier. These 'As-built' drawings shall be reviewed and stamped by EIL Inspector/TPIA. Supplier shall prepare scanned images files of all marked – up 'As – built' drawings. Simultaneously Supplier shall incorporate the shop changes in the native soft files of the drawings also.

##### 4.11.3 Packing/Presentation of Final Documents

Final Documents shall be legible photocopies in A4, A3 size only. Drawings will be inserted in plastic pockets (both sides transparent, sheet thickness minimum 0.1 mm) with an extra strip of 12 mm wide for punching so that drawings are well placed.

Final Documentation shall be bound in Hard board Plastic folder(s) of size 265 mm x 315 mm (10½-inch x 12½-inch) and shall not be more than 75 mm thick. It may be of several volumes and each volume shall have a volume number, index of volumes and index of contents of that particular volume. Where number of volumes are more, 90mm thickness can be used. Each volume shall have top PVC sheet of minimum 0.15 mm thick duly fixed and pressed on folder cover and will have 2 lever clips. In case of imported items documents, 4 lever clip shall also be accepted. All four corners of folders shall be properly metal clamped. Indexing of contents with page numbering must be incorporated by supplier. Spiral/Spico bound documents shall not be acceptable. As mentioned above, books should be in hard board plastic folders with sheets punched and having 2/4 lever clips arrangement.

Each volume shall contain on cover a Title Block indicating package Equipment Tag No. & Name, PO/Purchase Requisition No., Name of Project and Name of Customer. Each volume will have hard front cover and a reinforced spine to fit thickness of book. These spines will also have the title printed on them. Title shall include also volume number (say 11 of 15) etc.

#### 4.11.4 Submission of Soft Copies

Supplier shall submit to EIL, the scanned images files as well as the native files of drawings/documents, along with proper index.

In addition to hard copies, Supplier shall submit soft copies of all the final drawings and documents in pen drive or any other specified medium with proper identification tag, all text documents prepared on computer, scanned images of all important documents (not available as soft files), all relevant catalogues, manuals available as soft files (editable copies of drawings/text documents, while for catalogues/manuals/proprietary information and data, PDF files can be furnished). All soft files shall be appropriately named, systematically indexed, and duly bookmarked in PDF format to facilitate ease of reference and access.

All the above documents shall also be uploaded on the EIL Vendor Portal and if applicable on Client Server also.

#### 4.11.5 Completeness of Final Documentation

Supplier shall get the completeness of final documentation verified by EIL/TPIA, as applicable, and attach the Format for Completeness of Final Documentation (Format No. 3-78-0004) duly signed by EIL Inspector or TPIA as applicable to the final document folder.

**COMPLETENESS OF FINAL DOCUMENTATION**

Name of Supplier/Contractor :  
 Customer :  
 Project :  
 EIL's Job No. :  
 Purchase Order No./ Contract No. :  
 Purchase Requisition No./ Tender No. : Rev. No.:  
 Name of the Work/ Equipment :  
 Tag. No. :  
 Supplier's/ Contractor's Works Order No. :

Certified that the Engineering Documents/ Manufacturing & Test Certificates submitted by the supplier (as per Index sheet mentioned in Annexure-1) are complete in accordance with the Vendor Data Requirements of Purchase Requisition / Tender.

Signature	: .....	Signature	: .....
Date	: .....	Date	: .....
Name	: .....	Name	: .....
Designation	: .....	Designation	: .....
Department	: .....	Department	: .....

Supplier/Contractor

EIL/TPIA



# ADDITIONAL TECHNICAL REQUIREMENTS (GATE, GLOBE AND CHECK VALVES)

A	10/02/2026	ISSUED FOR BIDS	SR	BKT	PM
Rev. No	Date	Purpose	Prepared by	Checked by	Approved by

## **ADDITIONAL TECHNICAL REQUIREMENTS** **(GATE, GLOBE AND CHECK VALVES- CAT-I)**

1. Vendor to note that no correspondence whatsoever shall be entered into or entertained after the bid submission.
2. Vendor shall furnish quotations only for those items, for which he is approved by EIL and which he can supply strictly as per MR specifications.
3. **No technical details of any nature shall be included in the offer. If the offer contains any technical deviation or clarification or stipulates any technical specifications (even if in line with the MR requirements), the offer shall be liable for rejection.**
4. The submission of prices by the vendor shall be construed to mean that he has confirmed compliance with all technical specifications of the corresponding item(s).
5. Vendor shall ensure compliance to all the specifications/documents as per "List of Attachment" attached with the Material Requisition- C068-000-WB-MR-3005.
6. Material specified with requirements of "H2" (i.e. HYDROGEN SERVICE) shall meet the requirements specified in technical notes for valves; 6-44-0052.
7. Valves specified as LO (Lock Open) and LC (Lock Close) shall be supplied with suitable arrangement for locking in open as well as in closed position. Lock is in vendor scope of supply.
8. Material specified with requirements of "NAC6", shall meet the requirements Of NACE MR0103 as specified in technical notes for valves; 6-44-0052.
9. Material specified with requirements of "NAC7", shall meet the requirements Of NACE MR0103 and "H2" service as specified in technical notes for valves; 6-44-0052.
10. Material specified with requirements of "NAC4", shall meet the requirements of NACE MR0103 and "H2" service as specified in technical notes for valves; 6-44-0052.
11. Items with ITEM CODE "51301ZZZ016EZZZZZ", "51301ZZZ020EZZZZZ" & "51311ZZZM15E1ZZZZ" shall be supplied as per drawing number C068-261-81-45-44753, C068-203-81-45-44752 & C068-203-81-45-44751 respectively.
12. In case of any conflict amongst documents attached with the MR, the most stringent shall govern and Owner's / EIL decision shall be final in this regard.

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# VENDOR DATA REQUIREMENTS FOR GATE, GLOBE & CHECK VALVES

A	11-FEB-2026	ISSUED FOR BIDS	SR	BKT	PM
Rev. No.	Date	Purpose	Prepared by	Checked by	Approved by

## VENDOR DATA REQUIREMENTS

The following drawings/documents marked "✓" shall be furnished by the bidder.

S. N O.	DESCRIPTION	WITH BID	POST ORDER			REMARKS
			FOR REVIEW	FOR RECORD	WITH DATA BOOK (FINAL)	
1.	Detailed dimensioned cross section, general arrangement drawing with part / material list (BOM), weight etc. & test certificates in Hard as well as Soft copy.			✓	✓	

### Notes :

- "TICK" denotes applicability.
- Post order, drawing / document review shall commence only after approval of Document Control Index (DCI).
- All post order documents shall be submitted / approved through EIL eDMS portal.
- Final documentation shall be submitted in hard copy (Six prints) and soft ( two CDs/DVDs ) in addition to submission through EIL eDMS.
- Refer - 6-78-0001: Specification for quality management system from Bidders.
- Refer - 6-78-0003: Specification for documentation requirement from Suppliers.
- All drawings & documents shall be submitted in A4 or A3 paper sizes. Documents in higher paper size shall be submitted in exceptional circumstances or as indicated in the MR/Tender.
- Post order- The schedule of drawing / data submission shall be mutually agreed between EIL & the bidder / contractor / supplier during finalization of Document Control Index (DCI).
- "@" indicates submission of documents to Inspection Agency.
- Bill of Material shall form part of the respective drawing.

<b>Client</b> : HPCL		<b>Dept. / Sect</b> : 16/43		
<b>Project</b> : LMBU PROJECT				
<b>Location</b> : MUMBAI		<b>Tag No</b> : 51001		<b>Sheet No.</b> 1 of 1
<b>GATE VALVE SPECIFICATION</b>			<b>MANUF'S OFFER</b>	
<b>TAG NO. : 51001</b> <b>RATING : 800</b> <b>STANDARD : API 602/ ISO 15761</b> <b>SIZE RANGE : 0.25 " TO 1.50 "</b> <b>ENDS : SW 3000 TO B-16.11</b> <b>PIPING CLASS : A11A,A1A,A20A,A21A,A32A,A3A,A91A,A92A,A94A,A9A,B1A,B21A, B24A,B32A,B91A,B9A,D1A,D9A</b>			<b>STANDARD :</b> <b>MFGRS CAT/FIG :</b> (For category -II MRs only) <b>RATING :                      ENDS :</b>	
DESCRIPTION	CONSTRUCTION	MATERIAL	CONSTRUCTION	MATERIAL
BODY	FORGED	ASTM A 105		
BONNET	BOLTED	ASTM A 105		
STEM	RISING	13% CR.STEEL (NO CASTING)		
WEDGE DISC	SOLID	STELLITED		
BODY SEAT RING	RENEWABLE	STELLITED		
STEM PACKING	RENEWABLE WITH VALVE OPEN ON STREAM	CORROSION INHIBITED DIE FORMED FLEXIBLE GRAPHITE WITH BRAIDED ANTI EXTRUSION RINGS		
HAND WHEEL	NON RISING	MALLEABLE IRON/CAST ST/FAB.ST/DUCT. IRON		
BONNET BOLTS		ASTM A193 GR B7		
BONNET NUTS		ASTM A194 GR 2H		
BONNET GASKET		SP.WND SS316- GRAFOIL FILLER		
SPECIAL SERVICE CONDITIONS		MAX TEMP. 427 DEG. C.		
BACK SEAT & SHOULDER	INTEGRAL			
OTHERS	O.S & Y.			
HYDROSTATIC TEST PRESSURE	BODY : 2975 PSIG.	SEAT : 2175 PSIG		
TEST PRESSURE WITH AIR	80 PSIG			

**NOTES**

- 1 THIS VALVE SPEC SHEET SHALL BE READ IN CONJUNCTION WITH TECHNICAL NOTES FOR VALVES, 6-44-0052.
- 2 ONLY IN THE CASE OF CATEGORY - II MRs, BIDDER SHALL CLEARLY WRITE ALL/ ANY DEVIATION AGAINST EACH PART/ MATERIAL OF VALVE IN THE SPACE PROVIDED FOR AND WHEREVER BIDDER AGREES WITH EIL'S SPEC BIDDER SHALL INDICATE "AGREED".
- 3 NO CUTTING/ OVERWRITING BY BIDDER ON EIL'S SPEC IS ALLOWED.
- 4 VALVES AS PER API-602 AND TESTING AS PER API-598 ARE ALSO ACCEPTABLE.

SIGNATURE & SEAL OF MANUFACTURER

SHEET REV NO.	2	3	4	5	6
DATE	2-Jan-1995	14-Dec-2000	28-May-2001	30-Jun-2009	26-Apr-2018

**51001**

<b>Client</b> : HPCL			<b>Dept. / Sect</b> : 16\43	
<b>Project</b> : LMBU PROJECT				
<b>Location</b> : MUMBAI		<b>Tag No</b> : 51002		<b>Sheet No.</b> 1 of 1
<b>GATE VALVE SPECIFICATION</b>			<b>MANUF'S OFFER</b>	
<b>TAG NO. : 51002</b>			<b>STANDARD :</b>	
<b>RATING : 800</b>			<b>MFGRS CAT/FIG :</b>	
<b>STANDARD : API 602/ ISO 15761</b>			<b>(For category -II MRs only)</b>	
<b>SIZE RANGE : 0.50 " TO 1.50 "</b>			<b>RATING :</b>	
<b>ENDS : SW 3000 TO B-16.11</b>			<b>ENDS :</b>	
<b>PIPING CLASS : A22A,A2A,A82A,B22A,B2A,B81A,B84A,D2A,D42A</b>				
DESCRIPTION	CONSTRUCTION	MATERIAL	CONSTRUCTION	MATERIAL
BODY	FORGED	ASTM A 105		
BONNET	BOLTED	ASTM A 105		
STEM	RISING	13% CR.STEEL (NO CASTING)		
WEDGE DISC	SOLID	STELLITED		
BODY SEAT RING	RENEWABLE	STELLITED		
STEM PACKING	RENEWABLE WITH VALVE OPEN ON STREAM	CORROSION INHIBITED DIE FORMED FLEXIBLE GRAPHITE WITH BRAIDED ANTI EXTRUSION RINGS		
HAND WHEEL	NON RISING	MALLEABLE IRON/CAST ST/FAB.ST/DUCT. IRON		
BONNET BOLTS		ASTM A193 GR B7		
BONNET NUTS		ASTM A194 GR 2H		
BONNET GASKET		SP WND SS316 - GRAFOIL FILLER		
SPECIAL SERVICE CONDITIONS	I.B.R	STEAM/CONDENSATE/BOILER FEED WATER; MAX TEMP. 427 DEG. C.		
BACK SEAT & SHOULDER	INTEGRAL			
OTHERS	O.S & Y.			
HYDROSTATIC TEST PRESSURE	BODY : 2975 PSIG.	SEAT : 2175 PSIG		
TEST PRESSURE WITH AIR	80 PSIG			

**NOTES**

- 1 THIS VALVE SPEC SHEET SHALL BE READ IN CONJUNCTION WITH TECHNICAL NOTES FOR VALVES, 6-44-0052.
- 2 ONLY IN THE CASE OF CATEGORY - II MRs,BIDDER SHALL CLEARLY WRITE ALL/ ANY DEVIATION AGAINST EACH PART/ MATERIAL OF VALVE IN THE SPACE PROVIDED FOR AND WHEREVER BIDDER AGREES WITH EIL'S SPEC BIDDER SHALL INDICATE "AGREED".
- 3 NO CUTTING/ OVERWRITING BY BIDDER ON EIL'S SPEC IS ALLOWED.
- 4 TESTING SHALL BE AS PER IBR ALSO.
- 5 ALL VALVES SHALL BE SUPPLIED WITH IBR CERTIFICATE IN FORM-III C.
- 6 ALL VALVES SHALL BE PAINTED RED ON BODY-BONNET JOINT.
- 7 VALVES TO COMPLY WITH DESIGN REQUIREMENTS OF IBR ALSO.
- 8 VALVES AS PER API-602 AND TESTING AS PER API-598 & IBR ARE ALSO ACCEPTABLE.

SIGNATURE & SEAL OF MANUFACTURER

SHEET REV NO.	2	3	4	5	6
DATE	2-Jan-1995	14-Dec-2000	28-May-2001	30-Jun-2009	26-Apr-2018

**51002**

<b>Client</b> : HPCL		<b>Dept. / Sect</b> : 16\43		
<b>Project</b> : LMBU PROJECT				
<b>Location</b> : MUMBAI		<b>Tag No</b> : 51004		<b>Sheet No.</b> 1 of 1
<b>GATE VALVE SPECIFICATION</b>			<b>MANUF'S OFFER</b>	
<b>TAG NO. : 51004</b>			<b>STANDARD :</b>	
<b>RATING : 800</b>			<b>MFGRS CAT/FIG :</b>	
<b>STANDARD : API 602/ ISO 15761</b>			<b>(For category -II MRs only)</b>	
<b>SIZE RANGE : 0.50 " TO 1.50 "</b>			<b>RATING :</b>	
<b>ENDS : SW 3000 TO B-16.11</b>			<b>ENDS :</b>	
<b>PIPING CLASS : B51A,B5A,D51A</b>				
DESCRIPTION	CONSTRUCTION	MATERIAL	CONSTRUCTION	MATERIAL
BODY	FORGED	ASTM A 105		
BONNET	BOLTED	ASTM A 105		
STEM	RISING	13% CR.STEEL (NO CASTING)		
WEDGE DISC	SOLID	STELLITED		
BODY SEAT RING	RENEWABLE	STELLITED		
STEM PACKING	RENEWABLE WITH VALVE OPEN ON STREAM	CORROSION INHIBITED DIE FORMED FLEXIBLE GRAPHITE WITH BRAIDED ANTI EXTRUSION RINGS		
HAND WHEEL	NON RISING	MALLEABLE IRON/CAST ST/FAB.ST/DUCT. IRON		
BONNET BOLTS		ASTM A193 GR B7		
BONNET NUTS		ASTM A194 GR 2H		
BONNET GASKET		SP WND SS316 - GRAFOIL FILLER.		
SPECIAL SERVICE CONDITIONS	H2	MAX TEMP 260 DEG.C.		
BACK SEAT & SHOULDER	INTEGRAL			
OTHERS	O.S & Y.			
HYDROSTATIC TEST PRESSURE	BODY : 2975 PSIG.	SEAT : 2175 PSIG.		
TEST PRESSURE WITH AIR	80 PSIG			

**NOTES**

- 1 THIS VALVE SPEC SHEET SHALL BE READ IN CONJUNCTION WITH TECHNICAL NOTES FOR VALVES, 6-44-0052.
- 2 ONLY IN THE CASE OF CATEGORY - II MRs,BIDDER SHALL CLEARLY WRITE ALL/ ANY DEVIATION AGAINST EACH PART/ MATERIAL OF VALVE IN THE SPACE PROVIDED FOR AND WHEREVER BIDDER AGREES WITH EIL'S SPEC BIDDER SHALL INDICATE "AGREED".
- 3 NO CUTTING/ OVERWRITING BY BIDDER ON EIL'S SPEC IS ALLOWED.
- 4 VALVES SHALL MEET THE REQUIREMENTS FOR HYDROGEN SERVICE AS SPECIFIED IN 'TECHNICAL NOTES FOR VALVES'.
- 5 VALVES AS PER API-602 AND TESTING AS PER API-598 ARE ALSO ACCEPTABLE.

SIGNATURE & SEAL OF MANUFACTURER

<b>SHEET REV NO.</b>	3	4	5	6
<b>DATE</b>	14-Dec-2000	28-May-2001	30-Jun-2009	26-Apr-2018

**51004**

<b>Client</b> : HPCL		<b>Dept. / Sect</b> : 16/43		
<b>Project</b> : LMBU PROJECT				
<b>Location</b> : MUMBAI		<b>Tag No</b> : 51011		<b>Sheet No.</b> 1 of 1
<b>GATE VALVE SPECIFICATION</b>			<b>MANUF'S OFFER</b>	
<b>TAG NO. : 51011</b> <b>RATING : 800</b> <b>STANDARD : API 602/ ISO 15761</b> <b>SIZE RANGE : 0.50 " TO 1.50 "</b> <b>ENDS : SW 3000 TO B-16.11</b> <b>PIPING CLASS : A16A,A26A,A28A,A29A,A61A,A64A,A66A,A95A,A97A,A98A,ACA2A, B16A,B26A,B61A,B64A,B66A,B68A,B69A,COPY,D16A</b>			<b>STANDARD :</b> <b>MFGRS CAT/FIG :</b> (For category -II MRs only) <b>RATING :</b> <b>ENDS :</b>	
DESCRIPTION	CONSTRUCTION	MATERIAL	CONSTRUCTION	MATERIAL
BODY	FORGED	ASTM A 105		
BONNET	BOLTED	ASTM A 105		
STEM	RISING	SS 316L (NO CASTING)		
WEDGE DISC	SOLID	STELLITED		
BODY SEAT RING	RENEWABLE	STELLITED		
STEM PACKING	RENEWABLE WITH VALVE OPEN ON STREAM	CORROSION INHIBITED DIE FORMED FLEXIBLE GRAPHITE WITH BRAIDED ANTI EXTRUSION RINGS		
HAND WHEEL	NON RISING	MALLEABLE IRON/CAST ST/FAB.ST/DUCT. IRON		
BONNET BOLTS		ASTM A193 GR B7M		
BONNET NUTS		ASTM A194 GR 2HM		
BONNET GASKET		SP WND SS316L -GRAFOIL FILLER.		
SPECIAL SERVICE CONDITIONS	NACE	SOUR SERVICE (MAX TEMP 427 DEG.C.)		
BACK SEAT & SHOULDER	INTEGRAL			
OTHERS	O.S & Y.			
HYDROSTATIC TEST PRESSURE	BODY : 2975 PSIG	SEAT : 2175 PSIG		
TEST PRESSURE WITH AIR	80 PSIG			

**NOTES**

- THIS VALVE SPEC SHEET SHALL BE READ IN CONJUNCTION WITH TECHNICAL NOTES FOR VALVES, 6-44-0052.
- ONLY IN THE CASE OF CATEGORY - II MRs, BIDDER SHALL CLEARLY WRITE ALL/ ANY DEVIATION AGAINST EACH PART/ MATERIAL OF VALVE IN THE SPACE PROVIDED FOR AND WHEREVER BIDDER AGREES WITH EIL'S SPEC BIDDER SHALL INDICATE "AGREED".
- NO CUTTING/ OVERWRITING BY BIDDER ON EIL'S SPEC IS ALLOWED.
- NACE REQUIREMENTS SHALL BE AS PER MR0103.
- VALVES AS PER API-602 AND TESTING AS PER API-598 ARE ALSO ACCEPTABLE.

SIGNATURE  
&  
SEAL  
OF  
MANUFACTURER

<b>SHEET REV NO.</b>	2	3	4	5	6	7
<b>DATE</b>	2-Jan-1995	14-Dec-2000	28-May-2001	31-Dec-2001	30-Jun-2009	26-Apr-2018

**51011**

<b>Client</b> : HPCL			<b>Dept. / Sect</b> : 16\43	
<b>Project</b> : LMBU PROJECT				
<b>Location</b> : MUMBAI		<b>Tag No</b> : 51013		<b>Sheet No.</b> 1 of 1
<b>GATE VALVE SPECIFICATION</b>			<b>MANUF'S OFFER</b>	
<b>TAG NO. : 51013</b>			<b>STANDARD :</b>	
<b>RATING : 800</b>			<b>MFGRS CAT/FIG :</b>	
<b>STANDARD : API 602/ ISO 15761</b>			<b>(For category -II MRs only)</b>	
<b>SIZE RANGE : 0.50 " TO 1.50 "</b>			<b>RATING :</b>	
<b>ENDS : SW 3000 TO B-16.11</b>			<b>ENDS :</b>	
<b>PIPING CLASS : A19A,B19A,D19A</b>				
<b>DESCRIPTION</b>	<b>CONSTRUCTION</b>	<b>MATERIAL</b>	<b>CONSTRUCTION</b>	<b>MATERIAL</b>
BODY	FORGED	ASTM A 105		
BONNET	BOLTED	ASTM A 105		
STEM	RISING	SS 316; (NO CASTING)		
WEDGE DISC	SOLID	STELLITED		
BODY SEAT RING	RENEWABLE	STELLITED		
STEM PACKING	RENEWABLE WITH VALVE OPEN ON STREAM	CORROSION INHIBITED DIE FORMED FLEXIBLE GRAPHITE WITH BRAIDED ANTI EXTRUSION RINGS		
HAND WHEEL	NON RISING	MALLEABLE IRON/CAST ST/FAB.ST/DUCT. IRON		
BONNET BOLTS		ASTM A193 GR B7		
BONNET NUTS		ASTM A194 GR 2H		
BONNET GASKET		SP WND SS316 - GRAFOIL FILLER		
SPECIAL SERVICE CONDITIONS		CAUSTIC(MAX.TEMP.110 DEG.C) AND AMINE		
BACK SEAT & SHOULDER	INTEGRAL			
OTHERS	O.S & Y.			
HYDROSTATIC TEST PRESSURE	BODY : 2975 PSIG	SEAT : 2175 PSIG		
TEST PRESSURE WITH AIR	80 PSIG			

**NOTES**

- 1 THIS VALVE SPEC SHEET SHALL BE READ IN CONJUNCTION WITH TECHNICAL NOTES FOR VALVES, 6-44-0052.
- 2 ONLY IN THE CASE OF CATEGORY - II MRs,BIDDER SHALL CLEARLY WRITE ALL/ ANY DEVIATION AGAINST EACH PART/ MATERIAL OF VALVE IN THE SPACE PROVIDED FOR AND WHEREVER BIDDER AGREES WITH EIL'S SPEC BIDDER SHALL INDICATE "AGREED".
- 3 NO CUTTING/ OVERWRITING BY BIDDER ON EIL'S SPEC IS ALLOWED.
- 4 VALVES AS PER API-602 AND TESTING AS PER API-598 ARE ALSO ACCEPTABLE.

SIGNATURE & SEAL OF MANUFACTURER

<b>SHEET REV NO.</b>	2	3	4	5	6	7	8
<b>DATE</b>	2-Jan-1995	14-Dec-2000	28-May-2001	23-Jun-2003	30-Jun-2009	26-Apr-2018	9-Dec-2019

**51013**

<b>Client</b> : HPCL			<b>Dept. / Sect</b> : 16\43	
<b>Project</b> : LMBU PROJECT				
<b>Location</b> : MUMBAI		<b>Tag No</b> : 51045		<b>Sheet No.</b> 1 of 1
<b>GATE VALVE SPECIFICATION</b>			<b>MANUF'S OFFER</b>	
<b>TAG NO. : 51045</b>			<b>STANDARD :</b>	
<b>RATING : 800</b>			<b>MFGRS CAT/FIG :</b>	
<b>STANDARD : API 602/ ISO 15761</b>			<b>(For category -II MRs only)</b>	
<b>SIZE RANGE : 0.50 " TO 1.50 "</b>			<b>RATING :</b>	
<b>ENDS : SW 3000 TO B-16.11</b>			<b>ENDS :</b>	
<b>PIPING CLASS : A1K,A3K</b>				
DESCRIPTION	CONSTRUCTION	MATERIAL	CONSTRUCTION	MATERIAL
BODY	FORGED	ASTM A 182 GR.F304		
BONNET	BOLTED	ASTM A 182 GR.F304		
STEM	RISING	SS 316; (NO CASTING)		
WEDGE DISC	SOLID	STELLITED		
BODY SEAT RING	RENEWABLE	STELLITED		
STEM PACKING	RENEWABLE WITH VALVE OPEN ON STREAM	CORROSION INHIBITED DIE FORMED FLEXIBLE GRAPHITE WITH BRAIDED ANTI EXTRUSION RINGS		
HAND WHEEL	NON RISING	MALLEABLE IRON/CAST ST/FAB.ST/DUCT. IRON		
BONNET BOLTS		ASTM A193 GR B8M CL.2		
BONNET NUTS		ASTM A194 GR.8M		
BONNET GASKET		SP WND SS316-GRAFOIL FILLER		
SPECIAL SERVICE CONDITIONS		MAX TEMP 454 DEG.C.		
BACK SEAT & SHOULDER	INTEGRAL			
OTHERS	O.S & Y.			
HYDROSTATIC TEST PRESSURE	BODY : 2900 PSIG	SEAT : 2125 PSIG		
TEST PRESSURE WITH AIR	80 PSIG			

**NOTES**

- 1 THIS VALVE SPEC SHEET SHALL BE READ IN CONJUNCTION WITH TECHNICAL NOTES FOR VALVES, 6-44-0052.
- 2 ONLY IN THE CASE OF CATEGORY - II MRs,BIDDER SHALL CLEARLY WRITE ALL/ ANY DEVIATION AGAINST EACH PART/ MATERIAL OF VALVE IN THE SPACE PROVIDED FOR AND WHEREVER BIDDER AGREES WITH EIL'S SPEC BIDDER SHALL INDICATE "AGREED".
- 3 NO CUTTING/ OVERWRITING BY BIDDER ON EIL'S SPEC IS ALLOWED.
- 4 VALVES AS PER API-602 AND TESTING AS PER API-598 ARE ALSO ACCEPTABLE.

SIGNATURE & SEAL OF MANUFACTURER

SHEET REV NO.	2	3	4	5	6	7	8
DATE	2-Jan-1995	14-Dec-2000	28-May-2001	30-Jun-2009	26-Apr-2018	9-Dec-2019	25-Jul-2023

**51045**

Client : HPCL		Dept. / Sect : 16\43		
Project : LMBU PROJECT				
Location : MUMBAI		Tag No : 51050	Sheet No. 1 of 1	
GATE VALVE SPECIFICATION			MANUF'S OFFER	
TAG NO. : 51050 RATING : 800 STANDARD : API 602/ ISO 15761			STANDARD :	
SIZE RANGE : 0.50 " TO 1.50 " ENDS : SW 3000 TO B-16.11			MFGRS CAT/FIG : (For category -II MRs only)	
PIPING CLASS : A11K,A26K,B11K,BAAD			RATING : ENDS :	
DESCRIPTION	CONSTRUCTION	MATERIAL	CONSTRUCTION	MATERIAL
BODY	FORGED	ASTM A 182 GR.F304L		
BONNET	BOLTED	ASTM A 182 GR.F304L		
STEM	RISING	SS 316L (NO CASTING)		
WEDGE DISC	SOLID	STELLITED		
BODY SEAT RING	RENEWABLE	STELLITED		
STEM PACKING	RENEWABLE WITH VALVE OPEN ON STREAM	CORROSION INHIBITED DIE FORMED FLEXIBLE GRAPHITE WITH BRAIDED ANTI EXTRUSION RINGS		
HAND WHEEL	NON RISING	MALLEABLE IRON/CAST ST/FAB.ST/DUCT. IRON		
BONNET BOLTS		ASTM A193 GR B8M CL.2		
BONNET NUTS		ASTM A194 GR 8M		
BONNET GASKET		SP WND SS316L-GRAFOIL FILLER		
SPECIAL SERVICE CONDITIONS		MAX TEMP 427 DEG.C.		
BACK SEAT & SHOULDER	INTEGRAL			
OTHERS	O.S & Y.			
HYDROSTATIC TEST PRESSURE	BODY : 2400 PSIG	SEAT : 1775 PSIG		
TEST PRESSURE WITH AIR	80 PSIG			

**NOTES**

- 1 THIS VALVE SPEC SHEET SHALL BE READ IN CONJUNCTION WITH TECHNICAL NOTES FOR VALVES, 6-44-0052.
- 2 ONLY IN THE CASE OF CATEGORY - II MRs,BIDDER SHALL CLEARLY WRITE ALL/ ANY DEVIATION AGAINST EACH PART/ MATERIAL OF VALVE IN THE SPACE PROVIDED FOR AND WHEREVER BIDDER AGREES WITH EIL'S SPEC BIDDER SHALL INDICATE "AGREED".
- 3 NO CUTTING/ OVERWRITING BY BIDDER ON EIL'S SPEC IS ALLOWED.
- 4 VALVES AS PER API-602 AND TESTING AS PER API-598 ARE ALSO ACCEPTABLE.

SIGNATURE  
&  
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OF  
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SHEET REV NO.	2	3	4	5	6	7	8
DATE	2-Jan-1995	14-Dec-2000	28-May-2001	16-Apr-2002	30-Jun-2009	26-Apr-2018	25-Jul-2023

**51050**

Client : HPCL			Dept. / Sect : 16\43	
Project : LMBU PROJECT				
Location : MUMBAI		Tag No : 51061		Sheet No. 1 of 1
GATE VALVE SPECIFICATION			MANUF'S OFFER	
TAG NO. : 51061 RATING : 800 STANDARD : API 602/ ISO 15761			STANDARD :	
SIZE RANGE : 0.50 " TO 1.50 " ENDS : SW 3000 TO B-16.11			MFGRS CAT/FIG : (For category -II MRs only)	
PIPING CLASS : A98M			RATING : ENDS :	
DESCRIPTION	CONSTRUCTION	MATERIAL	CONSTRUCTION	MATERIAL
BODY	FORGED	ASTM A 182 GR.F316		
BONNET	BOLTED	ASTM A 182 GR.F316		
STEM	RISING	SS 316 (NO CASTING)		
WEDGE DISC	SOLID	STELLITED		
BODY SEAT RING	RENEWABLE	STELLITED		
STEM PACKING	RENEWABLE WITH VALVE OPEN ON STREAM	CORROSION INHIBITED DIE FORMED FLEXIBLE GRAPHITE WITH BRAIDED ANTI EXTRUSION RINGS		
HAND WHEEL	NON RISING	MALLEABLE IRON/CAST ST/FAB.ST/DUCT. IRON		
BONNET BOLTS		ASTM A193 GR B8M CL.2		
BONNET NUTS		ASTM A194 GR 8M		
BONNET GASKET		SP WND SS316-GRAFOIL FILLER		
SPECIAL SERVICE CONDITIONS		MAX TEMP 427 DEG.C.		
BACK SEAT & SHOULDER	INTEGRAL			
OTHERS	O.S & Y.			
HYDROSTATIC TEST PRESSURE	BODY : 2900 PSIG	SEAT : 2125 PSIG		
TEST PRESSURE WITH AIR	80 PSIG			

**NOTES**

- 1 THIS VALVE SPEC SHEET SHALL BE READ IN CONJUNCTION WITH TECHNICAL NOTES FOR VALVES, 6-44-0052.
- 2 ONLY IN THE CASE OF CATEGORY - II MRs,BIDDER SHALL CLEARLY WRITE ALL/ ANY DEVIATION AGAINST EACH PART/ MATERIAL OF VALVE IN THE SPACE PROVIDED FOR AND WHEREVER BIDDER AGREES WITH EIL'S SPEC BIDDER SHALL INDICATE "AGREED".
- 3 NO CUTTING/ OVERWRITING BY BIDDER ON EIL'S SPEC IS ALLOWED.
- 4 VALVES AS PER API-602 AND TESTING AS PER API-598 ARE ALSO ACCEPTABLE.

SIGNATURE  
&  
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OF  
MANUFACTURER

SHEET REV NO.	2	3	4	5	6	7	8
DATE	2-Jan-1995	14-Dec-2000	28-May-2001	16-Apr-2002	30-Jun-2009	26-Apr-2018	25-Jul-2023

**51061**

<b>Client</b> : HPCL		<b>Dept. / Sect</b> : 16\43		
<b>Project</b> : LMBU PROJECT				
<b>Location</b> : MUMBAI		<b>Tag No</b> : 51066		<b>Sheet No.</b> 1 of 1
<b>GATE VALVE SPECIFICATION</b>			<b>MANUF'S OFFER</b>	
<b>TAG NO. : 51066</b>			<b>STANDARD :</b>	
<b>RATING : 800</b>			<b>MFGRS CAT/FIG :</b>	
<b>STANDARD : API 602/ ISO 15761</b>			<b>(For category -II MRs only)</b>	
<b>SIZE RANGE : 0.50 " TO 1.50 "</b>			<b>RATING :</b>	
<b>ENDS : SW 3000 TO B-16.11</b>			<b>ENDS :</b>	
<b>PIPING CLASS : A1N,A20N,A22N,A26N,A27N,A28N,B26N</b>				
DESCRIPTION	CONSTRUCTION	MATERIAL	CONSTRUCTION	MATERIAL
BODY	FORGED	ASTM A 182 GR.F316L		
BONNET	BOLTED	ASTM A 182 GR.F316L		
STEM	RISING	SS 316L (NO CASTING)		
WEDGE DISC	SOLID	STELLITED		
BODY SEAT RING	RENEWABLE	STELLITED		
STEM PACKING	RENEWABLE WITH VALVE OPEN ON STREAM	CORROSION INHIBITED DIE FORMED FLEXIBLE GRAPHITE WITH BRAIDED ANTI EXTRUSION RINGS		
HAND WHEEL	NON RISING	MALLEABLE IRON/CAST ST/FAB.ST/DUCT. IRON		
BONNET BOLTS		ASTM A193 GR B8M CL.2		
BONNET NUTS		ASTM A194 GR 8M		
BONNET GASKET		SP WND SS316L-GRAFOIL FILLER		
SPECIAL SERVICE CONDITIONS		MAX TEMP 454 DEG.C.		
BACK SEAT & SHOULDER	INTEGRAL			
OTHERS	O.S & Y.			
HYDROSTATIC TEST PRESSURE	BODY : 2400 PSIG	SEAT : 1775 PSIG		
TEST PRESSURE WITH AIR	80 PSIG			

**NOTES**

- 1 THIS VALVE SPEC SHEET SHALL BE READ IN CONJUNCTION WITH TECHNICAL NOTES FOR VALVES, 6-44-0052.
- 2 ONLY IN THE CASE OF CATEGORY - II MRs,BIDDER SHALL CLEARLY WRITE ALL/ ANY DEVIATION AGAINST EACH PART/ MATERIAL OF VALVE IN THE SPACE PROVIDED FOR AND WHEREVER BIDDER AGREES WITH EIL'S SPEC BIDDER SHALL INDICATE "AGREED".
- 3 NO CUTTING/ OVERWRITING BY BIDDER ON EIL'S SPEC IS ALLOWED.
- 4 VALVES AS PER API-602 AND TESTING AS PER API-598 ARE ALSO ACCEPTABLE.

SIGNATURE & SEAL OF MANUFACTURER

SHEET REV NO.	2	3	4	5	6	7
DATE	2-Jan-1995	14-Dec-2000	28-May-2001	30-Jun-2009	26-Apr-2018	25-Jul-2023

**51066**

<b>Client</b> : HPCL		<b>Dept. / Sect</b> : 16\43		
<b>Project</b> : LMBU PROJECT				
<b>Location</b> : MUMBAI		<b>Tag No</b> : 51080		<b>Sheet No.</b> 1 of 1
<b>GATE VALVE SPECIFICATION</b>			<b>MANUF'S OFFER</b>	
<b>TAG NO. : 51080</b> <b>RATING : CL.2</b> <b>STANDARD : IS:778 CL.2</b> <b>SIZE RANGE : 0.50 " TO 1.50 "</b> <b>ENDS : SCRFB 3000 TO B-1.20.1</b> <b>PIPING CLASS : A33Y,A34Y,A5Y,A91Y,J2A</b>			<b>STANDARD :</b> <b>MFGRS CAT/FIG :</b> (For category -II MRs only) <b>RATING :                      ENDS :</b>	
DESCRIPTION	CONSTRUCTION	MATERIAL	CONSTRUCTION	MATERIAL
BODY	CAST	IS 318 GR.LTB2 (LEADED TIN BRONZE)		
BONNET	BOLTED/SCREWED	IS 318 GR.LTB2		
STEM	RISING	IS 320 ALLOY HT2 HIGH TENSILE BRASS		
WEDGE DISC	SOLID	IS 318 GR LTB2		
BODY SEAT RING	RENEWABLE	IS 318 GR LTB2		
STEM PACKING	RENEWABLE WITH VALVE OPEN ON STREAM	PTFE		
HAND WHEEL	NON RISING	MALLEABLE IRON/CAST ST/FAB.ST/DUCT. IRON		
BONNET BOLTS		IS 1367 CLAUSE 4.6 & 4 / ASTM A193 GR B7		
BONNET NUTS		IS 1367 CLAUSE 4.6 & 4 / ASTM A194 GR 2H		
BONNET GASKET		RUBBER		
SPECIAL SERVICE CONDITIONS		MAX TEMP 75 DEG.C.		
BACK SEAT & SHOULDER		IS 320 ALLOY HT2		
OTHERS				
HYDROSTATIC TEST PRESSURE	BODY : 348 PSIG	SEAT : 232 PSIG		
TEST PRESSURE WITH AIR				

**NOTES**

- 1 THIS VALVE SPEC SHEET SHALL BE READ IN CONJUNCTION WITH TECHNICAL NOTES FOR VALVES, 6-44-0052.
- 2 ONLY IN THE CASE OF CATEGORY - II MRs,BIDDER SHALL CLEARLY WRITE ALL/ ANY DEVIATION AGAINST EACH PART/ MATERIAL OF VALVE IN THE SPACE PROVIDED FOR AND WHEREVER BIDDER AGREES WITH EIL'S SPEC BIDDER SHALL INDICATE "AGREED".
- 3 NO CUTTING/ OVERWRITING BY BIDDER ON EIL'S SPEC IS ALLOWED.
- 4 TESTING SHALL BE AS PER IS:778 CL.2

SIGNATURE & SEAL OF MANUFACTURER

<b>SHEET REV NO.</b>	3	4	5	6	7
<b>DATE</b>	14-Dec-2000	28-May-2001	6-Aug-2002	30-Jun-2009	26-Apr-2018

**51080**

<b>Client</b> : HPCL		<b>Dept. / Sect</b> : 16\43		
<b>Project</b> : LMBU PROJECT				
<b>Location</b> : MUMBAI		<b>Tag No</b> : 51099		<b>Sheet No.</b> 1 of 1
<b>GATE VALVE SPECIFICATION</b>			<b>MANUF'S OFFER</b>	
<b>TAG NO. : 51099</b> <b>RATING : 800</b> <b>STANDARD : API 602/ ISO 15761</b>			<b>STANDARD :</b>	
<b>SIZE RANGE : 0.50 " TO 1.50 "</b> <b>ENDS : SW 3000 TO B-16.11</b>			<b>MFGRS CAT/FIG :</b> (For category -II MRs only)	
<b>PIPING CLASS : B52AW</b>			<b>RATING :</b> <b>ENDS :</b>	
DESCRIPTION	CONSTRUCTION	MATERIAL	CONSTRUCTION	MATERIAL
BODY	FORGED	ASTM A 105		
BONNET	BOLTED	ASTM A 105		
STEM	RISING	SS 316 (NO CASTING)		
WEDGE DISC	SOLID	SS 316 FACING/SS 316		
BODY SEAT RING	RENEWABLE	HARDFACED		
STEM PACKING	RENEWABLE WITH VALVE OPEN ON STREAM	CORROSION INHIBITED DIE FORMED FLEXIBLE GRAPHITE WITH BRAIDED ANTI EXTRUSION RINGS		
HAND WHEEL	NON RISING	MALLEABLE IRON/CAST ST/FAB.ST/DUCT. IRON		
BONNET BOLTS		ASTM A193 GR B7M		
BONNET NUTS		ASTM A194 GR 2HM		
BONNET GASKET		SP.WND SS316- GRAFOIL FILLER		
SPECIAL SERVICE CONDITIONS	NACE + H2	SOUR SERVICE +HYDROGEN (MAX TEMP 260 DEG.C.)		
BACK SEAT & SHOULDER	INTEGRAL			
OTHERS	O.S & Y.			
HYDROSTATIC TEST PRESSURE	BODY : 2975 PSIG	SEAT : 2175 PSIG		
TEST PRESSURE WITH AIR	80 PSIG			

**NOTES**

- 1 THIS VALVE SPEC SHEET SHALL BE READ IN CONJUNCTION WITH TECHNICAL NOTES FOR VALVES, 6-44-0052.
- 2 ONLY IN THE CASE OF CATEGORY - II MRs,BIDDER SHALL CLEARLY WRITE ALL/ ANY DEVIATION AGAINST EACH PART/ MATERIAL OF VALVE IN THE SPACE PROVIDED FOR AND WHEREVER BIDDER AGREES WITH EIL'S SPEC BIDDER SHALL INDICATE "AGREED".
- 3 NO CUTTING/ OVERWRITING BY BIDDER ON EIL'S SPEC IS ALLOWED.
- 4 TESTING SHALL BE AS PER API 598.
- 5 NACE REQUIREMENTS SHALL BE AS PER MR0103.
- 6 ALL ASTM A105 MATERIALS SHALL BE SUPPLIED IN NORMALIZED CONDITION.
- 7 VALVES SHALL MEET THE REQUIREMENTS FOR HYDROGEN SERVICE AS SPECIFIED IN 'TECHNICAL NOTES FOR VALVES'.

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MANUFACTURER

<b>SHEET REV NO.</b>	0
<b>DATE</b>	10-Feb-2023

**51099**

Client : HPCL		Dept. / Sect : 16\43		
Project : LMBU PROJECT				
Location : MUMBAI		Tag No : 510LM		Sheet No. 1 of 1
GATE VALVE SPECIFICATION			MANUF'S OFFER	
TAG NO. : 510LM RATING : 800 STANDARD : API 602/ ISO 15761			STANDARD :	
SIZE RANGE : 0.50 " TO 1.50 " ENDS : SW 3000 TO B-16.11			MFGRS CAT/FIG : (For category -II MRs only)	
PIPING CLASS : A61K,A91K,B61K,B64K,D61K			RATING : ENDS :	
DESCRIPTION	CONSTRUCTION	MATERIAL	CONSTRUCTION	MATERIAL
BODY	FORGED	ASTM A 182 GR.F347		
BONNET	BOLTED	ASTM A 182 GR.F347		
STEM	RISING	SS 316L (NO CASTING)		
WEDGE DISC	SOLID	STELLITED		
BODY SEAT RING	RENEWABLE	STELLITED		
STEM PACKING	RENEWABLE WITH VALVE OPEN ON STREAM	CORROSION INHIBITED DIE FORMED FLEXIBLE GRAPHITE WITH BRAIDED ANTI EXTRUSION RINGS		
HAND WHEEL	NON RISING	MALLEABLE IRON/CAST ST/FAB.ST/DUCT. IRON		
BONNET BOLTS		ASTM A193 GR B8M CL.2		
BONNET NUTS		ASTM A194 GR 8M		
BONNET GASKET		SP WND SS316L-GRAFOIL FILLER		
SPECIAL SERVICE CONDITIONS	NACE	MAX TEMP 427 DEG.C.		
BACK SEAT & SHOULDER	INTEGRAL			
OTHERS	O.S & Y.			
HYDROSTATIC TEST PRESSURE	BODY : 2400 PSIG	SEAT : 1775 PSIG		
TEST PRESSURE WITH AIR	80 PSIG			

**NOTES**

- 1 THIS VALVE SPEC SHEET SHALL BE READ IN CONJUNCTION WITH TECHNICAL NOTES FOR VALVES, 6-44-0052.
- 2 ONLY IN THE CASE OF CATEGORY - II MRs,BIDDER SHALL CLEARLY WRITE ALL/ ANY DEVIATION AGAINST EACH PART/ MATERIAL OF VALVE IN THE SPACE PROVIDED FOR AND WHEREVER BIDDER AGREES WITH EIL'S SPEC BIDDER SHALL INDICATE "AGREED".
- 3 NO CUTTING/ OVERWRITING BY BIDDER ON EIL'S SPEC IS ALLOWED.
- 4 VALVES AS PER API-602 AND TESTING AS PER API-598 ARE ALSO ACCEPTABLE.
- 5 NACE REQUIREMENTS SHALL BE AS PER MR0103.

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OF  
MANUFACTURER

SHEET REV NO.	0
DATE	10-Feb-2026

**510LM**

<b>Client</b> : HPCL		<b>Dept. / Sect</b> : 16\43		
<b>Project</b> : LMBU PROJECT				
<b>Location</b> : MUMBAI		<b>Tag No</b> : 510ZC		<b>Sheet No.</b> 1 of 1
<b>GATE VALVE SPECIFICATION</b>			<b>MANUF'S OFFER</b>	
<b>TAG NO. : 510ZC</b> <b>RATING : 800</b> <b>STANDARD : API 602/ ISO 15761</b>			<b>STANDARD :</b>	
<b>SIZE RANGE : 0.50 " TO 1.50 "</b> <b>ENDS : SW 3000 TO B-16.11</b>			<b>MFGRS CAT/FIG :</b> (For category -II MRs only)	
<b>PIPING CLASS : B54A</b>			<b>RATING :</b> <b>ENDS :</b>	
DESCRIPTION	CONSTRUCTION	MATERIAL	CONSTRUCTION	MATERIAL
BODY	FORGED	ASTM A 105		
BONNET	BOLTED	ASTM A 105		
STEM	RISING	SS 316 (NO CASTING)		
WEDGE DISC	SOLID	SS 316 FACING/SS 316		
BODY SEAT RING	RENEWABLE	HARDFACED		
STEM PACKING	RENEWABLE WITH VALVE OPEN ON STREAM	CORROSION INHIBITED DIE FORMED FLEXIBLE GRAPHITE WITH BRAIDED ANTI EXTRUSION RINGS		
HAND WHEEL	NON RISING	MALLEABLE IRON/CAST ST/FAB.ST/DUCT. IRON		
BONNET BOLTS		ASTM A193 GR B7M		
BONNET NUTS		ASTM A194 GR 2HM		
BONNET GASKET		SP.WND SS316- GRAFOIL FILLER		
SPECIAL SERVICE CONDITIONS	NACE + H2	SOUR SERVICE +HYDROGEN (MAX TEMP 260 DEG.C.)		
BACK SEAT & SHOULDER	INTEGRAL			
OTHERS	O.S & Y.			
HYDROSTATIC TEST PRESSURE	BODY : 2975 PSIG	SEAT : 2175 PSIG		
TEST PRESSURE WITH AIR	80 PSIG			

**NOTES**

- 1 THIS VALVE SPEC SHEET SHALL BE READ IN CONJUNCTION WITH TECHNICAL NOTES FOR VALVES, 6-44-0052.
- 2 ONLY IN THE CASE OF CATEGORY - II MRs,BIDDER SHALL CLEARLY WRITE ALL/ ANY DEVIATION AGAINST EACH PART/ MATERIAL OF VALVE IN THE SPACE PROVIDED FOR AND WHEREVER BIDDER AGREES WITH EIL'S SPEC BIDDER SHALL INDICATE "AGREED".
- 3 NO CUTTING/ OVERWRITING BY BIDDER ON EIL'S SPEC IS ALLOWED.
- 4 TESTING SHALL BE AS PER API 598.
- 5 NACE REQUIREMENTS SHALL BE AS PER MR0103.
- 6 ALL ASTM A105 MATERIALS SHALL BE SUPPLIED IN NORMALIZED CONDITION.
- 7 VALVES SHALL MEET THE REQUIREMENTS FOR HYDROGEN SERVICE AS SPECIFIED IN 'TECHNICAL NOTES FOR VALVES'.

SIGNATURE  
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OF  
MANUFACTURER

<b>SHEET REV NO.</b>	0
<b>DATE</b>	10-Feb-2023

**510ZC**

<b>Client</b> : HPCL		<b>Dept. / Sect</b> : 16\43		
<b>Project</b> : LMBU PROJECT				
<b>Location</b> : MUMBAI		<b>Tag No</b> : 510ZD		<b>Sheet No.</b> 1 of 1
<b>GATE VALVE SPECIFICATION</b>			<b>MANUF'S OFFER</b>	
<b>TAG NO. : 510ZD</b> <b>RATING : 800</b> <b>STANDARD : API 602/ ISO 15761</b>			<b>STANDARD :</b>	
<b>SIZE RANGE : 0.50 " TO 1.50 "</b> <b>ENDS : SW 3000 TO B-16.11</b>			<b>MFGRS CAT/FIG :</b> (For category -II MRs only)	
<b>PIPING CLASS : B25A</b>			<b>RATING :</b> <b>ENDS :</b>	
DESCRIPTION	CONSTRUCTION	MATERIAL	CONSTRUCTION	MATERIAL
BODY	FORGED	ASTM A 105		
BONNET	BOLTED	ASTM A 105		
STEM	RISING	SS 316; (NO CASTING)		
WEDGE DISC	SOLID	STELLITED		
BODY SEAT RING	RENEWABLE	STELLITED		
STEM PACKING	RENEWABLE WITH VALVE OPEN ON STREAM	CORROSION INHIBITED DIE FORMED FLEXIBLE GRAPHITE WITH BRAIDED ANTI EXTRUSION RINGS		
HAND WHEEL	NON RISING	MALLEABLE IRON/CAST ST/FAB.ST/DUCT. IRON		
BONNET BOLTS		ASTM A193 GR B7		
BONNET NUTS		ASTM A194 GR 2H		
BONNET GASKET		SP WND SS316 - GRAFOIL FILLER		
SPECIAL SERVICE CONDITIONS	H2	MAX TEMP 230 DEGC		
BACK SEAT & SHOULDER	INTEGRAL			
OTHERS	O.S & Y.			
HYDROSTATIC TEST PRESSURE	BODY : 2975 PSIG	SEAT : 2175 PSIG		
TEST PRESSURE WITH AIR	80 PSIG			

**NOTES**

- 1 THIS VALVE SPEC SHEET SHALL BE READ IN CONJUNCTION WITH TECHNICAL NOTES FOR VALVES, 6-44-0052.
- 2 ONLY IN THE CASE OF CATEGORY - II MRs, BIDDER SHALL CLEARLY WRITE ALL/ ANY DEVIATION AGAINST EACH PART/ MATERIAL OF VALVE IN THE SPACE PROVIDED FOR AND WHEREVER BIDDER AGREES WITH EIL'S SPEC BIDDER SHALL INDICATE "AGREED".
- 3 NO CUTTING/ OVERWRITING BY BIDDER ON EIL'S SPEC IS ALLOWED.
- 4 VALVES AS PER API-602 AND TESTING AS PER API-598 ARE ALSO ACCEPTABLE.
- 5 VALVES SHALL MEET THE REQUIREMENTS FOR HYDROGEN SERVICE AS SPECIFIED IN 'TECHNICAL NOTES FOR VALVES'

SIGNATURE  
&  
SEAL  
OF  
MANUFACTURER

<b>SHEET REV NO.</b>	0
<b>DATE</b>	11-Feb-2026

**510ZD**

Client : HPCL		Dept. / Sect : 16\43		
Project : LMBU PROJECT				
Location : MUMBAI		Tag No : 51301		Sheet No. 1 of 1
GATE VALVE SPECIFICATION			MANUF'S OFFER	
TAG NO. : 51301 RATING : 150 STANDARD : API 600/ ISO 10434			STANDARD :	
SIZE RANGE : 2.00 " TO 42.00 " ENDS : FLGD TO B-16.5 RF/125AARH			MFGRS CAT/FIG : (For category -II MRs only)	
PIPING CLASS : A11A,A1A,A21A,A32A,A91A,A92A,A93A,A94A,A9A			RATING : ENDS :	
DESCRIPTION	CONSTRUCTION	MATERIAL	CONSTRUCTION	MATERIAL
BODY	CAST	ASTM A 216 GR.WCB		
BONNET	BOLTED	ASTM A 216 GR.WCB		
STEM	RISING	13% CR.STEEL (NO CASTING)		
WEDGE DISC	SOLID/FLEXIBLE	13% CR STEEL FACING/13% CR. STEEL		
BODY SEAT RING	RENEWABLE/NON RENEWABLE	STELLITED		
STEM PACKING	RENEWABLE WITH VALVE OPEN ON STREAM	CORROSION INHIBITED DIE FORMED FLEXIBLE GRAPHITE WITH BRAIDED ANTI EXTRUSION RINGS		
HAND WHEEL	NON RISING	MALLEABLE IRON/CAST ST/FAB.ST/DUCT. IRON		
BONNET BOLTS		ASTM A193 GR B7		
BONNET NUTS		ASTM A194 GR 2H		
BONNET GASKET		SP WND SS316-GRAFOIL FILLER/CORRUGATED SS 316		
REQUIREMENT OF GEAR OPERATOR		REFER TECHNICAL NOTES FOR PURCHASE OF VALVES.		
REQUIREMENT OF RADIOGRAPHY		REFER TECHNICAL NOTES FOR PURCHASE OF VALVES.		
SPECIAL SERVICE CONDITIONS		MAX TEMP 371 DEG.C.		
BACK SEAT & SHOULDER		13% CR STEEL		
OTHERS	O.S & Y.			
HYDROSTATIC TEST PRESSURE	BODY : 450 PSIG	SEAT : 325 PSIG		
TEST PRESSURE WITH AIR	80 PSIG			

**NOTES**

- THIS VALVE SPEC SHEET SHALL BE READ IN CONJUNCTION WITH TECHNICAL NOTES FOR VALVES, 6-44-0052.
- ONLY IN THE CASE OF CATEGORY - II MRs,BIDDER SHALL CLEARLY WRITE ALL/ ANY DEVIATION AGAINST EACH PART/ MATERIAL OF VALVE IN THE SPACE PROVIDED FOR AND WHEREVER BIDDER AGREES WITH EIL'S SPEC BIDDER SHALL INDICATE "AGREED".
- NO CUTTING/ OVERWRITING BY BIDDER ON EIL'S SPEC IS ALLOWED.
- GATE VALVES OF SIZE 26" AND ABOVE SHALL BE IN ACCORDANCE WITH ANSI B-16.34 WITH TESTING AS PER API 598 AND FLANGE ENDS SHALL BE IN ACCORDANCE WITH ASME B16.47 SERIES B.
- 5% VALVE CASTINGS UPTO 24" AND 100% VALVE CASTINGS 26" AND ABOVE SHALL UNDERGO RADIOGRAPHIC EXAMINATION.
- FOR VALVE SIZE UPTO 24", VALVES AS PER API-600 AND TESTING AS PER API-598 ARE ALSO ACCEPTABLE.

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SHEET REV NO.	2	3	4	5	6	7
DATE	2-Jan-1995	14-Dec-2000	28-May-2001	30-Jun-2009	26-Apr-2018	9-Dec-2019

**51301**

Client : HPCL		Dept. / Sect : 16\43		
Project : LMBU PROJECT				
Location : MUMBAI		Tag No : 51302		Sheet No. 1 of 2
GATE VALVE SPECIFICATION			MANUF'S OFFER	
TAG NO. : 51302 RATING : 150 STANDARD : API 600/ ISO 10434			STANDARD :	
SIZE RANGE : 2.00 " TO 36.00 " ENDS : FLGD TO B-16.5 RF/125AARH			MFGRS CAT/FIG : (For category -II MRs only)	
PIPING CLASS : A22A,A2A,A82A			RATING : ENDS :	
DESCRIPTION	CONSTRUCTION	MATERIAL	CONSTRUCTION	MATERIAL
BODY	CAST	ASTM A 216 GR.WCB		
BONNET	BOLTED	ASTM A 216 GR.WCB		
STEM	RISING	13% CR.STEEL (NO CASTING)		
WEDGE DISC	SOLID/FLEXIBLE	13% CR STEEL FACING/13% CR. STEEL		
BODY SEAT RING	RENEWABLE/NON RENEWABLE	STELLITED		
STEM PACKING	RENEWABLE WITH VALVE OPEN ON STREAM	CORROSION INHIBITED DIE FORMED FLEXIBLE GRAPHITE WITH BRAIDED ANTI EXTRUSION RINGS		
HAND WHEEL	NON RISING	MALLEABLE IRON/CAST ST/FAB.ST/DUCT. IRON		
BONNET BOLTS		ASTM A193 GR B7		
BONNET NUTS		ASTM A194 GR 2H		
BONNET GASKET		SP WND SS316-GRAFOIL FILLER/CORRUGATED SS 316		
REQUIREMENT OF GEAR OPERATOR		REFER TECHNICAL NOTES FOR PURCHASE OF VALVES.		
REQUIREMENT OF RADIOGRAPHY		REFER TECHNICAL NOTES FOR PURCHASE OF VALVES.		
SPECIAL SERVICE CONDITIONS	I.B.R	STEAM/CONDENSATE/BOILER FEED WATER; MAX. TEMP. 371 DEG.C.		
BACK SEAT & SHOULDER		13% CR STEEL		
OTHERS	O.S & Y.			
HYDROSTATIC TEST PRESSURE	BODY : 450 PSIG	SEAT : 325 PSIG		
TEST PRESSURE WITH AIR	80 PSIG			

**NOTES**

- THIS VALVE SPEC SHEET SHALL BE READ IN CONJUNCTION WITH TECHNICAL NOTES FOR VALVES, 6-44-0052.
- ONLY IN THE CASE OF CATEGORY - II MRs,BIDDER SHALL CLEARLY WRITE ALL/ ANY DEVIATION AGAINST EACH PART/ MATERIAL OF VALVE IN THE SPACE PROVIDED FOR AND WHEREVER BIDDER AGREES WITH EIL'S SPEC BIDDER SHALL INDICATE "AGREED".
- NO CUTTING/ OVERWRITING BY BIDDER ON EIL'S SPEC IS ALLOWED.
- TESTING SHALL BE AS PER IBR ALSO.
- ALL VALVES SHALL BE SUPPLIED WITH IBR CERTIFICATE IN FORM-III C.
- ALL VALVES SHALL BE PAINTED RED ON BODY-BONNET JOINT.
- 5% VALVE CASTINGS UPTO 24" AND 100% VALVE CASTINGS 26" AND ABOVE SHALL UNDERGO RADIOGRAPHIC EXAMINATION.
- GATE VALVES OF SIZE 26" AND ABOVE SHALL BE IN ACCORDANCE WITH ANSI B-16.34 WITH TESTING AS PER API-598 RESPECTIVELY & IBR AND FLANGE ENDS SHALL BE IN ACCORDANCE WITH ASME B16.47 SERIES B.

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SHEET REV NO.	2	3	4	5	6	7
DATE	2-Jan-1995	14-Dec-2000	28-May-2001	30-Jun-2009	26-Apr-2018	9-Dec-2019

**51302**

- 9 VALVES TO COMPLY WITH DESIGN REQUIREMENTS OF IBR ALSO.
- 10 FOR VALVE SIZE UPTO 24", VALVES AS PER API-600 AND TESTING AS PER API-598 & IBR ARE ALSO ACCEPTABLE.

SHEET REV NO.	2	3	4	5	6	7
DATE	2-Jan-1995	14-Dec-2000	28-May-2001	30-Jun-2009	26-Apr-2018	9-Dec-2019

**51302**

<b>Client</b> : HPCL		<b>Dept. / Sect</b> : 16\43		
<b>Project</b> : LMBU PROJECT				
<b>Location</b> : MUMBAI		<b>Tag No</b> : 51311	<b>Sheet No.</b> 1 of 1	
<b>GATE VALVE SPECIFICATION</b>			<b>MANUF'S OFFER</b>	
<b>TAG NO. : 51311</b> <b>RATING : 150</b> <b>STANDARD : API 600/ ISO 10434</b> <b>SIZE RANGE : 2.00 " TO 30.00 "</b> <b>ENDS : FLGD TO B-16.5 RF/125AARH</b> <b>PIPING CLASS : A16A,A26A,A28A,A29A,A61A,A64A,A66A,A95A,A97A,A98A,ACA2A, COPY</b>			<b>STANDARD :</b> <b>MFGRS CAT/FIG :</b> (For category -II MRs only) <b>RATING :</b> <b>ENDS :</b>	
DESCRIPTION	CONSTRUCTION	MATERIAL	CONSTRUCTION	MATERIAL
BODY	CAST	ASTM A 216 GR.WCB		
BONNET	BOLTED	ASTM A 216 GR.WCB		
STEM	RISING	SS 316L (NO CASTING)		
WEDGE DISC	FLEXIBLE	FACED WITH SS 316L/SS 316L		
BODY SEAT RING	RENEWABLE/NON-RENEWABLE	FACED WITH SS 316L/SS 316L		
STEM PACKING	RENEWABLE WITH VALVE OPEN ON STREAM	CORROSION INHIBITED DIE FORMED FLEXIBLE GRAPHITE WITH BRAIDED ANTI EXTRUSION RINGS		
HAND WHEEL	NON RISING	MALLEABLE IRON/CAST ST/FAB.ST/DUCT. IRON		
BONNET BOLTS		ASTM A193 GR B7M		
BONNET NUTS		ASTM A194 GR 2HM		
BONNET GASKET		SP WND SS316L-GRAFOIL FILLER/CORRUGATED SS316L		
REQUIREMENT OF GEAR OPERATOR		REFER TECHNICAL NOTES FOR PURCHASE OF VALVES.		
REQUIREMENT OF RADIOGRAPHY		REFER TECHNICAL NOTES FOR PURCHASE OF VALVES.		
SPECIAL SERVICE CONDITIONS	NACE	SOUR SERVICE/MAX TEMP 371 DEG.C.		
BACK SEAT & SHOULDER		SS 316L		
OTHERS	O.S & Y.			
HYDROSTATIC TEST PRESSURE	BODY : 450 PSIG	SEAT : 325 PSIG		
TEST PRESSURE WITH AIR	80 PSIG			

**NOTES**

- THIS VALVE SPEC SHEET SHALL BE READ IN CONJUNCTION WITH TECHNICAL NOTES FOR VALVES, 6-44-0052.
- ONLY IN THE CASE OF CATEGORY - II MRs,BIDDER SHALL CLEARLY WRITE ALL/ ANY DEVIATION AGAINST EACH PART/ MATERIAL OF VALVE IN THE SPACE PROVIDED FOR AND WHEREVER BIDDER AGREES WITH EIL'S SPEC BIDDER SHALL INDICATE "AGREED".
- NO CUTTING/ OVERWRITING BY BIDDER ON EIL'S SPEC IS ALLOWED.
- GATE VALVES OF SIZE 26" AND ABOVE SHALL BE IN ACCORDANCE WITH ANSI B-16.34 WITH TESTING AS PER API-598 AND FLANGE ENDS SHALL BE IN ACCORDANCE WITH ASME B16.47 SERIES B.
- 50% VALVE CASTINGS UPTO 24" AND 100% VALVE CASTINGS 26" AND ABOVE SHALL UNDERGO RADIOGRAPHIC EXAMINATION.
- FOR VALVE SIZE UPTO 24", VALVES AS PER API-600 AND TESTING AS PER API-598 ARE ALSO ACCEPTABLE.
- NACE REQUIREMENTS SHALL BE AS PER MR0103.

SIGNATURE & SEAL OF MANUFACTURER

<b>SHEET REV NO.</b>	2	3	4	5	6	7	8
<b>DATE</b>	2-Jan-1995	14-Dec-2000	28-May-2001	1-Dec-2004	9-Dec-2005	30-Jun-2009	26-Apr-2018

**51311**

<b>Client</b> : HPCL		<b>Dept. / Sect</b> : 16/43		
<b>Project</b> : LMBU PROJECT				
<b>Location</b> : MUMBAI		<b>Tag No</b> : 51313		<b>Sheet No.</b> 1 of 1
<b>GATE VALVE SPECIFICATION</b>			<b>MANUF'S OFFER</b>	
<b>TAG NO. : 51313</b>			<b>STANDARD :</b>	
<b>RATING : 150</b>			<b>MFGRS CAT/FIG :</b>	
<b>STANDARD : API 600/ ISO 10434</b>			<b>(For category -II MRs only)</b>	
<b>SIZE RANGE : 2.00 " TO 24.00 "</b>			<b>RATING :</b>	
<b>ENDS : FLGD TO B-16.5 RF/125AARH</b>			<b>ENDS :</b>	
<b>PIPING CLASS : A19A</b>				
DESCRIPTION	CONSTRUCTION	MATERIAL	CONSTRUCTION	MATERIAL
BODY	CAST	ASTM A 216 GR.WCB		
BONNET	BOLTED	ASTM A 216 GR.WCB		
STEM	RISING	SS 316; (NO CASTING)		
WEDGE DISC	SOLID/FLEXIBLE	SS 316		
BODY SEAT RING	RENEWABLE/NON-RENEWABLE	SS 316		
STEM PACKING	RENEWABLE WITH VALVE OPEN ON STREAM	CORROSION INHIBITED DIE FORMED FLEXIBLE GRAPHITE WITH BRAIDED ANTI EXTRUSION RINGS		
HAND WHEEL	NON RISING	MALLEABLE IRON/CAST ST/FAB.ST/DUCT. IRON		
BONNET BOLTS		ASTM A193 GR.B7		
BONNET NUTS		ASTM A194 GR.2H		
BONNET GASKET		SP WND SS316-GRAFOIL FILLER/CORRUGATED SS316		
REQUIREMENT OF GEAR OPERATOR		REFER TECHNICAL NOTES FOR PURCHASE OF VALVES.		
REQUIREMENT OF RADIOGRAPHY		REFER TECHNICAL NOTES FOR PURCHASE OF VALVES.		
SPECIAL SERVICE CONDITIONS		CAUSTIC SERVICE (MAX.TEMP.110 DEG.C) & AMINE		
BACK SEAT & SHOULDER		SS 316		
OTHERS	O.S & Y.			
HYDROSTATIC TEST PRESSURE	BODY : 450 PSIG	SEAT : 325 PSIG		
TEST PRESSURE WITH AIR	80 PSIG			

**NOTES**

- 1 THIS VALVE SPEC SHEET SHALL BE READ IN CONJUNCTION WITH TECHNICAL NOTES FOR VALVES, 6-44-0052.
- 2 ONLY IN THE CASE OF CATEGORY - II MRs,BIDDER SHALL CLEARLY WRITE ALL/ ANY DEVIATION AGAINST EACH PART/ MATERIAL OF VALVE IN THE SPACE PROVIDED FOR AND WHEREVER BIDDER AGREES WITH EIL'S SPEC BIDDER SHALL INDICATE "AGREED".
- 3 NO CUTTING/ OVERWRITING BY BIDDER ON EIL'S SPEC IS ALLOWED.
- 4 50% VALVE CASTINGS SHALL UNDERGO RADIOGRAPHIC EXAMINATION.
- 5 VALVES AS PER API-600 AND TESTING AS PER API-598 ARE ALSO ACCEPTABLE.

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SHEET REV NO.	2	3	4	5	6	7
DATE	2-Jan-1995	14-Dec-2000	28-May-2001	30-Jun-2009	26-Apr-2018	9-Dec-2019

**51313**

<b>Client</b> : HPCL			<b>Dept. / Sect</b> : 16\43	
<b>Project</b> : LMBU PROJECT				
<b>Location</b> : MUMBAI		<b>Tag No</b> : 51321		<b>Sheet No.</b> 1 of 1
<b>GATE VALVE SPECIFICATION</b>			<b>MANUF'S OFFER</b>	
<b>TAG NO. : 51321</b>			<b>STANDARD :</b>	
<b>RATING : 150</b>			<b>MFGRS CAT/FIG :</b>	
<b>STANDARD : API 600/ ISO 10434</b>			<b>(For category -II MRs only)</b>	
<b>SIZE RANGE : 2.00 " TO 24.00 "</b>			<b>RATING :</b>	
<b>ENDS : FLGD TO B-16.5 RF/125AARH</b>			<b>ENDS :</b>	
<b>PIPING CLASS : A3A</b>				
DESCRIPTION	CONSTRUCTION	MATERIAL	CONSTRUCTION	MATERIAL
BODY	CAST	ASTM A 216 GR.WCB		
BONNET	BOLTED	ASTM A 216 GR.WCB		
STEM	RISING	13% CR.STEEL (NO CASTING)		
WEDGE DISC	SOLID/FLEXIBLE	13% CR STEEL FACING/13% CR. STEEL		
BODY SEAT RING	RENEWABLE/NON RENEWABLE	STELLITED		
STEM PACKING	RENEWABLE WITH VALVE OPEN ON STREAM	CORROSION INHIBITED DIE FORMED FLEXIBLE GRAPHITE WITH BRAIDED ANTI EXTRUSION RINGS		
HAND WHEEL	NON RISING	MALLEABLE IRON/CAST ST/FAB.ST/DUCT. IRON		
BONNET BOLTS		ASTM A193 GR B7		
BONNET NUTS		ASTM A194 GR 2H		
BONNET GASKET		SP WND SS316-GRAFOIL FILLER/CORRUGATED SS 316		
REQUIREMENT OF GEAR OPERATOR		REFER TECHNICAL NOTES FOR PURCHASE OF VALVES.		
SPECIAL SERVICE CONDITIONS				
BACK SEAT & SHOULDER		13% CR STEEL		
OTHERS	O.S & Y.			
HYDROSTATIC TEST PRESSURE	BODY : 450 PSIG	SEAT : 325 PSIG		
TEST PRESSURE WITH AIR	80 PSIG			

**NOTES**

- 1 THIS VALVE SPEC SHEET SHALL BE READ IN CONJUNCTION WITH TECHNICAL NOTES FOR VALVES, 6-44-0052.
- 2 ONLY IN THE CASE OF CATEGORY - II MRs,BIDDER SHALL CLEARLY WRITE ALL/ ANY DEVIATION AGAINST EACH PART/ MATERIAL OF VALVE IN THE SPACE PROVIDED FOR AND WHEREVER BIDDER AGREES WITH EIL'S SPEC BIDDER SHALL INDICATE "AGREED".
- 3 NO CUTTING/ OVERWRITING BY BIDDER ON EIL'S SPEC IS ALLOWED.
- 4 RADIOGRAPHY OF VALVE CASTINGS NOT REQUIRED.
- 5 VALVES AS PER API-600 AND TESTING AS PER API-598 ARE ALSO ACCEPTABLE.

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<b>SHEET REV NO.</b>	3	4	5	6	7
<b>DATE</b>	14-Dec-2000	28-May-2001	30-Jun-2009	26-Apr-2018	9-Dec-2019

**51321**

<b>Client</b> : HPCL		<b>Dept. / Sect</b> : 16\43		
<b>Project</b> : LMBU PROJECT				
<b>Location</b> : MUMBAI		<b>Tag No</b> : 51345		<b>Sheet No.</b> 1 of 1
<b>GATE VALVE SPECIFICATION</b>			<b>MANUF'S OFFER</b>	
<b>TAG NO. : 51345</b> <b>RATING : 150</b> <b>STANDARD : API 600/ ISO 10434</b>			<b>STANDARD :</b>	
<b>SIZE RANGE : 2.00 " TO 24.00 "</b> <b>ENDS : FLGD TO B-16.5 RF/125AARH</b>			<b>MFGRS CAT/FIG :</b> (For category -II MRs only)	
<b>PIPING CLASS : A1K,A3K</b>			<b>RATING :</b> <b>ENDS :</b>	
DESCRIPTION	CONSTRUCTION	MATERIAL	CONSTRUCTION	MATERIAL
BODY	CAST	ASTM A 351 GR CF8		
BONNET	BOLTED	ASTM A 351 GR.CF8		
STEM	RISING	SS 316; (NO CASTING)		
WEDGE DISC	SOLID/FLEXIBLE	SS 316		
BODY SEAT RING	RENEWABLE/NON-RENEWABLE	SS 316		
STEM PACKING	RENEWABLE WITH VALVE OPEN ON STREAM	CORROSION INHIBITED DIE FORMED FLEXIBLE GRAPHITE WITH BRAIDED ANTI EXTRUSION RINGS		
HAND WHEEL	NON RISING	MALLEABLE IRON/CAST ST/FAB.ST/DUCT. IRON		
BONNET BOLTS		ASTM A193 GR B8M CL.2		
BONNET NUTS		ASTM A194 GR 8M		
BONNET GASKET		SP WND SS316-GRAFOIL FILLER/CORRUGATED SS316		
REQUIREMENT OF GEAR OPERATOR		REFER TECHNICAL NOTES FOR PURCHASE OF VALVES.		
REQUIREMENT OF RADIOGRAPHY		REFER TECHNICAL NOTES FOR PURCHASE OF VALVES.		
SPECIAL SERVICE CONDITIONS		MAX TEMP 371 DEG.C.		
BACK SEAT & SHOULDER		SS 316		
OTHERS	O.S & Y.			
HYDROSTATIC TEST PRESSURE	BODY : 425 PSIG	SEAT : 325 PSIG		
TEST PRESSURE WITH AIR	80 PSIG			

**NOTES**

- 1 THIS VALVE SPEC SHEET SHALL BE READ IN CONJUNCTION WITH TECHNICAL NOTES FOR VALVES, 6-44-0052.
- 2 ONLY IN THE CASE OF CATEGORY - II MRs,BIDDER SHALL CLEARLY WRITE ALL/ ANY DEVIATION AGAINST EACH PART/ MATERIAL OF VALVE IN THE SPACE PROVIDED FOR AND WHEREVER BIDDER AGREES WITH EIL'S SPEC BIDDER SHALL INDICATE "AGREED".
- 3 NO CUTTING/ OVERWRITING BY BIDDER ON EIL'S SPEC IS ALLOWED.
- 4 10 % VALVE CASTINGS SHALL UNDERGO RADIOGRAPHIC EXAMINATION.
- 5 ALL CASTINGS SHALL BE SOLUTION HEAT TREATED.
- 6 WELD REPAIRS, IF ANY, SHALL BE CARRIED OUT BEFORE SOLUTION HEAT TREATMENT.
- 7 VALVES AS PER API-600 AND TESTING AS PER API-598 ARE ALSO ACCEPTABLE.

SIGNATURE & SEAL OF MANUFACTURER

<b>SHEET REV NO.</b>	2	3	4	5	6	7
<b>DATE</b>	2-Jan-1995	14-Dec-2000	28-May-2001	30-Jun-2009	26-Apr-2018	9-Dec-2019

**51345**

<b>Client</b> : HPCL		<b>Dept. / Sect</b> : 16\43		
<b>Project</b> : LMBU PROJECT				
<b>Location</b> : MUMBAI		<b>Tag No</b> : 51361		<b>Sheet No.</b> 1 of 1
<b>GATE VALVE SPECIFICATION</b>			<b>MANUF'S OFFER</b>	
<b>TAG NO. : 51361</b>			<b>STANDARD :</b>	
<b>RATING : 150</b>			<b>MFGRS CAT/FIG :</b>	
<b>STANDARD : API 600/ ISO 10434</b>			<b>(For category -II MRs only)</b>	
<b>SIZE RANGE : 2.00 " TO 24.00 "</b>			<b>RATING :</b>	
<b>ENDS : FLGD TO B-16.5 RF/125AARH</b>			<b>ENDS :</b>	
<b>PIPING CLASS : A98M</b>				
DESCRIPTION	CONSTRUCTION	MATERIAL	CONSTRUCTION	MATERIAL
BODY	CAST	ASTM A 351 GR.CF8M		
BONNET	BOLTED	ASTM A 351 GR.CF8M		
STEM	RISING	SS 316 (NO CASTING)		
WEDGE DISC	FLEXIBLE	SS 316		
BODY SEAT RING	NON-RENEWABLE/RENEWABLE	SS 316		
STEM PACKING	RENEWABLE WITH VALVE OPEN ON STREAM	CORROSION INHIBITED DIE FORMED FLEXIBLE GRAPHITE WITH BRAIDED ANTI EXTRUSION RINGS		
HAND WHEEL	NON RISING	MALLEABLE IRON/CAST ST/FAB.ST/DUCT. IRON		
BONNET BOLTS		ASTM A193 GR B8M CL.2		
BONNET NUTS		ASTM A194 GR 8M		
BONNET GASKET		SP WND SS316-GRAFOIL FILLER/CORRUGATED SS316		
REQUIREMENT OF GEAR OPERATOR		REFER TECHNICAL NOTES FOR PURCHASE OF VALVES.		
REQUIREMENT OF RADIOGRAPHY		REFER TECHNICAL NOTES FOR PURCHASE OF VALVES.		
SPECIAL SERVICE CONDITIONS		MAX TEMP 371 DEG.C.		
BACK SEAT & SHOULDER		SS316		
OTHERS	O.S & Y.			
HYDROSTATIC TEST PRESSURE	BODY : 425 PSIG	SEAT : 325 PSIG		
TEST PRESSURE WITH AIR	80 PSIG			

**NOTES**

- THIS VALVE SPEC SHEET SHALL BE READ IN CONJUNCTION WITH TECHNICAL NOTES FOR VALVES, 6-44-0052.
- ONLY IN THE CASE OF CATEGORY - II MRs, BIDDER SHALL CLEARLY WRITE ALL/ ANY DEVIATION AGAINST EACH PART/ MATERIAL OF VALVE IN THE SPACE PROVIDED FOR AND WHEREVER BIDDER AGREES WITH EIL'S SPEC BIDDER SHALL INDICATE "AGREED".
- NO CUTTING/ OVERWRITING BY BIDDER ON EIL'S SPEC IS ALLOWED.
- 10 % VALVE CASTINGS SHALL UNDERGO RADIOGRAPHIC EXAMINATION.
- ALL CASTINGS SHALL BE SOLUTION HEAT TREATED.
- WELD REPAIR, IF ANY, SHALL BE CARRIED OUT BEFORE SOLUTION HEAT TREATMENT.
- VALVES AS PER API-600 AND TESTING AS PER API-598 ARE ALSO ACCEPTABLE.

SIGNATURE & SEAL OF MANUFACTURER

SHEET REV NO.	2	3	4	5	6	7
DATE	2-Jan-1995	14-Dec-2000	28-May-2001	30-Jun-2009	26-Apr-2018	25-Jul-2023

**51361**

<b>Client</b> : HPCL		<b>Dept. / Sect</b> : 16\43		
<b>Project</b> : LMBU PROJECT				
<b>Location</b> : MUMBAI		<b>Tag No</b> : 51366		<b>Sheet No.</b> 1 of 1
<b>GATE VALVE SPECIFICATION</b>			<b>MANUF'S OFFER</b>	
<b>TAG NO. : 51366</b>			<b>STANDARD :</b>	
<b>RATING : 150</b>			<b>MFGRS CAT/FIG :</b>	
<b>STANDARD : API 600/ ISO 10434</b>			<b>(For category -II MRs only)</b>	
<b>SIZE RANGE : 2.00 " TO 24.00 "</b>			<b>RATING :</b>	
<b>ENDS : FLGD TO B-16.5 RF/125AARH</b>			<b>ENDS :</b>	
<b>PIPING CLASS : A1N,A22N,A26N,A27N,A28N</b>				
DESCRIPTION	CONSTRUCTION	MATERIAL	CONSTRUCTION	MATERIAL
BODY	CAST	ASTM A 351 GR CF3M		
BONNET	BOLTED	ASTM A 351 GR.CF3M		
STEM	RISING	SS 316L (NO CASTING)		
WEDGE DISC	FLEXIBLE	316L		
BODY SEAT RING	NON-RENEWABLE/RENEWABLE	316L		
STEM PACKING	RENEWABLE WITH VALVE OPEN ON STREAM	CORROSION INHIBITED DIE FORMED FLEXIBLE GRAPHITE WITH BRAIDED ANTI EXTRUSION RINGS		
HAND WHEEL	NON RISING	MALLEABLE IRON/CAST ST/FAB.ST/DUCT. IRON		
BONNET BOLTS		ASTM A193 GR B8M CL.2		
BONNET NUTS		ASTM A194 GR 8M		
BONNET GASKET		SP WND SS316L-GRAFOIL FILLER/CORRUGATED SS316L		
REQUIREMENT OF GEAR OPERATOR		REFER TECHNICAL NOTES FOR PURCHASE OF VALVES.		
REQUIREMENT OF RADIOGRAPHY		REFER TECHNICAL NOTES FOR PURCHASE OF VALVES.		
SPECIAL SERVICE CONDITIONS		MAX TEMP 371 DEG.C.		
BACK SEAT & SHOULDER		SS 316L		
OTHERS	O.S & Y.			
HYDROSTATIC TEST PRESSURE	BODY : 425 PSIG	SEAT : 325 PSIG		
TEST PRESSURE WITH AIR	80 PSIG			

**NOTES**

- 1 THIS VALVE SPEC SHEET SHALL BE READ IN CONJUNCTION WITH TECHNICAL NOTES FOR VALVES, 6-44-0052.
- 2 ONLY IN THE CASE OF CATEGORY - II MRs,BIDDER SHALL CLEARLY WRITE ALL/ ANY DEVIATION AGAINST EACH PART/ MATERIAL OF VALVE IN THE SPACE PROVIDED FOR AND WHEREVER BIDDER AGREES WITH EIL'S SPEC BIDDER SHALL INDICATE "AGREED".
- 3 NO CUTTING/ OVERWRITING BY BIDDER ON EIL'S SPEC IS ALLOWED.
- 4 10 % VALVE CASTINGS SHALL UNDERGO RADIOGRAPHIC EXAMINATION.
- 5 ALL CASTING SHALL BE SOLUTION HEAT TREATED
- 6 WELD REPAIR, IF ANY, SHALL BE CARRIED OUT BEFORE SOLUTION HEAT TREATMENT.
- 7 VALVES AS PER API-600 AND TESTING AS PER API-598 ARE ALSO ACCEPTABLE.

SIGNATURE & SEAL OF MANUFACTURER

SHEET REV NO.	2	3	4	5	6	7
DATE	2-Jan-1995	14-Dec-2000	28-May-2001	30-Jun-2009	26-Apr-2018	25-Jul-2023

**51366**

<b>Client</b> : HPCL		<b>Dept. / Sect</b> : 16\43		
<b>Project</b> : LMBU PROJECT				
<b>Location</b> : MUMBAI		<b>Tag No</b> : 51384		<b>Sheet No.</b> 1 of 1
<b>GATE VALVE SPECIFICATION</b>			<b>MANUF'S OFFER</b>	
<b>TAG NO. : 51384</b>			<b>STANDARD :</b>	
<b>RATING : 150</b>			<b>MFGRS CAT/FIG :</b>	
<b>STANDARD : API 600/ ISO 10434</b>			<b>(For category -II MRs only)</b>	
<b>SIZE RANGE : 2.00 " TO 24.00 "</b>			<b>RATING :</b>	
<b>ENDS : FLGD TO B-16.5 FF/125AARH</b>			<b>ENDS :</b>	
<b>PIPING CLASS : A33Y,A34Y,A5Y,A91Y</b>				
DESCRIPTION	CONSTRUCTION	MATERIAL	CONSTRUCTION	MATERIAL
BODY	CAST	ASTM A 216 GR.WCB		
BONNET	BOLTED	ASTM A 216 GR.WCB		
STEM	RISING	BRONZE (NO CASTING)		
WEDGE DISC	SOLID/FLEXIBLE	BRONZE		
BODY SEAT RING	RENEWABLE/NON RENEWABLE	BRONZE		
STEM PACKING	RENEWABLE WITH VALVE OPEN ON STREAM	CORROSION INHIBITED DIE FORMED FLEXIBLE GRAPHITE WITH BRAIDED ANTI EXTRUSION RINGS		
HAND WHEEL	NON RISING	MALLEABLE IRON/CAST ST/FAB.ST/DUCT.IRON		
BONNET BOLTS		ASTM A193 GR B7		
BONNET NUTS		ASTM A194 GR 2H		
BONNET GASKET		SP WND SS316-GRAFOIL FILLER/CORRUGATED SS316		
REQUIREMENT OF GEAR OPERATOR		REFER TECHNICAL NOTES FOR PURCHASE OF VALVES.		
SPECIAL SERVICE CONDITIONS		SEA WATER; MAX TEMP 70 DEG.C. MAX.PR. 15.4 KG/CM2G		
BACK SEAT & SHOULDER		BRONZE		
OTHERS	O.S & Y.			
HYDROSTATIC TEST PRESSURE	BODY : 450 PSIG	SEAT : 325 PSIG		
TEST PRESSURE WITH AIR	80 PSIG			

**NOTES**

- 1 THIS VALVE SPEC SHEET SHALL BE READ IN CONJUNCTION WITH TECHNICAL NOTES FOR VALVES, 6-44-0052.
- 2 ONLY IN THE CASE OF CATEGORY - II MRs,BIDDER SHALL CLEARLY WRITE ALL/ ANY DEVIATION AGAINST EACH PART/ MATERIAL OF VALVE IN THE SPACE PROVIDED FOR AND WHEREVER BIDDER AGREES WITH EIL'S SPEC BIDDER SHALL INDICATE "AGREED".
- 3 NO CUTTING/ OVERWRITING BY BIDDER ON EIL'S SPEC IS ALLOWED.
- 4 RADIOGRAPHY OF VALVE CASTINGS NOT REQUIRED.
- 5 VALVES AS PER API-600 AND TESTING AS PER API-598 ARE ALSO ACCEPTABLE.

SIGNATURE & SEAL OF MANUFACTURER

<b>SHEET REV NO.</b>	3	4	5	6	7
<b>DATE</b>	14-Dec-2000	28-May-2001	6-Aug-2002	30-Jun-2009	26-Apr-2018

**51384**

<b>Client</b> : HPCL		<b>Dept. / Sect</b> : 16\43		
<b>Project</b> : LMBU PROJECT				
<b>Location</b> : MUMBAI		<b>Tag No</b> : 51401		<b>Sheet No.</b> 1 of 1
<b>GATE VALVE SPECIFICATION</b>			<b>MANUF'S OFFER</b>	
<b>TAG NO. : 51401</b> <b>RATING : 300</b> <b>STANDARD : API 600/ ISO 10434</b>			<b>STANDARD :</b>	
<b>SIZE RANGE : 2.00 " TO 24.00 "</b> <b>ENDS : FLGD TO B-16.5 RF/125AARH</b>			<b>MFGRS CAT/FIG :</b> (For category -II MRs only)	
<b>PIPING CLASS : A3A,B1A,B21A,B24A,B32A,B91A,B9A</b>			<b>RATING :</b> <b>ENDS :</b>	
DESCRIPTION	CONSTRUCTION	MATERIAL	CONSTRUCTION	MATERIAL
BODY	CAST	ASTM A 216 GR.WCB		
BONNET	BOLTED	ASTM A 216 GR.WCB		
STEM	RISING	13% CR.STEEL (NO CASTING)		
WEDGE DISC	FLEXIBLE/SOLID	13% CR STEEL FACING/13% CR. STEEL		
BODY SEAT RING	RENEWABLE/NON RENEWABLE	STELLITED		
STEM PACKING	RENEWABLE WITH VALVE OPEN ON STREAM	CORROSION INHIBITED DIE FORMED FLEXIBLE GRAPHITE WITH BRAIDED ANTI EXTRUSION RINGS		
HAND WHEEL	NON RISING	MALLEABLE IRON/CAST ST/FAB.ST/DUCT. IRON		
BONNET BOLTS		ASTM A193 GR B7		
BONNET NUTS		ASTM A194 GR 2H		
BONNET GASKET		SP WND SS316-GRAFOIL FILLER		
REQUIREMENT OF GEAR OPERATOR		REFER TECHNICAL NOTES FOR PURCHASE OF VALVES.		
REQUIREMENT OF RADIOGRAPHY		REFER TECHNICAL NOTES FOR PURCHASE OF VALVES.		
SPECIAL SERVICE CONDITIONS		MAX TEMP 427 DEG.C.		
BACK SEAT & SHOULDER		13% CR STEEL		
OTHERS	O.S & Y.			
HYDROSTATIC TEST PRESSURE	BODY : 1125 PSIG	SEAT : 825 PSIG		
TEST PRESSURE WITH AIR	80 PSIG			

**NOTES**

- THIS VALVE SPEC SHEET SHALL BE READ IN CONJUNCTION WITH TECHNICAL NOTES FOR VALVES, 6-44-0052.
- ONLY IN THE CASE OF CATEGORY - II MRs,BIDDER SHALL CLEARLY WRITE ALL/ ANY DEVIATION AGAINST EACH PART/ MATERIAL OF VALVE IN THE SPACE PROVIDED FOR AND WHEREVER BIDDER AGREES WITH EIL'S SPEC BIDDER SHALL INDICATE "AGREED".
- NO CUTTING/ OVERWRITING BY BIDDER ON EIL'S SPEC IS ALLOWED.
- 10% VALVE CASTINGS UPTO 16" AND 100% VALVE CASTINGS 18" AND ABOVE SHALL UNDERGO RADIOGRAPHIC EXAMINATION.
- VALVES AS PER API-600 AND TESTING AS PER API-598 ARE ALSO ACCEPTABLE.

SIGNATURE & SEAL OF MANUFACTURER

<b>SHEET REV NO.</b>	2	3	4	5	6	7
<b>DATE</b>	2-Jan-1995	14-Dec-2000	28-May-2001	30-Jun-2009	26-Apr-2018	9-Dec-2019

**51401**

<b>Client</b> : HPCL		<b>Dept. / Sect</b> : 16\43		
<b>Project</b> : LMBU PROJECT				
<b>Location</b> : MUMBAI		<b>Tag No</b> : 51402		<b>Sheet No.</b> 1 of 1
<b>GATE VALVE SPECIFICATION</b>			<b>MANUF'S OFFER</b>	
<b>TAG NO. : 51402</b> <b>RATING : 300</b> <b>STANDARD : API 600/ ISO 10434</b>			<b>STANDARD :</b>	
<b>SIZE RANGE : 2.00 " TO 24.00 "</b> <b>ENDS : FLGD TO B-16.5 RF/125AARH</b>			<b>MFGRS CAT/FIG :</b> (For category -II MRs only)	
<b>PIPING CLASS : B22A,B2A,B81A,B84A</b>			<b>RATING :</b> <b>ENDS :</b>	
DESCRIPTION	CONSTRUCTION	MATERIAL	CONSTRUCTION	MATERIAL
BODY	CAST	ASTM A 216 GR.WCB		
BONNET	BOLTED	ASTM A 216 GR.WCB		
STEM	RISING	13% CR.STEEL (NO CASTING)		
WEDGE DISC	SOLID/FLEXIBLE	13% CR STEEL FACING/13% CR. STEEL		
BODY SEAT RING	RENEWABLE/NON RENEWABLE	STELLITED		
STEM PACKING	RENEWABLE WITH VALVE OPEN ON STREAM	CORROSION INHIBITED DIE FORMED FLEXIBLE GRAPHITE WITH BRAIDED ANTI EXTRUSION RINGS		
HAND WHEEL	NON RISING	MALLEABLE IRON/CAST ST/FAB.ST/DUCT. IRON		
BONNET BOLTS		ASTM A193 GR B7		
BONNET NUTS		ASTM A194 GR 2H		
BONNET GASKET		SP WND SS316-GRAFOIL FILLER		
REQUIREMENT OF GEAR OPERATOR		REFER TECHNICAL NOTES FOR PURCHASE OF VALVES.		
REQUIREMENT OF RADIOGRAPHY		REFER TECHNICAL NOTES FOR PURCHASE OF VALVES.		
SPECIAL SERVICE CONDITIONS	I.B.R	STEAM/CONDENSATE/BOILER FEED WATER; MAX. TEMP. 427 DEG.C.		
BACK SEAT & SHOULDER		13% CR STEEL		
OTHERS	O.S & Y.			
HYDROSTATIC TEST PRESSURE	BODY : 1125 PSIG	SEAT : 825 PSIG		
TEST PRESSURE WITH AIR	80 PSIG			

**NOTES**

- 1 THIS VALVE SPEC SHEET SHALL BE READ IN CONJUNCTION WITH TECHNICAL NOTES FOR VALVES, 6-44-0052.
- 2 ONLY IN THE CASE OF CATEGORY - II MRs,BIDDER SHALL CLEARLY WRITE ALL/ ANY DEVIATION AGAINST EACH PART/ MATERIAL OF VALVE IN THE SPACE PROVIDED FOR AND WHEREVER BIDDER AGREES WITH EIL'S SPEC BIDDER SHALL INDICATE "AGREED".
- 3 NO CUTTING/ OVERWRITING BY BIDDER ON EIL'S SPEC IS ALLOWED.
- 4 TESTING SHALL BE AS PER IBR ALSO.
- 5 ALL VALVES SHALL BE SUPPLIED WITH IBR CERTIFICATE IN FORM-III C.
- 6 ALL VALVES SHALL BE PAINTED RED ON BODY-BONNET JOINT.
- 7 10% VALVE CASTINGS UPTO 16" AND 100% VALVE CASTINGS 18" AND ABOVE SHALL UNDERGO RADIOGRAPHIC EXAMINATION.
- 8 VALVES TO COMPLY WITH DESIGN REQUIREMENTS OF IBR ALSO.
- 9 VALVES AS PER API-600 AND TESTING AS PER API-598 & IBR ARE ALSO ACCEPTABLE.

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SHEET REV NO.	2	3	4	5	6	7
DATE	2-Jan-1995	14-Dec-2000	28-May-2001	30-Jun-2009	26-Apr-2018	9-Dec-2019

**51402**

<b>Client</b> : HPCL		<b>Dept. / Sect</b> : 16\43		
<b>Project</b> : LMBU PROJECT				
<b>Location</b> : MUMBAI		<b>Tag No</b> : 51404		<b>Sheet No.</b> 1 of 1
<b>GATE VALVE SPECIFICATION</b>			<b>MANUF'S OFFER</b>	
<b>TAG NO. : 51404</b> <b>RATING : 300</b> <b>STANDARD : API 600/ ISO 10434</b>			<b>STANDARD :</b>	
<b>SIZE RANGE : 2.00 " TO 24.00 "</b> <b>ENDS : FLGD TO B-16.5 RF/125AARH</b>			<b>MFGRS CAT/FIG :</b> (For category -II MRs only)	
<b>PIPING CLASS : B51A,B5A</b>			<b>RATING :</b> <b>ENDS :</b>	
DESCRIPTION	CONSTRUCTION	MATERIAL	CONSTRUCTION	MATERIAL
BODY	CAST	ASTM A 216 GR.WCB		
BONNET	BOLTED	ASTM A 216 GR.WCB		
STEM	RISING	13% CR.STEEL (NO CASTING)		
WEDGE DISC	SOLID/FLEXIBLE	FACED WITH 13% CR STEEL/13% CR STEEL		
BODY SEAT RING	RENEWABLE/NON-RENEWABLE	STELLITED		
STEM PACKING	RENEWABLE WITH VALVE OPEN ON STREAM	CORROSION INHIBITED DIE FORMED FLEXIBLE GRAPHITE WITH BRAIDED ANTI EXTRUSION RINGS		
HAND WHEEL	NON RISING	MALLEABLE IRON/CAST ST/FAB.ST/DUCT. IRON		
BONNET BOLTS		ASTM A193 GR B7		
BONNET NUTS		ASTM A194 GR 2H		
BONNET GASKET		SP WND SS316-GRAFOIL FILLER		
REQUIREMENT OF GEAR OPERATOR		REFER TECHNICAL NOTES FOR PURCHASE OF VALVES.		
REQUIREMENT OF RADIOGRAPHY		REFER TECHNICAL NOTES FOR PURCHASE OF VALVES.		
SPECIAL SERVICE CONDITIONS	H2	MAX TEMP 230 DEG.C.		
BACK SEAT & SHOULDER		13% CR STEEL		
OTHERS	O.S & Y.			
HYDROSTATIC TEST PRESSURE	BODY : 1125 PSIG	SEAT : 825 PSIG		
TEST PRESSURE WITH AIR	80 PSIG			

**NOTES**

- THIS VALVE SPEC SHEET SHALL BE READ IN CONJUNCTION WITH TECHNICAL NOTES FOR VALVES, 6-44-0052.
- ONLY IN THE CASE OF CATEGORY - II MRs, BIDDER SHALL CLEARLY WRITE ALL/ ANY DEVIATION AGAINST EACH PART/ MATERIAL OF VALVE IN THE SPACE PROVIDED FOR AND WHEREVER BIDDER AGREES WITH EIL'S SPEC BIDDER SHALL INDICATE "AGREED".
- NO CUTTING/ OVERWRITING BY BIDDER ON EIL'S SPEC IS ALLOWED.
- 50% VALVE CASTINGS UPTO 16" AND 100% VALVE CASTINGS 18" AND ABOVE SHALL UNDERGO RADIOGRAPHIC EXAMINATION.
- VALVES SHALL MEET THE REQUIREMENTS FOR HYDROGEN SERVICE AS SPECIFIED IN 'TECHNICAL NOTES FOR VALVES'.
- VALVES AS PER API-600 AND TESTING AS PER API-598 ARE ALSO ACCEPTABLE.

SIGNATURE & SEAL OF MANUFACTURER

<b>SHEET REV NO.</b>	2	3	4	5	6	7
<b>DATE</b>	2-Jan-1995	14-Dec-2000	28-May-2001	30-Jun-2009	26-Apr-2018	9-Dec-2019

**51404**

<b>Client</b> : HPCL			<b>Dept. / Sect</b> : 16\43	
<b>Project</b> : LMBU PROJECT				
<b>Location</b> : MUMBAI		<b>Tag No</b> : 51411		<b>Sheet No.</b> 1 of 1
<b>GATE VALVE SPECIFICATION</b>			<b>MANUF'S OFFER</b>	
<b>TAG NO.:</b> 51411 <b>RATING:</b> 300 <b>STANDARD:</b> API 600/ ISO 10434			<b>STANDARD:</b>	
<b>SIZE RANGE:</b> 2.00 " TO 24.00 " <b>ENDS:</b> FLGD TO B-16.5 RF/125AARH			<b>MFGRS CAT/FIG:</b> (For category -II MRs only)	
<b>PIPING CLASS:</b> B16A,B26A,B61A,B64A,B66A,B68A,B69A			<b>RATING:</b> <b>ENDS:</b>	
DESCRIPTION	CONSTRUCTION	MATERIAL	CONSTRUCTION	MATERIAL
BODY	CAST	ASTM A 216 GR.WCB		
BONNET	BOLTED	ASTM A 216 GR.WCB		
STEM	RISING	SS 316L (NO CASTING)		
WEDGE DISC	FLEXIBLE	SS 316L FACING/SS 316L		
BODY SEAT RING	RENEWABLE/NON-RENEWABLE	SS 316L FACING/SS 316L		
STEM PACKING	RENEWABLE WITH VALVE OPEN ON STREAM	CORROSION INHIBITED DIE FORMED FLEXIBLE GRAPHITE WITH BRAIDED ANTI EXTRUSION RINGS		
HAND WHEEL	NON RISING	MALLEABLE IRON/CAST ST/FAB.ST/DUCT. IRON		
BONNET BOLTS		ASTM A193 GR B7M		
BONNET NUTS		ASTM A194 GR 2HM		
BONNET GASKET		SP WND SS316L-GRAFOIL FILLER		
REQUIREMENT OF GEAR OPERATOR		REFER TECHNICAL NOTES FOR PURCHASE OF VALVES.		
REQUIREMENT OF RADIOGRAPHY		REFER TECHNICAL NOTES FOR PURCHASE OF VALVES.		
SPECIAL SERVICE CONDITIONS	NACE	SOUR SERVICE/MAX TEMP 427 DEG.C.		
BACK SEAT & SHOULDER		SS 316L		
OTHERS	O.S & Y.			
HYDROSTATIC TEST PRESSURE	BODY : 1125 PSIG	SEAT : 825 PSIG		
TEST PRESSURE WITH AIR	80 PSIG			

**NOTES**

- THIS VALVE SPEC SHEET SHALL BE READ IN CONJUNCTION WITH TECHNICAL NOTES FOR VALVES, 6-44-0052.
- ONLY IN THE CASE OF CATEGORY - II MRs,BIDDER SHALL CLEARLY WRITE ALL/ ANY DEVIATION AGAINST EACH PART/ MATERIAL OF VALVE IN THE SPACE PROVIDED FOR AND WHEREVER BIDDER AGREES WITH EIL'S SPEC BIDDER SHALL INDICATE "AGREED".
- NO CUTTING/ OVERWRITING BY BIDDER ON EIL'S SPEC IS ALLOWED.
- 50% VALVE CASTINGS UPTO 16" AND 100% VALVE CASTINGS 18" AND ABOVE SHALL UNDERGO RADIOGRAPHIC EXAMINATION.
- NACE REQUIREMENTS SHALL BE AS PER MR0103.
- VALVES AS PER API-600 AND TESTING AS PER API-598 ARE ALSO ACCEPTABLE.

SIGNATURE & SEAL OF MANUFACTURER

<b>SHEET REV NO.</b>	2	3	4	5	6	7
<b>DATE</b>	2-Jan-1995	14-Dec-2000	28-May-2001	9-Dec-2005	30-Jun-2009	26-Apr-2018

**51411**

<b>Client</b> : HPCL		<b>Dept. / Sect</b> : 16/43		
<b>Project</b> : LMBU PROJECT				
<b>Location</b> : MUMBAI		<b>Tag No</b> : 51413		<b>Sheet No.</b> 1 of 1
<b>GATE VALVE SPECIFICATION</b>			<b>MANUF'S OFFER</b>	
<b>TAG NO. : 51413</b>			<b>STANDARD :</b>	
<b>RATING : 300</b>			<b>MFGRS CAT/FIG :</b>	
<b>STANDARD : API 600/ ISO 10434</b>			<b>(For category -II MRs only)</b>	
<b>SIZE RANGE : 2.00 " TO 24.00 "</b>			<b>RATING :</b>	
<b>ENDS : FLGD TO B-16.5 RF/125AARH</b>			<b>ENDS :</b>	
<b>PIPING CLASS : B19A</b>				
DESCRIPTION	CONSTRUCTION	MATERIAL	CONSTRUCTION	MATERIAL
BODY	CAST	ASTM A 216 GR.WCB		
BONNET	BOLTED	ASTM A 216 GR.WCB		
STEM	RISING	SS 316; (NO CASTING)		
WEDGE DISC	SOLID/FLEXIBLE	SS 316		
BODY SEAT RING	RENEWABLE/NON RENEWABLE	SS 316		
STEM PACKING	RENEWABLE WITH VALVE OPEN ON STREAM	CORROSION INHIBITED DIE FORMED FLEXIBLE GRAPHITE WITH BRAIDED ANTI EXTRUSION RINGS		
HAND WHEEL	NON RISING	MALLEABLE IRON/CAST ST/FAB.ST/DUCT. IRON		
BONNET BOLTS		ASTM A193 GR B7		
BONNET NUTS		ASTM A194 GR 2H		
BONNET GASKET		SP WND SS316-GRAFOIL FILLER		
REQUIREMENT OF GEAR OPERATOR		REFER TECHNICAL NOTES FOR PURCHASE OF VALVES.		
REQUIREMENT OF RADIOGRAPHY		REFER TECHNICAL NOTES FOR PURCHASE OF VALVES.		
SPECIAL SERVICE CONDITIONS		CAUSTIC SERVICE(MAX.TEMP.110 DEG.C) & AMINE;		
BACK SEAT & SHOULDER		SS 316		
OTHERS	O.S & Y.			
HYDROSTATIC TEST PRESSURE	BODY : 1125 PSIG	SEAT : 825 PSIG		
TEST PRESSURE WITH AIR	80 PSIG			

**NOTES**

- THIS VALVE SPEC SHEET SHALL BE READ IN CONJUNCTION WITH TECHNICAL NOTES FOR VALVES, 6-44-0052.
- ONLY IN THE CASE OF CATEGORY - II MRs,BIDDER SHALL CLEARLY WRITE ALL/ ANY DEVIATION AGAINST EACH PART/ MATERIAL OF VALVE IN THE SPACE PROVIDED FOR AND WHEREVER BIDDER AGREES WITH EIL'S SPEC BIDDER SHALL INDICATE "AGREED".
- NO CUTTING/ OVERWRITING BY BIDDER ON EIL'S SPEC IS ALLOWED.
- 50% VALVE CASTINGS UPTO 16" AND 100% VALVE CASTINGS 18" AND ABOVE SHALL UNDERGO RADIOGRAPHIC EXAMINATION.
- VALVES AS PER API-600 AND TESTING AS PER API-598 ARE ALSO ACCEPTABLE.

SIGNATURE & SEAL OF MANUFACTURER

SHEET REV NO.	2	3	4	5	6	7
DATE	2-Jan-1995	14-Dec-2000	28-May-2001	30-Jun-2009	26-Apr-2018	9-Dec-2019

**51413**

<b>Client</b> : HPCL		<b>Dept. / Sect</b> : 16\43		
<b>Project</b> : LMBU PROJECT				
<b>Location</b> : MUMBAI		<b>Tag No</b> : 51466		<b>Sheet No.</b> 1 of 1
<b>GATE VALVE SPECIFICATION</b>			<b>MANUF'S OFFER</b>	
<b>TAG NO. : 51466</b> <b>RATING : 300</b> <b>STANDARD : API 600/ ISO 10434</b>			<b>STANDARD :</b>	
<b>SIZE RANGE : 2.00 " TO 24.00 "</b> <b>ENDS : FLGD TO B-16.5 RF/125AARH</b>			<b>MFGRS CAT/FIG :</b> (For category -II MRs only)	
<b>PIPING CLASS : A22N,B26N</b>			<b>RATING :</b> <b>ENDS :</b>	
DESCRIPTION	CONSTRUCTION	MATERIAL	CONSTRUCTION	MATERIAL
BODY	CAST	ASTM A 351 GR CF3M		
BONNET	BOLTED	ASTM A 351 GR.CF3M		
STEM	RISING	SS 316L (NO CASTING)		
WEDGE DISC	FLEXIBLE	SS 316L		
BODY SEAT RING	RENEWABLE/NON-RENEWABLE	SS 316L		
STEM PACKING	RENEWABLE WITH VALVE OPEN ON STREAM	CORROSION INHIBITED DIE FORMED FLEXIBLE GRAPHITE WITH BRAIDED ANTI EXTRUSION RINGS		
HAND WHEEL	NON RISING	MALLEABLE IRON/CAST ST/FAB.ST/DUCT. IRON		
BONNET BOLTS		ASTM A193 GR B8M CL.2		
BONNET NUTS		ASTM A194 GR 8M		
BONNET GASKET		SP WND SS316L-GRAFOIL FILLER		
REQUIREMENT OF GEAR OPERATOR		REFER TECHNICAL NOTES FOR PURCHASE OF VALVES.		
REQUIREMENT OF RADIOGRAPHY		REFER TECHNICAL NOTES FOR PURCHASE OF VALVES.		
SPECIAL SERVICE CONDITIONS		MAX TEMP 454 DEG.C.		
BACK SEAT & SHOULDER		SS316L		
OTHERS	O.S & Y.			
HYDROSTATIC TEST PRESSURE	BODY : 1100 PSIG	SEAT : 800 PSIG		
TEST PRESSURE WITH AIR	80 PSIG			

**NOTES**

- THIS VALVE SPEC SHEET SHALL BE READ IN CONJUNCTION WITH TECHNICAL NOTES FOR VALVES, 6-44-0052.
- ONLY IN THE CASE OF CATEGORY - II MRs,BIDDER SHALL CLEARLY WRITE ALL/ ANY DEVIATION AGAINST EACH PART/ MATERIAL OF VALVE IN THE SPACE PROVIDED FOR AND WHEREVER BIDDER AGREES WITH EIL'S SPEC BIDDER SHALL INDICATE "AGREED".
- NO CUTTING/ OVERWRITING BY BIDDER ON EIL'S SPEC IS ALLOWED.
- 10% VALVE CASTINGS UPTO 16" AND 100% VALVE CASTINGS 18" AND ABOVE SHALL UNDERGO RADIOGRAPHIC EXAMINATION.
- ALL CASTINGS SHALL BE SOLUTION HEAT TREATED.
- WELD REPAIRS, IF ANY, SHALL BE CARRIED OUT BEFORE SOLUTION HEAT TREATMENT.
- VALVES AS PER API-600 AND TESTING AS PER API-598 ARE ALSO ACCEPTABLE.

SIGNATURE & SEAL OF MANUFACTURER

<b>SHEET REV NO.</b>	2	3	4	5	6	7
<b>DATE</b>	2-Jan-1995	14-Dec-2000	28-May-2001	30-Jun-2009	26-Apr-2018	25-Jul-2023

**51466**

Client : HPCL		Dept. / Sect : 16\43		
Project : LMBU PROJECT				
Location : MUMBAI		Tag No : 51499		Sheet No. 1 of 1
GATE VALVE SPECIFICATION			MANUF'S OFFER	
TAG NO. : 51499 RATING : 300 STANDARD : API 600/ ISO 10434			STANDARD :	
SIZE RANGE : 2.00 " TO 24.00 " ENDS : FLGD TO B-16.5 RF/125AARH			MFGRS CAT/FIG : (For category -II MRs only)	
PIPING CLASS : B52AW			RATING : ENDS :	
DESCRIPTION	CONSTRUCTION	MATERIAL	CONSTRUCTION	MATERIAL
BODY	CAST	ASTM A 216 GR.WCB		
BONNET	BOLTED	ASTM A 216 GR.WCB		
STEM	RISING	SS 316 (NO CASTING)		
WEDGE DISC	FLEXIBLE	SS 316 FACING/SS 316		
BODY SEAT RING	RENEWABLE/NON-RENEWABLE	HARDFACED		
STEM PACKING	RENEWABLE WITH VALVE OPEN ON STREAM	CORROSION INHIBITED DIE FORMED FLEXIBLE GRAPHITE WITH BRAIDED ANTI EXTRUSION RINGS		
HAND WHEEL	NON RISING	MALLEABLE IRON/CAST ST/FAB.ST/DUCT. IRON		
BONNET BOLTS		ASTM A193 GR B7M		
BONNET NUTS		ASTM A194 GR 2HM		
BONNET GASKET		SP WND SS316-GRAFOIL FILLER		
REQUIREMENT OF GEAR OPERATOR		REFER TECHNICAL NOTES FOR PURCHASE OF VALVES.		
REQUIREMENT OF RADIOGRAPHY		REFER TECHNICAL NOTES FOR PURCHASE OF VALVES.		
SPECIAL SERVICE CONDITIONS	NACE+H2	SOUR SERVICE+H2 SERICE; MAX TEMP 230 DEG.C.		
BACK SEAT		HARDFACED		
OTHERS	O.S & Y.			
HYDROSTATIC TEST PRESSURE	BODY : 1125 PSIG	SEAT : 825 PSIG		
TEST PRESSURE WITH AIR	80 PSIG			

**NOTES**

- THIS VALVE SPEC SHEET SHALL BE READ IN CONJUNCTION WITH TECHNICAL NOTES FOR VALVES, 6-44-0052.
- ONLY IN THE CASE OF CATEGORY - II MRs,BIDDER SHALL CLEARLY WRITE ALL/ ANY DEVIATION AGAINST EACH PART/ MATERIAL OF VALVE IN THE SPACE PROVIDED FOR AND WHEREVER BIDDER AGREES WITH EIL'S SPEC BIDDER SHALL INDICATE "AGREED".
- NO CUTTING/ OVERWRITING BY BIDDER ON EIL'S SPEC IS ALLOWED.
- 50% VALVE CASTINGS UPTO 16" AND 100% VALVE CASTINGS 18" AND ABOVE SHALL UNDERGO RADIOGRAPHIC EXAMINATION.
- NACE REQUIREMENTS SHALL BE AS PER MR0103.
- ALL ASTM A105 MATERIALS, IF ANY, SHALL BE SUPPLIED IN NORMALIZED CONDITION.
- VALVES SHALL MEET THE REQUIREMENTS FOR HYDROGEN SERVICE AS SPECIFIED IN 'TECHNICAL NOTES FOR VALVES'.
- TESTING SHALL BE AS PER API 598.

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 MANUFACTURER

SHEET REV NO.	0
DATE	2-Oct-2026

**51499**

Client : HPCL		Dept. / Sect : 16\43		
Project : LMBU PROJECT				
Location : MUMBAI		Tag No : 514ZC		Sheet No. 1 of 1
GATE VALVE SPECIFICATION			MANUF'S OFFER	
TAG NO. : 514ZC RATING : 300 STANDARD : API 600/ ISO 10434			STANDARD :	
SIZE RANGE : 2.00 " TO 24.00 " ENDS : FLGD TO B-16.5 RF/125AARH			MFGRS CAT/FIG : (For category -II MRs only)	
PIPING CLASS : B54A			RATING : ENDS :	
DESCRIPTION	CONSTRUCTION	MATERIAL	CONSTRUCTION	MATERIAL
BODY	CAST	ASTM A 216 GR.WCB		
BONNET	BOLTED	ASTM A 216 GR.WCB		
STEM	RISING	SS 316 (NO CASTING)		
WEDGE DISC	FLEXIBLE	SS 316 FACING/SS 316		
BODY SEAT RING	RENEWABLE/NON-RENEWABLE	HARDFACED		
STEM PACKING	RENEWABLE WITH VALVE OPEN ON STREAM	CORROSION INHIBITED DIE FORMED FLEXIBLE GRAPHITE WITH BRAIDED ANTI EXTRUSION RINGS		
HAND WHEEL	NON RISING	MALLEABLE IRON/CAST ST/FAB.ST/DUCT. IRON		
BONNET BOLTS		ASTM A193 GR B7M		
BONNET NUTS		ASTM A194 GR 2HM		
BONNET GASKET		SP WND SS316-GRAFOIL FILLER		
REQUIREMENT OF GEAR OPERATOR		REFER TECHNICAL NOTES FOR PURCHASE OF VALVES.		
REQUIREMENT OF RADIOGRAPHY		REFER TECHNICAL NOTES FOR PURCHASE OF VALVES.		
SPECIAL SERVICE CONDITIONS	NACE+H2	SOUR SERVICE+H2 SERICE; MAX TEMP 230 DEG.C.		
BACK SEAT		HARDFACED		
OTHERS	O.S & Y.			
HYDROSTATIC TEST PRESSURE	BODY : 1125 PSIG	SEAT : 825 PSIG		
TEST PRESSURE WITH AIR	80 PSIG			

**NOTES**

- THIS VALVE SPEC SHEET SHALL BE READ IN CONJUNCTION WITH TECHNICAL NOTES FOR VALVES, 6-44-0052.
- ONLY IN THE CASE OF CATEGORY - II MRs,BIDDER SHALL CLEARLY WRITE ALL/ ANY DEVIATION AGAINST EACH PART/ MATERIAL OF VALVE IN THE SPACE PROVIDED FOR AND WHEREVER BIDDER AGREES WITH EIL'S SPEC BIDDER SHALL INDICATE "AGREED".
- NO CUTTING/ OVERWRITING BY BIDDER ON EIL'S SPEC IS ALLOWED.
- 50% VALVE CASTINGS UPTO 16" AND 100% VALVE CASTINGS 18" AND ABOVE SHALL UNDERGO RADIOGRAPHIC EXAMINATION.
- NACE REQUIREMENTS SHALL BE AS PER MR0103.
- ALL ASTM A105 MATERIALS, IF ANY, SHALL BE SUPPLIED IN NORMALIZED CONDITION.
- VALVES SHALL MEET THE REQUIREMENTS FOR HYDROGEN SERVICE AS SPECIFIED IN 'TECHNICAL NOTES FOR VALVES'.
- TESTING SHALL BE AS PER API 598.

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MANUFACTURER

SHEET REV NO.	0
DATE	2-Oct-2026

**514ZC**

Client : HPCL		Dept. / Sect : 16/43		
Project : LMBU PROJECT				
Location : MUMBAI		Tag No : 514ZD		Sheet No. 1 of 1
GATE VALVE SPECIFICATION			MANUF'S OFFER	
TAG NO. : 514ZD RATING : 300 STANDARD : API 600/ ISO 10434			STANDARD :	
SIZE RANGE : 2.00 " TO 24.00 " ENDS : FLGD TO B-16.5 RF/125AARH			MFGRS CAT/FIG : (For category -II MRs only)	
PIPING CLASS : B25A			RATING : ENDS :	
DESCRIPTION	CONSTRUCTION	MATERIAL	CONSTRUCTION	MATERIAL
BODY	CAST	ASTM A 216 GR.WCB		
BONNET	BOLTED	ASTM A 216 GR.WCB		
STEM	RISING	SS 316; (NO CASTING)		
WEDGE DISC	SOLID/FLEXIBLE	SS 316		
BODY SEAT RING	RENEWABLE/NON RENEWABLE	SS 316		
STEM PACKING	RENEWABLE WITH VALVE OPEN ON STREAM	CORROSION INHIBITED DIE FORMED FLEXIBLE GRAPHITE WITH BRAIDED ANTI EXTRUSION RINGS		
HAND WHEEL	NON RISING	MALLEABLE IRON/CAST ST/FAB.ST/DUCT. IRON		
BONNET BOLTS		ASTM A193 GR B7		
BONNET NUTS		ASTM A194 GR 2H		
BONNET GASKET		SP WND SS316-GRAFOIL FILLER		
REQUIREMENT OF GEAR OPERATOR		REFER TECHNICAL NOTES FOR PURCHASE OF VALVES.		
REQUIREMENT OF RADIOGRAPHY		REFER TECHNICAL NOTES FOR PURCHASE OF VALVES.		
SPECIAL SERVICE CONDITIONS	H2	MAX TEMP 230 DEG.C		
BACK SEAT & SHOULDER		SS 316		
OTHERS	O.S & Y.			
HYDROSTATIC TEST PRESSURE	BODY : 1125 PSIG	SEAT : 825 PSIG		
TEST PRESSURE WITH AIR	80 PSIG			

**NOTES**

- THIS VALVE SPEC SHEET SHALL BE READ IN CONJUNCTION WITH TECHNICAL NOTES FOR VALVES, 6-44-0052.
- ONLY IN THE CASE OF CATEGORY - II MRs, BIDDER SHALL CLEARLY WRITE ALL/ ANY DEVIATION AGAINST EACH PART/ MATERIAL OF VALVE IN THE SPACE PROVIDED FOR AND WHEREVER BIDDER AGREES WITH EIL'S SPEC BIDDER SHALL INDICATE "AGREED".
- NO CUTTING/ OVERWRITING BY BIDDER ON EIL'S SPEC IS ALLOWED.
- 50% VALVE CASTINGS UPTO 16" AND 100% VALVE CASTINGS 18" AND ABOVE SHALL UNDERGO RADIOGRAPHIC EXAMINATION.
- VALVES AS PER API-600 AND TESTING AS PER API-598 ARE ALSO ACCEPTABLE.
- VALVES SHALL MEET THE REQUIREMENTS FOR HYDROGEN SERVICE AS SPECIFIED IN 'TECHNICAL NOTES FOR VALVES'

SIGNATURE & SEAL OF MANUFACTURER

SHEET REV NO.	0
DATE	2-Jun-2026

514ZD

Client : HPCL		Dept. / Sect : 16\43		
Project : LMBU PROJECT				
Location : MUMBAI		Tag No : 51502		Sheet No. 1 of 1
GATE VALVE SPECIFICATION			MANUF'S OFFER	
TAG NO. : 51502		RATING : 600		STANDARD : API 600/ ISO 10434
SIZE RANGE : 2.00 " TO 24.00 "		ENDS : FLGD TO B-16.5 RF/125AARH		STANDARD : MFGRS CAT/FIG : (For category -II MRs only)
PIPING CLASS : D2A,D42A				RATING : ENDS :
DESCRIPTION	CONSTRUCTION	MATERIAL	CONSTRUCTION	MATERIAL
BODY	CAST	ASTM A 216 GR.WCB		
BONNET	BOLTED	ASTM A 216 GR.WCB		
STEM	RISING	13% CR.STEEL (NO CASTING)		
WEDGE DISC	SOLID/FLEXIBLE	STELLITED		
BODY SEAT RING	RENEWABLE/NON-RENEWABLE	STELLITED		
STEM PACKING	RENEWABLE WITH VALVE OPEN ON STREAM	CORROSION INHIBITED DIE FORMED FLEXIBLE GRAPHITE WITH BRAIDED ANTI EXTRUSION RINGS		
HAND WHEEL	NON RISING	MALLEABLE IRON/CAST ST/FAB.ST/DUCT. IRON		
BONNET BOLTS		ASTM A193 GR B7		
BONNET NUTS		ASTM A194 GR 2H		
BONNET GASKET		SP WND SS316-GRAFOIL FILLER		
REQUIREMENT OF GEAR OPERATOR		REFER TECHNICAL NOTES FOR PURCHASE OF VALVES.		
REQUIREMENT OF RADIOGRAPHY		REFER TECHNICAL NOTES FOR PURCHASE OF VALVES.		
SPECIAL SERVICE CONDITIONS	I.B.R	STEAM/CONDENSATE/BOILER FEED WATER; MAX. TEMP. 427 DEG.C.		
BACK SEAT & SHOULDER		13% CR STEEL		
OTHERS	O.S & Y.			
HYDROSTATIC TEST PRESSURE	BODY : 2225 PSIG	SEAT : 1650 PSIG		
TEST PRESSURE WITH AIR	80 PSIG			

**NOTES**

- THIS VALVE SPEC SHEET SHALL BE READ IN CONJUNCTION WITH TECHNICAL NOTES FOR VALVES, 6-44-0052.
- ONLY IN THE CASE OF CATEGORY - II MRs, BIDDER SHALL CLEARLY WRITE ALL/ ANY DEVIATION AGAINST EACH PART/ MATERIAL OF VALVE IN THE SPACE PROVIDED FOR AND WHEREVER BIDDER AGREES WITH EIL'S SPEC BIDDER SHALL INDICATE "AGREED".
- NO CUTTING/ OVERWRITING BY BIDDER ON EIL'S SPEC IS ALLOWED.
- TESTING SHALL BE AS PER IBR ALSO.
- ALL VALVES SHALL BE SUPPLIED WITH IBR CERTIFICATE IN FORM-III C.
- ALL VALVES SHALL BE PAINTED RED ON BODY-BONNET JOINT.
- 100% VALVE CASTINGS SHALL UNDERGO RADIOGRAPHIC EXAMINATION.
- VALVES TO COMPLY WITH DESIGN REQUIREMENTS OF IBR ALSO.
- VALVES AS PER API-600 AND TESTING AS PER API-598 & IBR ARE ALSO ACCEPTABLE.

SIGNATURE & SEAL OF MANUFACTURER

SHEET REV NO.	2	3	4	5	6
DATE	2-Jan-1995	14-Dec-2000	28-May-2001	30-Jun-2009	26-Apr-2018

51502

<b>Client</b> : HPCL		<b>Dept. / Sect</b> : 16/43		
<b>Project</b> : LMBU PROJECT				
<b>Location</b> : MUMBAI		<b>Tag No</b> : 52001		<b>Sheet No.</b> 1 of 1
<b>GLOBE VALVE SPECIFICATION</b>			<b>MANUF'S OFFER</b>	
<b>TAG NO. : 52001</b> <b>RATING : 800</b> <b>STANDARD : API 602/ ISO 15761</b> <b>SIZE RANGE : 0.25 " TO 1.50 "</b> <b>ENDS : SW 3000 TO B-16.11</b> <b>PIPING CLASS : A11A,A1A,A20A,A21A,A32A,A3A,A91A,A92A,A93A,A94A,A9A,B1A, B21A,B24A,B32A,B91A,B9A,D1A,D9A</b>			<b>STANDARD :</b> <b>MFGRS CAT/FIG :</b> (For category -II MRs only) <b>RATING :                      ENDS :</b>	
DESCRIPTION	CONSTRUCTION	MATERIAL	CONSTRUCTION	MATERIAL
BODY	FORGED	ASTM A 105		
BONNET	BOLTED	ASTM A 105		
STEM	RISING	13% CR.STEEL (NO CASTING)		
DISC	LOOSE PLUG TYPE	STELLITED		
BODY SEAT RING	RENEWABLE/NON RENEWABLE	STELLITED		
STEM PACKING	RENEWABLE WITH VALVE OPEN ON STREAM	CORROSION INHIBITED DIE FORMED FLEXIBLE GRAPHITE WITH BRAIDED ANTI EXTRUSION RINGS		
HAND WHEEL	RISING	MALLEABLE IRON/CAST ST/FAB.ST/DUCT. IRON		
BONNET BOLTS		ASTM A193 GR B7		
BONNET NUTS		ASTM A194 GR 2H		
BONNET GASKET		SP WND SS316-GRAFOIL FILLER		
OTHERS	O S & Y			
SPECIAL SERVICE CONDITION		MAX TEMP 427 DEG.C.		
BACK SEAT & SHOULDER	INTEGRAL			
HYDROSTATIC TEST PRESSURE	BODY : 2975 PSIG	SEAT : 2175 PSIG		
TEST PRESSURE WITH AIR	80 PSIG			

**NOTES**

- 1 THIS VALVE SPEC SHEET SHALL BE READ IN CONJUNCTION WITH TECHNICAL NOTES FOR VALVES, 6-44-0052.
- 2 ONLY IN THE CASE OF CATEGORY - II MRs,BIDDER SHALL CLEARLY WRITE ALL/ ANY DEVIATION AGAINST EACH PART/ MATERIAL OF VALVE IN THE SPACE PROVIDED FOR AND WHEREVER BIDDER AGREES WITH EIL'S SPEC BIDDER SHALL INDICATE "AGREED".
- 3 NO CUTTING/ OVERWRITING BY BIDDER ON EIL'S SPEC IS ALLOWED.

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<b>SHEET REV NO.</b>	2	3	4	5	6
<b>DATE</b>	2-Jan-1995	14-Dec-2000	28-May-2001	30-Jun-2009	26-Apr-2018

**52001**

Client : HPCL		Dept. / Sect : 16\43		
Project : LMBU PROJECT				
Location : MUMBAI		Tag No : 52002		Sheet No. 1 of 1
GLOBE VALVE SPECIFICATION			MANUF'S OFFER	
TAG NO. : 52002 RATING : 800 STANDARD : API 602/ ISO 15761			STANDARD :	
SIZE RANGE : 0.50 " TO 1.50 " ENDS : SW 3000 TO B-16.11			MFGRS CAT/FIG : (For category -II MRs only)	
PIPING CLASS : A22A,A2A,A82A,B22A,B2A,B81A,B84A,D2A,D42A			RATING : ENDS :	
DESCRIPTION	CONSTRUCTION	MATERIAL	CONSTRUCTION	MATERIAL
BODY	FORGED	ASTM A 105		
BONNET	BOLTED	ASTM A 105		
STEM	RISING	13% CR.STEEL (NO CASTING)		
DISC	LOOSE PLUG TYPE	STELLITED		
BODY SEAT RING	RENEWABLE/NON RENEWABLE	STELLITED		
STEM PACKING	RENEWABLE WITH VALVE OPEN ON STREAM	CORROSION INHIBITED DIE FORMED FLEXIBLE GRAPHITE WITH BRAIDED ANTI EXTRUSION RINGS		
HAND WHEEL	RISING	MALLEABLE IRON/CAST ST/FAB.ST/DUCT. IRON		
BONNET BOLTS		ASTM A193 GR B7		
BONNET NUTS		ASTM A194 GR 2H		
BONNET GASKET		SP WND SS316 WITH GRAFOIL FILLER		
OTHERS	O S & Y			
SPECIAL SERVICE CONDITION	I.B.R	STEAM/CONDENSATE/BOILER FEED WATER; MAX TEMP. 427 DEG.C.		
BACK SEAT & SHOULDER	INTEGRAL			
HYDROSTATIC TEST PRESSURE	BODY : 2975 PSIG	SEAT : 2175 PSIG		
TEST PRESSURE WITH AIR	80 PSIG			

**NOTES**

- THIS VALVE SPEC SHEET SHALL BE READ IN CONJUNCTION WITH TECHNICAL NOTES FOR VALVES, 6-44-0052.
- ONLY IN THE CASE OF CATEGORY - II MRs,BIDDER SHALL CLEARLY WRITE ALL/ ANY DEVIATION AGAINST EACH PART/ MATERIAL OF VALVE IN THE SPACE PROVIDED FOR AND WHEREVER BIDDER AGREES WITH EIL'S SPEC BIDDER SHALL INDICATE "AGREED".
- NO CUTTING/ OVERWRITING BY BIDDER ON EIL'S SPEC IS ALLOWED.
- TESTING SHALL BE AS PER IBR ALSO.
- ALL VALVES SHALL BE SUPPLIED WITH IBR CERTIFICATE IN FORM-III C.
- ALL VALVES SHALL BE PAINTED RED ON BODY-BONNET JOINT.
- VALVES TO COMPLY WITH DESIGN REQUIREMENTS OF IBR ALSO.

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SHEET REV NO.	2	3	4	5	6
DATE	2-Jan-1995	14-Dec-2000	28-May-2001	30-Jun-2009	26-Apr-2018

**52002**

<b>Client</b> : HPCL		<b>Dept. / Sect</b> : 16\43		
<b>Project</b> : LMBU PROJECT				
<b>Location</b> : MUMBAI		<b>Tag No</b> : 52004		<b>Sheet No.</b> 1 of 1
<b>GLOBE VALVE SPECIFICATION</b>			<b>MANUF'S OFFER</b>	
<b>TAG NO. : 52004</b> <b>RATING : 800</b> <b>STANDARD : API 602/ ISO 15761</b> <b>SIZE RANGE : 0.50 " TO 1.50 "</b> <b>ENDS : SW 3000 TO B-16.11</b> <b>PIPING CLASS : B51A,B5A,D51A</b>			<b>STANDARD :</b> <b>MFGRS CAT/FIG :</b> (For category -II MRs only) <b>RATING :</b> <b>ENDS :</b>	
DESCRIPTION	CONSTRUCTION	MATERIAL	CONSTRUCTION	MATERIAL
BODY	FORGED	ASTM A 105		
BONNET	BOLTED	ASTM A 105		
STEM	RISING	13% CR.STEEL (NO CASTING)		
DISC	LOOSE PLUG TYPE	STELLITED		
BODY SEAT RING	RENEWABLE/NON RENEWABLE	STELLITED		
STEM PACKING	RENEWABLE WITH VALVE OPEN ON STREAM	CORROSION INHIBITED DIE FORMED FLEXIBLE GRAPHITE WITH BRAIDED ANTI EXTRUSION RINGS		
HAND WHEEL	RISING	MALLEABLE IRON/CAST ST/FAB.ST/DUCT. IRON		
BONNET BOLTS		ASTM A193 GR B7		
BONNET NUTS		ASTM A194 GR 2H		
BONNET GASKET		SP WND SS316 WITH GRAFOIL FILLER		
OTHERS	O S & Y			
SPECIAL SERVICE CONDITION	H2	MAX TEMP 260 DEG.C.		
BACK SEAT & SHOULDER	INTEGRAL			
HYDROSTATIC TEST PRESSURE	BODY : 2975 PSIG	SEAT : 2175 PSIG		
TEST PRESSURE WITH AIR	80 PSIG			

**NOTES**

- 1 THIS VALVE SPEC SHEET SHALL BE READ IN CONJUNCTION WITH TECHNICAL NOTES FOR VALVES, 6-44-0052.
- 2 ONLY IN THE CASE OF CATEGORY - II MRs,BIDDER SHALL CLEARLY WRITE ALL/ ANY DEVIATION AGAINST EACH PART/ MATERIAL OF VALVE IN THE SPACE PROVIDED FOR AND WHEREVER BIDDER AGREES WITH EIL'S SPEC BIDDER SHALL INDICATE "AGREED".
- 3 NO CUTTING/ OVERWRITING BY BIDDER ON EIL'S SPEC IS ALLOWED.
- 4 VALVES SHALL MEET THE REQUIREMENTS FOR HYDROGEN SERVICE AS SPECIFIED IN 'TECHNICAL NOTES FOR VALVES'.

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SHEET REV NO.	3	4	5	6
DATE	14-Dec-2000	28-May-2001	30-Jun-2009	26-Apr-2018

**52004**

Client : HPCL		Dept. / Sect : 1643		
Project : LMBU PROJECT				
Location : MUMBAI		Tag No : 52011		Sheet No. 1 of 1
GLOBE VALVE SPECIFICATION			MANUF'S OFFER	
TAG NO. : 52011 RATING : 800 STANDARD : API 602/ ISO 15761 SIZE RANGE : 0.50 " TO 1.50 " ENDS : SW 3000 TO B-16.11 PIPING CLASS : A16A,A26A,A28A,A29A,A61A,A64A,A66A,A95A,A97A,A98A,B16A,B26A,B61A,B64A,B66A,B68A,B69A,COPY,D16A			STANDARD : MFGRS CAT/FIG : (For category -II MRs only) RATING : ENDS :	
DESCRIPTION	CONSTRUCTION	MATERIAL	CONSTRUCTION	MATERIAL
BODY	FORGED	ASTM A 105		
BONNET	BOLTED	ASTM A 105		
STEM	RISING	SS 316L (NO CASTING)		
DISC	LOOSE PLUG TYPE	STELLITED		
BODY SEAT RING	RENEWABLE/NON RENEWABLE	STELLITED		
STEM PACKING	RENEWABLE WITH VALVE OPEN ON STREAM	CORROSION INHIBITED DIE FORMED FLEXIBLE GRAPHITE WITH BRAIDED ANTI EXTRUSION RINGS		
HAND WHEEL	RISING	MALLEABLE IRON/CAST ST/FAB.ST/DUCT. IRON		
BONNET BOLTS		ASTM A193 GR B7M		
BONNET NUTS		ASTM A194 GR 2HM		
BONNET GASKET		SP WND SS316L WITH GRAFOIL FILLER		
OTHERS	O S & Y			
SPECIAL SERVICE CONDITION	NACE	SOUR SERVICE; MAX. TEMP. 427 DEG.C.		
BACK SEAT & SHOULDER	INTEGRAL			
HYDROSTATIC TEST PRESSURE	BODY : 2975 PSIG	SEAT : 2175 PSIG		
TEST PRESSURE WITH AIR	80 PSIG			

**NOTES**

- 1 THIS VALVE SPEC SHEET SHALL BE READ IN CONJUNCTION WITH TECHNICAL NOTES FOR VALVES, 6-44-0052.
- 2 ONLY IN THE CASE OF CATEGORY - II MRs,BIDDER SHALL CLEARLY WRITE ALL/ ANY DEVIATION AGAINST EACH PART/ MATERIAL OF VALVE IN THE SPACE PROVIDED FOR AND WHEREVER BIDDER AGREES WITH EIL'S SPEC BIDDER SHALL INDICATE "AGREED".
- 3 NO CUTTING/ OVERWRITING BY BIDDER ON EIL'S SPEC IS ALLOWED.
- 4 NACE REQUIREMENTS SHALL BE AS PER MR0103.

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MANUFACTURER

SHEET REV NO.	2	3	4	5	6	7
DATE	2-Jan-1995	14-Dec-2000	28-May-2001	31-Dec-2001	30-Jun-2009	26-Apr-2018

**52011**

<b>Client</b> : HPCL		<b>Dept. / Sect</b> : 16/43		
<b>Project</b> : LMBU PROJECT				
<b>Location</b> : MUMBAI		<b>Tag No</b> : 52013		<b>Sheet No.</b> 1 of 1
<b>GLOBE VALVE SPECIFICATION</b>			<b>MANUF'S OFFER</b>	
<b>TAG NO. : 52013</b> <b>RATING : 800</b> <b>STANDARD : API 602/ ISO 15761</b>			<b>STANDARD :</b>	
<b>SIZE RANGE : 0.25 " TO 1.50 "</b> <b>ENDS : SW 3000 TO B-16.11</b>			<b>MFGRS CAT/FIG :</b> (For category -II MRs only)	
<b>PIPING CLASS : A19A,B19A,D19A</b>			<b>RATING :</b> <b>ENDS :</b>	
DESCRIPTION	CONSTRUCTION	MATERIAL	CONSTRUCTION	MATERIAL
BODY	FORGED	ASTM A 105		
BONNET	BOLTED	ASTM A 105		
STEM	RISING	SS 316; (NO CASTING), 32 RMS FINISH		
DISC	LOOSE PLUG TYPE	STELLITED		
BODY SEAT RING	RENEWABLE/NON RENEWABLE	STELLITED		
STEM PACKING	RENEWABLE WITH VALVE OPEN ON STREAM	CORROSION INHIBITED DIE FORMED FLEXIBLE GRAPHITE WITH BRAIDED ANTI EXTRUSION RINGS		
HAND WHEEL	RISING	MALLEABLE IRON/CAST ST/FAB.ST/DUCT. IRON		
BONNET BOLTS		ASTM A193 GR B7		
BONNET NUTS		ASTM A194 GR 2H		
BONNET GASKET		SPIRAL WOUND SS316 WITH GRAFOIL FILLER		
OTHERS	O.S & Y.			
SPECIAL SERVICE CONDITION		CAUSTIC SERVICE(MAX.TEMP.110 DEG.C) & AMINE		
BACK SEAT & SHOULDER	INTEGRAL			
HYDROSTATIC TEST PRESSURE	BODY : 2975 PSIG	SEAT : 2175 PSIG		
TEST PRESSURE WITH AIR	80 PSIG			

**NOTES**

- 1 THIS VALVE SPEC SHEET SHALL BE READ IN CONJUNCTION WITH TECHNICAL NOTES FOR VALVES, 6-44-0052.
- 2 ONLY IN THE CASE OF CATEGORY - II MRs,BIDDER SHALL CLEARLY WRITE ALL/ ANY DEVIATION AGAINST EACH PART/ MATERIAL OF VALVE IN THE SPACE PROVIDED FOR AND WHEREVER BIDDER AGREES WITH EIL'S SPEC BIDDER SHALL INDICATE "AGREED".
- 3 NO CUTTING/ OVERWRITING BY BIDDER ON EIL'S SPEC IS ALLOWED.

SIGNATURE & SEAL OF MANUFACTURER

SHEET REV NO.	3	4	5	6	7	8	9
DATE	14-Dec-2000	28-May-2001	23-Oct-2003	30-Jun-2009	26-Apr-2018	9-Dec-2019	25-Jun-2025

**52013**

Client : HPCL			Dept. / Sect : 16\43	
Project : LMBU PROJECT				
Location : MUMBAI		Tag No : 52066		Sheet No. 1 of 1
GLOBE VALVE SPECIFICATION			MANUF'S OFFER	
TAG NO. : 52066 RATING : 800 STANDARD : API 602/ ISO 15761			STANDARD :	
SIZE RANGE : 0.50 " TO 1.50 " ENDS : SW 3000 TO B-16.11			MFGRS CAT/FIG : (For category -II MRs only)	
PIPING CLASS : A1N,A20N,A22N,A26N,A27N,A28N,B26N			RATING : ENDS :	
DESCRIPTION	CONSTRUCTION	MATERIAL	CONSTRUCTION	MATERIAL
BODY	FORGED	ASTM A 182 GR.F316L		
BONNET	BOLTED	ASTM A 182 GR.F316L		
STEM	RISING	SS 316L (NO CASTING)		
DISC	LOOSE PLUG TYPE	STELLITED		
BODY SEAT RING	RENEWABLE/NON RENEWABLE	STELLITED		
STEM PACKING	RENEWABLE WITH VALVE OPEN ON STREAM	CORROSION INHIBITED DIE FORMED FLEXIBLE GRAPHITE WITH BRAIDED ANTI EXTRUSION RINGS		
HAND WHEEL	RISING	MALLEABLE IRON/CAST ST/FAB.ST/DUCT. IRON		
BONNET BOLTS		ASTM A193 GR B8M CL.2		
BONNET NUTS		ASTM A194 GR 8M		
BONNET GASKET		SP WND SS316L-GRAFOIL FILLER		
OTHERS	O S & Y			
SPECIAL SERVICE CONDITION		MAX TEMP 454 DEG. C.		
BACK SEAT & SHOULDER	INTEGRAL			
HYDROSTATIC TEST PRESSURE	BODY : 2400 PSIG	SEAT : 1775 PSIG		
TEST PRESSURE WITH AIR	80 PSIG			

**NOTES**

- 1 THIS VALVE SPEC SHEET SHALL BE READ IN CONJUNCTION WITH TECHNICAL NOTES FOR VALVES, 6-44-0052.
- 2 ONLY IN THE CASE OF CATEGORY - II MRs,BIDDER SHALL CLEARLY WRITE ALL/ ANY DEVIATION AGAINST EACH PART/ MATERIAL OF VALVE IN THE SPACE PROVIDED FOR AND WHEREVER BIDDER AGREES WITH EIL'S SPEC BIDDER SHALL INDICATE "AGREED".
- 3 NO CUTTING/ OVERWRITING BY BIDDER ON EIL'S SPEC IS ALLOWED.

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MANUFACTURER

SHEET REV NO.	2	3	4	5	6	7
DATE	2-Jan-1995	14-Dec-2000	28-May-2001	30-Jun-2009	26-Apr-2018	25-Jul-2023

**52066**

<b>Client</b> : HPCL		<b>Dept. / Sect</b> : 16\43		
<b>Project</b> : LMBU PROJECT				
<b>Location</b> : MUMBAI		<b>Tag No</b> : 52301		<b>Sheet No.</b> 1 of 1
<b>GLOBE VALVE SPECIFICATION</b>			<b>MANUF'S OFFER</b>	
<b>TAG NO. : 52301</b> <b>RATING : 150</b> <b>STANDARD : BS-1873</b>			<b>STANDARD :</b>	
<b>SIZE RANGE : 2.00 " TO 16.00 "</b> <b>ENDS : FLGD TO B-16.5 RF/125AARH</b>			<b>MFGRS CAT/FIG :</b> (For category -II MRs only)	
<b>PIPING CLASS : A11A,A1A,A21A,A91A,A92A,A93A,A94A,A9A</b>			<b>RATING :</b> <b>ENDS :</b>	
DESCRIPTION	CONSTRUCTION	MATERIAL	CONSTRUCTION	MATERIAL
BODY	CAST	ASTM A 216 GR.WCB		
BONNET	BOLTED	ASTM A 216 GR.WCB		
STEM	RISING	13% CR.STEEL (NO CASTING)		
DISC	LOOSE PLUG TYPE/BALL TYP	13% CR STEEL FACING/13% CR STEEL		
BODY SEAT RING	RENEWABLE/NON RENEWABLE	STELLITED		
STEM PACKING	RENEWABLE WITH VALVE OPEN ON STREAM	CORROSION INHIBITED DIE FORMED FLEXIBLE GRAPHITE WITH BRAIDED ANTI EXTRUSION RINGS		
HAND WHEEL	RISING	MALLEABLE IRON/CAST ST/FAB.ST/DUCT. IRON		
BONNET BOLTS		ASTM A193 GR B7		
BONNET NUTS		ASTM A194 GR 2H		
BONNET GASKET		SP WND SS316-GRAFOIL FILLER/ CORRUGATED SS316		
REQUIREMENT OF GEAR OPERATOR		REFER TECHNICAL NOTES FOR PURCHASE OF VALVES.		
REQUIREMENT OF RADIOGRAPHY		REFER TECHNICAL NOTES FOR PURCHASE OF VALVES.		
OTHERS	O S & Y			
SPECIAL SERVICE CONDITION		MAX TEMP 371 DEG. C.		
BACK SEAT & SHOULDER		13% CR STEEL		
HYDROSTATIC TEST PRESSURE	BODY : 450 PSIG	SEAT : 325 PSIG		
TEST PRESSURE WITH AIR	80 PSIG			

**NOTES**

- 1 THIS VALVE SPEC SHEET SHALL BE READ IN CONJUNCTION WITH TECHNICAL NOTES FOR VALVES, 6-44-0052.
- 2 ONLY IN THE CASE OF CATEGORY - II MRs,BIDDER SHALL CLEARLY WRITE ALL/ ANY DEVIATION AGAINST EACH PART/ MATERIAL OF VALVE IN THE SPACE PROVIDED FOR AND WHEREVER BIDDER AGREES WITH EIL'S SPEC BIDDER SHALL INDICATE "AGREED".
- 3 NO CUTTING/ OVERWRITING BY BIDDER ON EIL'S SPEC IS ALLOWED.
- 4 TESTING SHALL BE AS PER BS EN 12266-1.
- 5 5% VALVE CASTINGS SHALL UNDERGO RADIOGRAPHIC EXAMINATION

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<b>SHEET REV NO.</b>	2	3	4	5	6	7
<b>DATE</b>	2-Jan-1995	14-Dec-2000	28-May-2001	30-Jun-2009	26-Apr-2018	9-Dec-2019

**52301**

<b>Client</b> : HPCL		<b>Dept. / Sect</b> : 16\43		
<b>Project</b> : LMBU PROJECT				
<b>Location</b> : MUMBAI		<b>Tag No</b> : 52302		<b>Sheet No.</b> 1 of 1
<b>GLOBE VALVE SPECIFICATION</b>			<b>MANUF'S OFFER</b>	
<b>TAG NO. : 52302</b> <b>RATING : 150</b> <b>STANDARD : BS-1873</b> <b>SIZE RANGE : 2.00 " TO 16.00 "</b> <b>ENDS : FLGD TO B-16.5 RF/125AARH</b> <b>PIPING CLASS : A22A,A2A,A82A</b>			<b>STANDARD :</b> <b>MFGRS CAT/FIG :</b> (For category -II MRs only) <b>RATING :                      ENDS :</b>	
DESCRIPTION	CONSTRUCTION	MATERIAL	CONSTRUCTION	MATERIAL
BODY	CAST	ASTM A 216 GR.WCB		
BONNET	BOLTED	ASTM A 216 GR.WCB		
STEM	RISING	13% CR.STEEL (NO CASTING)		
DISC	LOOSE PLUG TYPE/BALL TYP	13% CR STEEL FACING/13% CR. STEEL		
BODY SEAT RING	RENEWABLE/NON RENEWABLE	STELLITED		
STEM PACKING	RENEWABLE WITH VALVE OPEN ON STREAM	CORROSION INHIBITED DIE FORMED FLEXIBLE GRAPHITE WITH BRAIDED ANTI EXTRUSION RINGS		
HAND WHEEL	RISING	MALLEABLE IRON/CAST ST/FAB.ST/DUCT. IRON		
BONNET BOLTS		ASTM A193 GR B7		
BONNET NUTS		ASTM A194 GR 2H		
BONNET GASKET		SP WND SS316-GRAFOIL FILLER/ CORRUGATED SS316		
REQUIREMENT OF GEAR OPERATOR		REFER TECHNICAL NOTES FOR PURCHASE OF VALVES.		
REQUIREMENT OF RADIOGRAPHY		REFER TECHNICAL NOTES FOR PURCHASE OF VALVES.		
OTHERS	O S & Y			
SPECIAL SERVICE CONDITION	I.B.R	STEAM/CONDENSATE/BOILER FEED WATER; MAX TEMP. 371 DEG.C.		
BACK SEAT & SHOULDER		13% CR STEEL		
HYDROSTATIC TEST PRESSURE	BODY : 450 PSIG	SEAT : 325 PSIG		
TEST PRESSURE WITH AIR	80 PSIG			

**NOTES**

- 1 THIS VALVE SPEC SHEET SHALL BE READ IN CONJUNCTION WITH TECHNICAL NOTES FOR VALVES, 6-44-0052.
- 2 ONLY IN THE CASE OF CATEGORY - II MRs,BIDDER SHALL CLEARLY WRITE ALL/ ANY DEVIATION AGAINST EACH PART/ MATERIAL OF VALVE IN THE SPACE PROVIDED FOR AND WHEREVER BIDDER AGREES WITH EIL'S SPEC BIDDER SHALL INDICATE "AGREED".
- 3 NO CUTTING/ OVERWRITING BY BIDDER ON EIL'S SPEC IS ALLOWED.
- 4 TESTING SHALL BE AS PER BS EN 12266-1 & IBR.
- 5 ALL VALVES SHALL BE SUPPLIED WITH IBR CERTIFICATE IN FORM-III C.
- 6 ALL VALVES SHALL BE PAINTED RED ON BODY-BONNET JOINT.
- 7 5% VALVE CASTINGS SHALL UNDERGO RADIOGRAPHIC EXAMINATION.
- 8 VALVES TO COMPLY WITH DESIGN REQUIREMENTS OF IBR ALSO.

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SHEET REV NO.	2	3	4	5	6	7
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**52302**

Client : HPCL		Dept. / Sect : 16\43		
Project : LMBU PROJECT				
Location : MUMBAI		Tag No : 52311		Sheet No. 1 of 1
GLOBE VALVE SPECIFICATION			MANUF'S OFFER	
TAG NO. : 52311 RATING : 150 STANDARD : BS-1873			STANDARD :	
SIZE RANGE : 2.00 " TO 16.00 " ENDS : FLGD TO B-16.5 RF/125AARH			MFGRS CAT/FIG : (For category -II MRs only)	
PIPING CLASS : A16A,A26A,A28A,A29A,A61A,A64A,A66A,A95A,A97A,A98A,COPY			RATING : ENDS :	
DESCRIPTION	CONSTRUCTION	MATERIAL	CONSTRUCTION	MATERIAL
BODY	CAST	ASTM A 216 GR.WCB		
BONNET	BOLTED	ASTM A 216 GR.WCB		
STEM	RISING	SS 316L (NO CASTING)		
DISC	LOOSE PLUG TYPE/BALL TYP	SS 316L FACING/SS 316L		
BODY SEAT RING	NON RENEWABLE	SS 316L FACING/SS 316L		
STEM PACKING	RENEWABLE WITH VALVE OPEN ON STREAM	CORROSION INHIBITED DIE FORMED FLEXIBLE GRAPHITE WITH BRAIDED ANTI EXTRUSION RINGS		
HAND WHEEL	RISING	MALLEABLE IRON/CAST ST/FAB.ST/DUCT. IRON		
BONNET BOLTS		ASTM A193 GR B7M		
BONNET NUTS		ASTM A194 GR 2HM		
BONNET GASKET		SP WND SS316L-GRAFOIL FILLER/CORRUGATED SS316L		
REQUIREMENT OF GEAR OPERATOR		REFER TECHNICAL NOTES FOR PURCHASE OF VALVES.		
REQUIREMENT OF RADIOGRAPHY		REFER TECHNICAL NOTES FOR PURCHASE OF VALVES.		
OTHERS	O S & Y			
SPECIAL SERVICE CONDITION	NACE	SOUR SERVICE; MAX TEMP 371 DEG.C.		
BACK SEAT & SHOULDER		SS316L		
HYDROSTATIC TEST PRESSURE	BODY : 450 PSIG	SEAT : 325 PSIG		
TEST PRESSURE WITH AIR	80 PSIG			

**NOTES**

- 1 THIS VALVE SPEC SHEET SHALL BE READ IN CONJUNCTION WITH TECHNICAL NOTES FOR VALVES, 6-44-0052.
- 2 ONLY IN THE CASE OF CATEGORY - II MRs,BIDDER SHALL CLEARLY WRITE ALL/ ANY DEVIATION AGAINST EACH PART/ MATERIAL OF VALVE IN THE SPACE PROVIDED FOR AND WHEREVER BIDDER AGREES WITH EIL'S SPEC BIDDER SHALL INDICATE "AGREED".
- 3 NO CUTTING/ OVERWRITING BY BIDDER ON EIL'S SPEC IS ALLOWED.
- 4 TESTING SHALL BE AS PER BS EN 12266-1.
- 5 50% OF VALVE CASTING SHALL UNDERGO RADIOGRAPHIC EXAMINATION.
- 6 NACE REQUIREMENTS SHALL BE AS PER MR0103.

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SHEET REV NO.	2	3	4	5	6
DATE	2-Jan-1995	14-Dec-2000	28-May-2001	30-Jun-2009	26-Apr-2018

**52311**

<b>Client</b> : HPCL			<b>Dept. / Sect</b> : 16\43	
<b>Project</b> : LMBU PROJECT				
<b>Location</b> : MUMBAI		<b>Tag No</b> : 52313		<b>Sheet No.</b> 1 of 1
<b>GLOBE VALVE SPECIFICATION</b>			<b>MANUF'S OFFER</b>	
<b>TAG NO.:</b> 52313 <b>RATING:</b> 150 <b>STANDARD:</b> BS-1873			<b>STANDARD:</b>	
<b>SIZE RANGE:</b> 2.00 " TO 16.00 " <b>ENDS:</b> FLGD TO B-16.5 RF/125AARH			<b>MFGRS CAT/FIG:</b> (For category -II MRs only)	
<b>PIPING CLASS:</b> A19A			<b>RATING:</b> <b>ENDS:</b>	
DESCRIPTION	CONSTRUCTION	MATERIAL	CONSTRUCTION	MATERIAL
BODY	CAST	ASTM A 216 GR.WCB		
BONNET	BOLTED	ASTM A 216 GR.WCB		
STEM	RISING	SS 316; (NO CASTING), 32 RMS FINISH		
DISC	LOOSE PLUG TYPE/BALL TYP	SS 316		
BODY SEAT RING	RENEWABLE/NON RENEWABLE	SS 316		
STEM PACKING	RENEWABLE WITH VALVE OPEN ON STREAM	CORROSION INHIBITED DIE FORMED FLEXIBLE GRAPHITE WITH BRAIDED ANTI EXTRUSION RINGS		
HAND WHEEL	RISING	MALLEABLE IRON/CAST ST/FAB.ST/DUCT. IRON		
BONNET BOLTS		ASTM A193 GR B7		
BONNET NUTS		ASTM A194 GR 2H		
BONNET GASKET		SP WND SS316-GRAFOIL FILLER/CORRUGATED SS316		
REQUIREMENT OF GEAR OPERATOR		REFER TECHNICAL NOTES FOR PURCHASE OF VALVES.		
REQUIREMENT OF RADIOGRAPHY		REFER TECHNICAL NOTES FOR PURCHASE OF VALVES.		
OTHERS	O S & Y			
SPECIAL SERVICE CONDITION		CAUSTIC SERVICE(MAX.TEMP.110 DEG.C) & AMINE;		
BACK SEAT & SHOULDER		SS 316		
HYDROSTATIC TEST PRESSURE	BODY : 450 PSIG	SEAT : 325 PSIG		
TEST PRESSURE WITH AIR	80 PSIG			

**NOTES**

- 1 THIS VALVE SPEC SHEET SHALL BE READ IN CONJUNCTION WITH TECHNICAL NOTES FOR VALVES, 6-44-0052.
- 2 ONLY IN THE CASE OF CATEGORY - II MRs,BIDDER SHALL CLEARLY WRITE ALL/ ANY DEVIATION AGAINST EACH PART/ MATERIAL OF VALVE IN THE SPACE PROVIDED FOR AND WHEREVER BIDDER AGREES WITH EIL'S SPEC BIDDER SHALL INDICATE "AGREED".
- 3 NO CUTTING/ OVERWRITING BY BIDDER ON EIL'S SPEC IS ALLOWED.
- 4 TESTING SHALL BE AS PER BS EN 12266-1.
- 5 50% OF VALVE CASTING SHALL UNDERGO RADIOGRAPHIC EXAMINATION.

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<b>SHEET REV NO.</b>	2	3	4	5	6	7	8
<b>DATE</b>	2-Jan-1995	14-Dec-2000	28-May-2001	30-Jun-2009	26-Apr-2018	9-Dec-2019	25-Jun-2025

**52313**

Client : HPCL		Dept. / Sect : 16\43		
Project : LMBU PROJECT				
Location : MUMBAI		Tag No : 52321		Sheet No. 1 of 1
GLOBE VALVE SPECIFICATION			MANUF'S OFFER	
TAG NO. : 52321 RATING : 150 STANDARD : BS-1873			STANDARD :	
SIZE RANGE : 2.00 " TO 16.00 " ENDS : FLGD TO B-16.5 RF/125AARH			MFGRS CAT/FIG : (For category -II MRs only)	
PIPING CLASS : A3A			RATING : ENDS :	
DESCRIPTION	CONSTRUCTION	MATERIAL	CONSTRUCTION	MATERIAL
BODY	CAST	ASTM A 216 GR.WCB		
BONNET	BOLTED	ASTM A 216 GR.WCB		
STEM	RISING	13% CR.STEEL (NO CASTING)		
DISC	LOOSE PLUG TYPE/BALL TYP	13% CR STEEL FACING/13% CR STEEL		
BODY SEAT RING	RENEWABLE/NON RENEWABLE	STELLITED		
STEM PACKING	RENEWABLE WITH VALVE OPEN ON STREAM	CORROSION INHIBITED DIE FORMED FLEXIBLE GRAPHITE WITH BRAIDED ANTI EXTRUSION RINGS		
HAND WHEEL	RISING	MALLEABLE IRON/CAST ST/FAB.ST/DUCT. IRON		
BONNET BOLTS		ASTM A193 GR B7		
BONNET NUTS		ASTM A194 GR 2H		
BONNET GASKET		SP WND SS316-GRAFOIL FILLER/ CORRUGATED SS316		
REQUIREMENT OF GEAR OPERATOR		REFER TECHNICAL NOTES FOR PURCHASE OF VALVES.		
OTHERS	O S & Y			
SPECIAL SERVICE CONDITION				
BACK SEAT & SHOULDER		13% CR STEEL		
HYDROSTATIC TEST PRESSURE	BODY : 450 PSIG	SEAT : 325 PSIG		
TEST PRESSURE WITH AIR	80 PSIG			

**NOTES**

- 1 THIS VALVE SPEC SHEET SHALL BE READ IN CONJUNCTION WITH TECHNICAL NOTES FOR VALVES, 6-44-0052.
- 2 ONLY IN THE CASE OF CATEGORY - II MRs, BIDDER SHALL CLEARLY WRITE ALL/ ANY DEVIATION AGAINST EACH PART/ MATERIAL OF VALVE IN THE SPACE PROVIDED FOR AND WHEREVER BIDDER AGREES WITH EIL'S SPEC BIDDER SHALL INDICATE "AGREED".
- 3 NO CUTTING/ OVERWRITING BY BIDDER ON EIL'S SPEC IS ALLOWED.
- 4 TESTING SHALL BE AS PER BS EN 12266-1.
- 5 RADIOGRAPHY OF VALVE CASTINGS NOT REQUIRED.

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SHEET REV NO.	3	4	5	6	7
DATE	14-Dec-2000	28-May-2001	30-Jun-2009	26-Apr-2018	9-Dec-2019

52321

<b>Client</b> : HPCL		<b>Dept. / Sect</b> : 16\43		
<b>Project</b> : LMBU PROJECT				
<b>Location</b> : MUMBAI		<b>Tag No</b> : 52345		<b>Sheet No.</b> 1 of 1
<b>GLOBE VALVE SPECIFICATION</b>			<b>MANUF'S OFFER</b>	
<b>TAG NO.:</b> 52345 <b>RATING:</b> 150 <b>STANDARD:</b> BS-1873 <b>SIZE RANGE:</b> 2.00 " TO 16.00 " <b>ENDS:</b> FLGD TO B-16.5 RF/125AARH <b>PIPING CLASS:</b> A1K,A3K			<b>STANDARD:</b> <b>MFGRS CAT/FIG:</b> (For category -II MRs only) <b>RATING:</b> <b>ENDS:</b>	
DESCRIPTION	CONSTRUCTION	MATERIAL	CONSTRUCTION	MATERIAL
BODY	CAST	ASTM A 351 GR CF8		
BONNET	BOLTED	ASTM A 351 GR.CF8		
STEM	RISING	SS 316; (NO CASTING), 32 RMS FINISH		
DISC	LOOSE PLUG TYPE/BALL TYP	SS 316		
BODY SEAT RING	RENEWABLE/NON RENEWABLE	SS 316		
STEM PACKING	RENEWABLE WITH VALVE OPEN ON STREAM	CORROSION INHIBITED DIE FORMED FLEXIBLE GRAPHITE WITH BRAIDED ANTI EXTRUSION RINGS		
HAND WHEEL	RISING	MALLEABLE IRON/CAST ST/FAB.ST/DUCT. IRON		
BONNET BOLTS		ASTM A193 GR B8M CL.2		
BONNET NUTS		ASTM A194 GR 8M		
BONNET GASKET		SP WND SS316 WITH GRAFOIL FILLER/CORRUGATED SS316		
REQUIREMENT OF GEAR OPERATOR		REFER TECHNICAL NOTES FOR PURCHASE OF VALVES.		
REQUIREMENT OF RADIOGRAPHY		REFER TECHNICAL NOTES FOR PURCHASE OF VALVES.		
OTHERS	O S & Y			
SPECIAL SERVICE CONDITION		MAX TEMP 371 DEG. C.		
BACK SEAT & SHOULDER		SS 316		
HYDROSTATIC TEST PRESSURE	BODY : 425 PSIG	SEAT : 325 PSIG		
TEST PRESSURE WITH AIR	80 PSIG			

**NOTES**

- THIS VALVE SPEC SHEET SHALL BE READ IN CONJUNCTION WITH TECHNICAL NOTES FOR VALVES, 6-44-0052.
- ONLY IN THE CASE OF CATEGORY - II MRs, BIDDER SHALL CLEARLY WRITE ALL/ ANY DEVIATION AGAINST EACH PART/ MATERIAL OF VALVE IN THE SPACE PROVIDED FOR AND WHEREVER BIDDER AGREES WITH EIL'S SPEC BIDDER SHALL INDICATE "AGREED".
- NO CUTTING/ OVERWRITING BY BIDDER ON EIL'S SPEC IS ALLOWED.
- TESTING SHALL BE AS PER BS EN 12266-1.
- 10% VALVE CASTINGS SHALL UNDERGO RADIOGRAPHIC EXAMINATION.
- ALL CASTINGS SHALL BE SOLUTION HEAT TREATED.
- WELD REPAIRS, IF ANY, SHALL BE CARRIED OUT BEFORE SOLUTION HEAT TREATMENT.

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<b>SHEET REV NO.</b>	3	4	5	6	7	8	9
<b>DATE</b>	14-Dec-2000	28-May-2001	30-Jun-2009	26-Apr-2018	9-Dec-2019	25-Jul-2023	25-Jun-2025

**52345**

<b>Client</b> : HPCL		<b>Dept. / Sect</b> : 16\43		
<b>Project</b> : LMBU PROJECT				
<b>Location</b> : MUMBAI		<b>Tag No</b> : 52366		<b>Sheet No.</b> 1 of 1
<b>GLOBE VALVE SPECIFICATION</b>			<b>MANUF'S OFFER</b>	
<b>TAG NO.:</b> 52366 <b>RATING:</b> 150 <b>STANDARD:</b> BS-1873			<b>STANDARD:</b>	
<b>SIZE RANGE:</b> 2.00 " TO 16.00 " <b>ENDS:</b> FLGD TO B-16.5 RF/125AARH			<b>MFGRS CAT/FIG:</b>	
<b>PIPING CLASS:</b> A1N,A22N,A26N,A27N,A28N			<b>(For category -II MRs only)</b>	
			<b>RATING:</b> <b>ENDS:</b>	
DESCRIPTION	CONSTRUCTION	MATERIAL	CONSTRUCTION	MATERIAL
BODY	CAST	ASTM A 351 GR CF3M		
BONNET	BOLTED	ASTM A 351 GR.CF3M		
STEM	RISING	SS 316L (NO CASTING)		
DISC	LOOSE PLUG TYPE/BALL TYP	SS 316L		
BODY SEAT RING	RENEWABLE/NON RENEWABLE	SS 316L		
STEM PACKING	RENEWABLE WITH VALVE OPEN ON STREAM	CORROSION INHIBITED DIE FORMED FLEXIBLE GRAPHITE WITH BRAIDED ANTI EXTRUSION RINGS		
HAND WHEEL	RISING	MALLEABLE IRON/CAST ST/FAB.ST/DUCT. IRON		
BONNET BOLTS		ASTM A193 GR B8M CL.2		
BONNET NUTS		ASTM A194 GR 8M		
BONNET GASKET		SP WND SS316L-GRAFOIL FILLER/CORRUGATED SS316L		
REQUIREMENT OF GEAR OPERATOR		REFER TECHNICAL NOTES FOR PURCHASE OF VALVES.		
REQUIREMENT OF RADIOGRAPHY		REFER TECHNICAL NOTES FOR PURCHASE OF VALVES.		
OTHERS	O S & Y			
SPECIAL SERVICE CONDITION		MAX TEMP 371 DEG. C.		
BACK SEAT & SHOULDER		SS316L		
HYDROSTATIC TEST PRESSURE	BODY : 425 PSIG	SEAT : 325 PSIG		
TEST PRESSURE WITH AIR	80 PSIG			

**NOTES**

- THIS VALVE SPEC SHEET SHALL BE READ IN CONJUNCTION WITH TECHNICAL NOTES FOR VALVES, 6-44-0052.
- ONLY IN THE CASE OF CATEGORY - II MRs,BIDDER SHALL CLEARLY WRITE ALL/ ANY DEVIATION AGAINST EACH PART/ MATERIAL OF VALVE IN THE SPACE PROVIDED FOR AND WHEREVER BIDDER AGREES WITH EIL'S SPEC BIDDER SHALL INDICATE "AGREED".
- NO CUTTING/ OVERWRITING BY BIDDER ON EIL'S SPEC IS ALLOWED.
- TESTING SHALL BE AS PER BS EN 12266-1.
- 10% VALVE CASTINGS SHALL UNDERGO RADIOGRAPHIC EXAMINATION.
- ALL CASTINGS SHALL BE SOLUTION HEAT TREATED.
- WELD REPAIR, IF ANY, SHALL BE CARRIED OUT BEFORE SOLUTION HEAT TREATMENT.

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<b>SHEET REV NO.</b>	2	3	4	5	6	7
<b>DATE</b>	2-Jan-1995	14-Dec-2000	28-May-2001	30-Jun-2009	26-Apr-2018	25-Jul-2023

**52366**

Client : HPCL		Dept. / Sect : 16\43		
Project : LMBU PROJECT				
Location : MUMBAI		Tag No : 52384		Sheet No. 1 of 1
GLOBE VALVE SPECIFICATION			MANUF'S OFFER	
TAG NO. : 52384 RATING : 150 STANDARD : BS-1873			STANDARD :	
SIZE RANGE : 2.00 " TO 16.00 " ENDS : FLGD TO B-16.5 FF/125AARH			MFGRS CAT/FIG : (For category -II MRs only)	
PIPING CLASS : A33Y,A34Y,A5Y,A91Y			RATING : ENDS :	
DESCRIPTION	CONSTRUCTION	MATERIAL	CONSTRUCTION	MATERIAL
BODY	CAST	ASTM A 216 GR.WCB		
BONNET	BOLTED	ASTM A 216 GR.WCB		
STEM	RISING	BRONZE (NO CASTING)		
DISC	LOOSE PLUG TYPE/BALL TYP	BRONZE		
BODY SEAT RING	RENEWABLE/NON RENEWABLE	BRONZE		
STEM PACKING	RENEWABLE WITH VALVE OPEN ON STREAM	CORROSION INHIBITED DIE FORMED FLEXIBLE GRAPHITE WITH BRAIDED ANTI EXTRUSION RINGS		
HAND WHEEL	RISING	MALLEABLE IRON/CAST ST/FAB.ST/DUCT. IRON		
BONNET BOLTS		ASTM A193 GR B7		
BONNET NUTS		ASTM A194 GR 2H		
BONNET GASKET		SP WND SS316-GRAFOIL FILLER/ CORRUGATED SS316		
REQUIREMENT OF GEAR OPERATOR		REFER TECHNICAL NOTES FOR PURCHASE OF VALVES.		
OTHERS	O S & Y			
SPECIAL SERVICE CONDITION		SEA WATER; MAX TEMP 70 DEG. C.; MAX.PR. 15.4 KG/CM2G		
BACK SEAT & SHOULDER		BRONZE		
HYDROSTATIC TEST PRESSURE	BODY : 450 PSIG	SEAT : 325 PSIG		
TEST PRESSURE WITH AIR	80 PSIG			

**NOTES**

- 1 THIS VALVE SPEC SHEET SHALL BE READ IN CONJUNCTION WITH TECHNICAL NOTES FOR VALVES, 6-44-0052.
- 2 ONLY IN THE CASE OF CATEGORY - II MRs,BIDDER SHALL CLEARLY WRITE ALL/ ANY DEVIATION AGAINST EACH PART/ MATERIAL OF VALVE IN THE SPACE PROVIDED FOR AND WHEREVER BIDDER AGREES WITH EIL'S SPEC BIDDER SHALL INDICATE "AGREED".
- 3 NO CUTTING/ OVERWRITING BY BIDDER ON EIL'S SPEC IS ALLOWED.
- 4 TESTING SHALL BE AS PER BS EN 12266-1.
- 5 RADIOGRAPHY OF VALVE CASTINGS NOT REQUIRED.

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SHEET REV NO.	3	4	5	6	7
DATE	14-Dec-2000	28-May-2001	6-Aug-2002	30-Jun-2009	26-Apr-2018

52384

Client : HPCL		Dept. / Sect : 16/43		
Project : LMBU PROJECT				
Location : MUMBAI		Tag No : 52401		Sheet No. 1 of 1
GLOBE VALVE SPECIFICATION			MANUF'S OFFER	
TAG NO. : 52401 RATING : 300 STANDARD : BS-1873			STANDARD :	
SIZE RANGE : 2.00 " TO 12.00 " ENDS : FLGD TO B-16.5 RF/125AARH			MFGRS CAT/FIG : (For category -II MRs only)	
PIPING CLASS : B1A,B21A,B24A,B84A,B91A,B9A			RATING : ENDS :	
DESCRIPTION	CONSTRUCTION	MATERIAL	CONSTRUCTION	MATERIAL
BODY	CAST	ASTM A 216 GR.WCB		
BONNET	BOLTED	ASTM A 216 GR.WCB		
STEM	RISING	13% CR.STEEL (NO CASTING)		
DISC	LOOSE PLUG TYPE/BALL TYP	13% CR STEEL FACING/13% CR STEEL		
BODY SEAT RING	RENEWABLE/NON RENEWABLE	STELLITED		
STEM PACKING	RENEWABLE WITH VALVE OPEN ON STREAM	CORROSION INHIBITED DIE FORMED FLEXIBLE GRAPHITE WITH BRAIDED ANTI EXTRUSION RINGS		
HAND WHEEL	RISING	MALLEABLE IRON/CAST ST/FAB.ST/DUCT. IRON		
BONNET BOLTS		ASTM A193 GR B7		
BONNET NUTS		ASTM A194 GR 2H		
BONNET GASKET		SP WND SS316-GRAFOIL FILLER		
REQUIREMENT OF GEAR OPERATOR		REFER TECHNICAL NOTES FOR PURCHASE OF VALVES.		
REQUIREMENT OF RADIOGRAPHY		REFER TECHNICAL NOTES FOR PURCHASE OF VALVES.		
OTHERS	O S & Y			
SPECIAL SERVICE CONDITION		MAX TEMP 427 DEG.C.		
BACK SEAT & SHOULDER		13% CR STEEL		
HYDROSTATIC TEST PRESSURE	BODY : 1125 PSIG	SEAT : 825 PSIG		
TEST PRESSURE WITH AIR	80 PSIG			

**NOTES**

- 1 THIS VALVE SPEC SHEET SHALL BE READ IN CONJUNCTION WITH TECHNICAL NOTES FOR VALVES, 6-44-0052.
- 2 ONLY IN THE CASE OF CATEGORY - II MRs,BIDDER SHALL CLEARLY WRITE ALL/ ANY DEVIATION AGAINST EACH PART/ MATERIAL OF VALVE IN THE SPACE PROVIDED FOR AND WHEREVER BIDDER AGREES WITH EIL'S SPEC BIDDER SHALL INDICATE "AGREED".
- 3 NO CUTTING/ OVERWRITING BY BIDDER ON EIL'S SPEC IS ALLOWED.
- 4 TESTING SHALL BE AS PER BS EN 12266-1.
- 5 10% VALVE CASTINGS SHALL UNDERGO RADIOGRAPHIC EXAMINATION.

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SHEET REV NO.	2	3	4	5	6	7
DATE	2-Jan-1995	14-Dec-2000	28-May-2001	30-Jun-2009	26-Apr-2018	9-Dec-2019

**52401**

<b>Client</b> : HPCL		<b>Dept. / Sect</b> : 16\43		
<b>Project</b> : LMBU PROJECT				
<b>Location</b> : MUMBAI		<b>Tag No</b> : 52402		<b>Sheet No.</b> 1 of 1
<b>GLOBE VALVE SPECIFICATION</b>			<b>MANUF'S OFFER</b>	
<b>TAG NO.:</b> 52402 <b>RATING:</b> 300 <b>STANDARD:</b> BS-1873 <b>SIZE RANGE:</b> 2.00 " TO 12.00 " <b>ENDS:</b> FLGD TO B-16.5 RF/125AARH <b>PIPING CLASS:</b> B22A,B2A,B81A			<b>STANDARD:</b> <b>MFGRS CAT/FIG:</b> (For category -II MRs only) <b>RATING:</b> <b>ENDS:</b>	
DESCRIPTION	CONSTRUCTION	MATERIAL	CONSTRUCTION	MATERIAL
BODY	CAST	ASTM A 216 GR.WCB		
BONNET	BOLTED	ASTM A 216 GR.WCB		
STEM	RISING	13% CR.STEEL (NO CASTING)		
DISC	LOOSE PLUG TYPE/BALL TYP	13% CR STEEL FACING/13% CR. STEEL		
BODY SEAT RING	RENEWABLE/NON RENEWABLE	STELLITED		
STEM PACKING	RENEWABLE WITH VALVE OPEN ON STREAM	CORROSION INHIBITED DIE FORMED FLEXIBLE GRAPHITE WITH BRAIDED ANTI EXTRUSION RINGS		
HAND WHEEL	RISING	MALLEABLE IRON/CAST ST/FAB.ST/DUCT. IRON		
BONNET BOLTS		ASTM A193 GR B7		
BONNET NUTS		ASTM A194 GR 2H		
BONNET GASKET		SP WND SS316-GRAFOIL FILLER		
REQUIREMENT OF GEAR OPERATOR		REFER TECHNICAL NOTES FOR PURCHASE OF VALVES.		
REQUIREMENT OF RADIOGRAPHY		REFER TECHNICAL NOTES FOR PURCHASE OF VALVES.		
OTHERS	O S & Y			
SPECIAL SERVICE CONDITION	I.B.R	STEAM/CONDENSATE/BOILER FEED WATER; MAX. TEMP. 427 DEG.C.		
BACK SEAT & SHOULDER		13% CR STEEL		
HYDROSTATIC TEST PRESSURE	BODY : 1125 PSIG	SEAT : 825 PSIG		
TEST PRESSURE WITH AIR	80 PSIG			

**NOTES**

- THIS VALVE SPEC SHEET SHALL BE READ IN CONJUNCTION WITH TECHNICAL NOTES FOR VALVES, 6-44-0052.
- ONLY IN THE CASE OF CATEGORY - II MRs,BIDDER SHALL CLEARLY WRITE ALL/ ANY DEVIATION AGAINST EACH PART/ MATERIAL OF VALVE IN THE SPACE PROVIDED FOR AND WHEREVER BIDDER AGREES WITH EIL'S SPEC BIDDER SHALL INDICATE "AGREED".
- NO CUTTING/ OVERWRITING BY BIDDER ON EIL'S SPEC IS ALLOWED.
- TESTING SHALL BE AS PER BS EN 12266-1 & IBR.
- ALL VALVES SHALL BE SUPPLIED WITH IBR CERTIFICATE IN FORM-III C.
- ALL VALVES SHALL BE PAINTED RED ON BODY-BONNET JOINT.
- 10% VALVE CASTINGS SHALL UNDERGO RADIOGRAPHIC EXAMINATION.
- VALVES TO COMPLY WITH DESIGN REQUIREMENTS OF IBR ALSO.

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<b>SHEET REV NO.</b>	2	3	4	5	6	7
<b>DATE</b>	2-Jan-1995	14-Dec-2000	28-May-2001	30-Jun-2009	26-Apr-2018	9-Dec-2019

**52402**

Client : HPCL		Dept. / Sect : 16\43		
Project : LMBU PROJECT				
Location : MUMBAI		Tag No : 52404		Sheet No. 1 of 1
GLOBE VALVE SPECIFICATION			MANUF'S OFFER	
TAG NO. : 52404 RATING : 300 STANDARD : BS-1873			STANDARD :	
SIZE RANGE : 2.00 " TO 12.00 " ENDS : FLGD TO B-16.5 RF/125AARH			MFGRS CAT/FIG : (For category -II MRs only)	
PIPING CLASS : B51A,B5A			RATING : ENDS :	
DESCRIPTION	CONSTRUCTION	MATERIAL	CONSTRUCTION	MATERIAL
BODY	CAST	ASTM A 216 GR.WCB		
BONNET	BOLTED	ASTM A 216 GR.WCB		
STEM	RISING	13% CR.STEEL (NO CASTING)		
DISC	LOOSE PLUG TYPE/BALL TYP	FACED WITH 13% CR STEEL/13% CR STEEL		
BODY SEAT RING	RENEWABLE/NON RENEWABLE	STELLITED		
STEM PACKING	RENEWABLE WITH VALVE OPEN ON STREAM	CORROSION INHIBITED DIE FORMED FLEXIBLE GRAPHITE WITH BRAIDED ANTI EXTRUSION RINGS		
HAND WHEEL	RISING	MALLEABLE IRON/CAST ST/FAB.ST/DUCT. IRON		
BONNET BOLTS		ASTM A193 GR B7		
BONNET NUTS		ASTM A194 GR 2H		
BONNET GASKET		SP WND SS316 WITH GRAFOIL FILLER		
REQUIREMENT OF GEAR OPERATOR		REFER TECHNICAL NOTES FOR PURCHASE OF VALVES.		
REQUIREMENT OF RADIOGRAPHY		REFER TECHNICAL NOTES FOR PURCHASE OF VALVES.		
OTHERS	O S & Y			
SPECIAL SERVICE CONDITION	H2	MAX TEMP 230 DEG.C.		
BACK SEAT & SHOULDER		13% CR STEEL		
HYDROSTATIC TEST PRESSURE	BODY : 1125 PSIG	SEAT : 825 PSIG		
TEST PRESSURE WITH AIR	80 PSIG			

**NOTES**

- 1 THIS VALVE SPEC SHEET SHALL BE READ IN CONJUNCTION WITH TECHNICAL NOTES FOR VALVES, 6-44-0052.
- 2 ONLY IN THE CASE OF CATEGORY - II MRs,BIDDER SHALL CLEARLY WRITE ALL/ ANY DEVIATION AGAINST EACH PART/ MATERIAL OF VALVE IN THE SPACE PROVIDED FOR AND WHEREVER BIDDER AGREES WITH EIL'S SPEC BIDDER SHALL INDICATE "AGREED".
- 3 NO CUTTING/ OVERWRITING BY BIDDER ON EIL'S SPEC IS ALLOWED.
- 4 TESTING SHALL BE AS PER BS EN 12266-1.
- 5 50% VALVE CASTINGS SHALL UNDERGO RADIOGRAPHIC EXAMINATION.
- 6 VALVES SHALL MEET THE REQUIREMENTS FOR HYDROGEN SERVICE AS SPECIFIED IN 'TECHNICAL NOTES FOR VALVES'.

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SHEET REV NO.	2	3	4	5	6	7
DATE	2-Jan-1995	14-Dec-2000	28-May-2001	30-Jun-2009	26-Apr-2018	9-Dec-2019

**52404**

Client : HPCL		Dept. / Sect : 16\43		
Project : LMBU PROJECT				
Location : MUMBAI		Tag No : 52411		Sheet No. 1 of 1
GLOBE VALVE SPECIFICATION			MANUF'S OFFER	
TAG NO. : 52411 RATING : 300 STANDARD : BS-1873			STANDARD :	
SIZE RANGE : 2.00 " TO 12.00 " ENDS : FLGD TO B-16.5 RF/125AARH			MFGRS CAT/FIG : (For category -II MRs only)	
PIPING CLASS : B16A,B26A,B61A,B64A,B66A,B68A,B69A			RATING : ENDS :	
DESCRIPTION	CONSTRUCTION	MATERIAL	CONSTRUCTION	MATERIAL
BODY	CAST	ASTM A 216 GR.WCB		
BONNET	BOLTED	ASTM A 216 GR.WCB		
STEM	RISING	SS 316L (NO CASTING)		
DISC	LOOSE PLUG TYPE/BALL TYP	SS 316L FACING/SS 316L		
BODY SEAT RING	RENEWABLE/NON RENEWABLE	SS 316L FACING/SS 316L		
STEM PACKING	RENEWABLE WITH VALVE OPEN ON STREAM	CORROSION INHIBITED DIE FORMED FLEXIBLE GRAPHITE WITH BRAIDED ANTI EXTRUSION RINGS		
HAND WHEEL	RISING	MALLEABLE IRON/CAST ST/FAB.ST/DUCT. IRON		
BONNET BOLTS		ASTM A193 GR B7M		
BONNET NUTS		ASTM A194 GR 2HM		
BONNET GASKET		SP WND SS316L-GRAFOIL FILLER		
REQUIREMENT OF GEAR OPERATOR		REFER TECHNICAL NOTES FOR PURCHASE OF VALVES.		
REQUIREMENT OF RADIOGRAPHY		REFER TECHNICAL NOTES FOR PURCHASE OF VALVES.		
OTHERS	O.S & Y			
SPECIAL SERVICE CONDITION	NACE	SOUR SERVICE; MAX TEMP 427 DEG. C.		
BACK SEAT & SHOULDER		SS 316L		
HYDROSTATIC TEST PRESSURE	BODY : 1125 PSIG	SEAT : 825 PSIG		
TEST PRESSURE WITH AIR	80 PSIG			

**NOTES**

- 1 THIS VALVE SPEC SHEET SHALL BE READ IN CONJUNCTION WITH TECHNICAL NOTES FOR VALVES, 6-44-0052.
- 2 ONLY IN THE CASE OF CATEGORY - II MRs,BIDDER SHALL CLEARLY WRITE ALL/ ANY DEVIATION AGAINST EACH PART/ MATERIAL OF VALVE IN THE SPACE PROVIDED FOR AND WHEREVER BIDDER AGREES WITH EIL'S SPEC BIDDER SHALL INDICATE "AGREED".
- 3 NO CUTTING/ OVERWRITING BY BIDDER ON EIL'S SPEC IS ALLOWED.
- 4 TESTING SHALL BE AS PER BS EN 12266-1.
- 5 50% VALVE CASTINGS SHALL UNDERGO RADIOGRAPHIC EXAMINATION.
- 6 NACE REQUIREMENTS SHALL BE AS PER MR0103.

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SHEET REV NO.	2	3	4	5	6
DATE	2-Jan-1995	14-Dec-2000	28-May-2001	30-Jun-2009	26-Apr-2018

**52411**

Client : HPCL		Dept. / Sect : 16\43		
Project : LMBU PROJECT				
Location : MUMBAI		Tag No : 52466	Sheet No. 1 of 1	
GLOBE VALVE SPECIFICATION		MANUF'S OFFER		
TAG NO. : 52466 RATING : 300 STANDARD : BS-1873		STANDARD :		
SIZE RANGE : 2.00 " TO 12.00 " ENDS : FLGD TO B-16.5 RF/125AARH		MFGRS CAT/FIG : (For category -II MRs only)		
PIPING CLASS : B26N		RATING : ENDS :		
DESCRIPTION	CONSTRUCTION	MATERIAL	CONSTRUCTION	MATERIAL
BODY	CAST	ASTM A 351 GR CF3M		
BONNET	BOLTED	ASTM A 351 GR.CF3M		
STEM	RISING	SS 316L (NO CASTING), 32 RMS FINISH		
DISC	LOOSE PLUG TYPE/BALL TYP	SS 316L		
BODY SEAT RING	RENEWABLE/NON RENEWABLE	SS 316L		
STEM PACKING	RENEWABLE WITH VALVE OPEN ON STREAM	CORROSION INHIBITED DIE FORMED FLEXIBLE GRAPHITE WITH BRAIDED ANTI EXTRUSION RINGS		
HAND WHEEL	RISING	MALLEABLE IRON/CAST ST/FAB.ST/DUCT. IRON		
BONNET BOLTS		ASTM A193 GR B8M CL.2		
BONNET NUTS		ASTM A194 GR 8M		
BONNET GASKET		SP WND SS316L-GRAFOIL FILLER		
REQUIREMENT OF GEAR OPERATOR		REFER TECHNICAL NOTES FOR PURCHASE OF VALVES.		
REQUIREMENT OF RADIOGRAPHY		REFER TECHNICAL NOTES FOR PURCHASE OF VALVES.		
OTHERS	O S & Y			
SPECIAL SERVICE CONDITION		MAX TEMP 454 DEG. C.		
BACK SEAT & SHOULDER		SS316L		
HYDROSTATIC TEST PRESSURE	BODY : 1100 PSIG	SEAT : 800 PSIG		
TEST PRESSURE WITH AIR	80 PSIG			

### NOTES

- THIS VALVE SPEC SHEET SHALL BE READ IN CONJUNCTION WITH TECHNICAL NOTES FOR VALVES, 6-44-0052.
- ONLY IN THE CASE OF CATEGORY - II MRs, BIDDER SHALL CLEARLY WRITE ALL/ ANY DEVIATION AGAINST EACH PART/ MATERIAL OF VALVE IN THE SPACE PROVIDED FOR AND WHEREVER BIDDER AGREES WITH EIL'S SPEC BIDDER SHALL INDICATE "AGREED".
- NO CUTTING/ OVERWRITING BY BIDDER ON EIL'S SPEC IS ALLOWED.
- TESTING SHALL BE AS PER BS EN 12266-1.
- 10% VALVE CASTINGS SHALL UNDERGO RADIOGRAPHIC EXAMINATION
- ALL CASTINGS SHALL BE SOLUTION HEAT TREATED
- WELD REPAIR, IF ANY, SHALL BE CARRIED OUT BEFORE SOLUTION HEAT TREATMENT.

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SHEET REV NO.	2	3	4	5	6	7	8
DATE	2-Jan-1995	14-Dec-2000	28-May-2001	30-Jun-2009	26-Apr-2018	25-Jul-2023	25-Jun-2025

52466

Client : HPCL		Dept. / Sect : 16\43		
Project : LMBU PROJECT				
Location : MUMBAI		Tag No : 524ZD		Sheet No. 1 of 1
GLOBE VALVE SPECIFICATION			MANUF'S OFFER	
TAG NO. : 524ZD RATING : 300 STANDARD : BS-1873			STANDARD :	
SIZE RANGE : 2.00 " TO 12.00 " ENDS : FLGD TO B-16.5 RF/125AARH			MFGRS CAT/FIG : (For category -II MRs only)	
PIPING CLASS : B25A			RATING : ENDS :	
DESCRIPTION	CONSTRUCTION	MATERIAL	CONSTRUCTION	MATERIAL
BODY	CAST	ASTM A 216 GR.WCB		
BONNET	BOLTED	ASTM A 216 GR.WCB		
STEM	RISING	SS 316; (NO CASTING), 32 RMS FINISH		
DISC	LOOSE PLUG TYPE/BALL TYP	SS316		
BODY SEAT RING	RENEWABLE/NON RENEWABLE	SS316		
STEM PACKING	RENEWABLE WITH VALVE OPEN ON STREAM	CORROSION INHIBITED DIE FORMED FLEXIBLE GRAPHITE WITH BRAIDED ANTI EXTRUSION RINGS		
HAND WHEEL	RISING	MALLEABLE IRON/CAST ST/FAB.ST/DUCT. IRON		
BONNET BOLTS		ASTM A193 GR B7		
BONNET NUTS		ASTM A194 GR 2H		
BONNET GASKET		SP WND SS316-GRAFOIL FILLER		
REQUIREMENT OF GEAR OPERATOR		REFER TECHNICAL NOTES FOR PURCHASE OF VALVES.		
REQUIREMENT OF RADIOGRAPHY		REFER TECHNICAL NOTES FOR PURCHASE OF VALVES.		
OTHERS	O S & Y			
SPECIAL SERVICE CONDITION	H2	MAX TEMP 230 DEG C		
BACK SEAT & SHOULDER		SS316		
HYDROSTATIC TEST PRESSURE	BODY : 1125 PSIG	SEAT : 825 PSIG		
TEST PRESSURE WITH AIR	80 PSIG			

**NOTES**

- 1 THIS VALVE SPEC SHEET SHALL BE READ IN CONJUNCTION WITH TECHNICAL NOTES FOR VALVES, 6-44-0052.
- 2 ONLY IN THE CASE OF CATEGORY - II MRs,BIDDER SHALL CLEARLY WRITE ALL/ ANY DEVIATION AGAINST EACH PART/ MATERIAL OF VALVE IN THE SPACE PROVIDED FOR AND WHEREVER BIDDER AGREES WITH EIL'S SPEC BIDDER SHALL INDICATE "AGREED".
- 3 NO CUTTING/ OVERWRITING BY BIDDER ON EIL'S SPEC IS ALLOWED.
- 4 TESTING SHALL BE AS PER BS EN 12266-1.
- 5 50% VALVE CASTINGS SHALL UNDERGO RADIOGRAPHIC EXAMINATION.
- 6 VALVES SHALL MEET THE REQUIREMENTS FOR HYDROGEN SERVICE AS SPECIFIED IN 'TECHNICAL NOTES FOR VALVES'

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SHEET REV NO.	0
DATE	11-Feb-2026

**524ZD**

<b>Client</b> : HPCL			<b>Dept. / Sect</b> : 16\43	
<b>Project</b> : LMBU PROJECT				
<b>Location</b> : MUMBAI		<b>Tag No</b> : 52502		<b>Sheet No.</b> 1 of 1
<b>GLOBE VALVE SPECIFICATION</b>			<b>MANUF'S OFFER</b>	
<b>TAG NO. : 52502</b> <b>RATING : 600</b> <b>STANDARD : BS-1873</b>			<b>STANDARD :</b>	
<b>SIZE RANGE : 2.00 " TO 12.00 "</b> <b>ENDS : FLGD TO B-16.5 RF/125AARH</b>			<b>MFGRS CAT/FIG :</b> (For category -II MRs only)	
<b>PIPING CLASS : D2A,D42A</b>			<b>RATING :            ENDS :</b>	
DESCRIPTION	CONSTRUCTION	MATERIAL	CONSTRUCTION	MATERIAL
BODY	CAST	ASTM A 216 GR.WCB		
BONNET	BOLTED	ASTM A 216 GR.WCB		
STEM	RISING	13% CR.STEEL (NO CASTING)		
DISC	LOOSE PLUG TYPE/BALL TYP	STELLITED		
BODY SEAT RING	RENEWABLE/NON-REN EWABLE	STELLITED		
STEM PACKING	RENEWABLE WITH VALVE OPEN ON STREAM	CORROSION INHIBITED DIE FORMED FLEXIBLE GRAPHITE WITH BRAIDED ANTI EXTRUSION RINGS		
HAND WHEEL	RISING	MALLEABLE IRON/CAST ST/FAB.ST/DUCT. IRON		
BONNET BOLTS		ASTM A193 GR B7		
BONNET NUTS		ASTM A194 GR 2H		
BONNET GASKET		SP WND SS316-GRAFOIL FILLER		
REQUIREMENT OF GEAR OPERATOR		REFER TECHNICAL NOTES FOR PURCHASE OF VALVES.		
REQUIREMENT OF RADIOGRAPHY		REFER TECHNICAL NOTES FOR PURCHASE OF VALVES.		
OTHERS	O S & Y			
SPECIAL SERVICE CONDITION	I.B.R	STEAM/CONDENSATE/BOILER FEED WATER; MAX TEMP. 427 DEG.C.		
BACK SEAT & SHOULDER		13% CR STEEL		
HYDROSTATIC TEST PRESSURE	BODY : 2225 PSIG	SEAT : 1650 PSIG		
TEST PRESSURE WITH AIR	80 PSIG			

**NOTES**

- THIS VALVE SPEC SHEET SHALL BE READ IN CONJUNCTION WITH TECHNICAL NOTES FOR VALVES, 6-44-0052.
- ONLY IN THE CASE OF CATEGORY - II MRs, BIDDER SHALL CLEARLY WRITE ALL/ ANY DEVIATION AGAINST EACH PART/ MATERIAL OF VALVE IN THE SPACE PROVIDED FOR AND WHEREVER BIDDER AGREES WITH EIL'S SPEC BIDDER SHALL INDICATE "AGREED".
- NO CUTTING/ OVERWRITING BY BIDDER ON EIL'S SPEC IS ALLOWED.
- TESTING SHALL BE AS PER BS EN 12266-1 & IBR.
- ALL VALVES SHALL BE SUPPLIED WITH IBR CERTIFICATE IN FORM-III C.
- ALL VALVES SHALL BE PAINTED RED ON BODY-BONNET JOINT.
- 100% VALVE CASTINGS SHALL UNDERGO RADIOGRAPHIC EXAMINATION.
- VALVES TO COMPLY WITH DESIGN REQUIREMENTS OF IBR ALSO.

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<b>SHEET REV NO.</b>	2	3	4	5	6
<b>DATE</b>	2-Jan-1995	14-Dec-2000	28-May-2001	30-Jun-2009	26-Apr-2018

**52502**

Client : HPCL		Dept. / Sect : 16\43		
Project : LMBU PROJECT				
Location : MUMBAI		Tag No : 53001		Sheet No. 1 of 1
CHECK VALVE SPECIFICATION			MANUF'S OFFER	
TAG NO. : 53001 RATING : 800 STANDARD : API 602/ ISO 15761			STANDARD :	
SIZE RANGE : 0.25 " TO 1.50 " ENDS : SW 3000 TO B-16.11			MFGRS CAT/FIG : (For category -II MRs only)	
PIPING CLASS : A11A,A1A,A20A,A21A,A32A,A3A,A91A,A92A,A93A,A94A,A9A,B1A, B21A,B24A,B32A,B91A,B9A,D1A,D9A			RATING : ENDS :	
DESCRIPTION	CONSTRUCTION	MATERIAL	CONSTRUCTION	MATERIAL
BODY	FORGED	ASTM A 105		
COVER	BOLTED	ASTM A 105		
DISC/PISTON		STELLITED		
BODY SEAT RING	RENEWABLE/NON RENEWABLE	STELLITED		
DISC HINGE/HINGE PIN				
COVER STUD BOLT		ASTM A193 GR B7		
COVER NUT		ASTM A194 GR 2H		
COVER GASKET		SP WND SS316-GRAFOIL FILLER		
TYPE	LIFT CHECK TYPE			
OTHERS				
SPECIAL SERVICE CONDITIONS		MAX TEMP 427 DEG.C.		
WASHER,NUT,PIN				
HYDROSTATIC TEST PRESSURE	BODY : 2975 PSIG	SEAT : 2175 PSIG		
TEST PRESSURE WITH AIR				

**NOTES**

- 1 THIS VALVE SPEC SHEET SHALL BE READ IN CONJUNCTION WITH TECHNICAL NOTES FOR VALVES, 6-44-0052.
- 2 ONLY IN THE CASE OF CATEGORY - II MRs,BIDDER SHALL CLEARLY WRITE ALL/ ANY DEVIATION AGAINST EACH PART/ MATERIAL OF VALVE IN THE SPACE PROVIDED FOR AND WHEREVER BIDDER AGREES WITH EIL'S SPEC BIDDER SHALL INDICATE "AGREED".
- 3 NO CUTTING/ OVERWRITING BY BIDDER ON EIL'S SPEC IS ALLOWED.
- 4 VALVES SHALL BE OF STANDARD BORE DESIGN.

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SHEET REV NO.	2	3	4	5	6
DATE	2-Jan-1995	14-Dec-2000	28-May-2001	30-Jun-2009	26-Apr-2018

**53001**

<b>Client</b> : HPCL			<b>Dept. / Sect</b> : 16\43	
<b>Project</b> : LMBU PROJECT				
<b>Location</b> : MUMBAI		<b>Tag No</b> : 53004		<b>Sheet No.</b> 1 of 1
<b>CHECK VALVE SPECIFICATION</b>			<b>MANUF'S OFFER</b>	
<b>TAG NO. : 53004</b> <b>RATING : 800</b> <b>STANDARD : API 602/ ISO 15761</b>			<b>STANDARD :</b>	
<b>SIZE RANGE : 0.50 " TO 1.50 "</b> <b>ENDS : SW 3000 TO B-16.11</b>			<b>MFGRS CAT/FIG :</b> (For category -II MRs only)	
<b>PIPING CLASS : B51A,B5A,D51A</b>			<b>RATING :</b> <b>ENDS :</b>	
DESCRIPTION	CONSTRUCTION	MATERIAL	CONSTRUCTION	MATERIAL
BODY	FORGED	ASTM A 105		
COVER	BOLTED	ASTM A 105		
DISC/PISTON		STELLITED		
BODY SEAT RING	RENEWABLE/NON RENEWABLE	STELLITED		
DISC HINGE/HINGE PIN				
COVER STUD BOLT		ASTM A193 GR B7		
COVER NUT		ASTM A194 GR 2H		
COVER GASKET		SP WND SS316-GRAFOIL FILLER		
TYPE	LIFT CHECK TYPE			
OTHERS				
SPECIAL SERVICE CONDITIONS	H2	MAX TEMP 260 DEG.C.		
WASHER,NUT,PIN				
HYDROSTATIC TEST PRESSURE	BODY : 2975 PSIG	SEAT : 2175 PSIG		
TEST PRESSURE WITH AIR				

**NOTES**

- 1 THIS VALVE SPEC SHEET SHALL BE READ IN CONJUNCTION WITH TECHNICAL NOTES FOR VALVES, 6-44-0052.
- 2 ONLY IN THE CASE OF CATEGORY - II MRs,BIDDER SHALL CLEARLY WRITE ALL/ ANY DEVIATION AGAINST EACH PART/ MATERIAL OF VALVE IN THE SPACE PROVIDED FOR AND WHEREVER BIDDER AGREES WITH EIL'S SPEC BIDDER SHALL INDICATE "AGREED".
- 3 NO CUTTING/ OVERWRITING BY BIDDER ON EIL'S SPEC IS ALLOWED.
- 4 VALVES SHALL BE OF STANDARD BORE DESIGN.
- 5 VALVES SHALL MEET THE REQUIREMENTS FOR HYDROGEN SERVICE AS SPECIFIED IN 'TECHNICAL NOTES FOR VALVES'.

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SHEET REV NO.	3	4	5	6
DATE	14-Dec-2000	28-May-2001	30-Jun-2009	26-Apr-2018

**53004**

<b>Client</b> : HPCL		<b>Dept. / Sect</b> : 16\43		
<b>Project</b> : LMBU PROJECT				
<b>Location</b> : MUMBAI		<b>Tag No</b> : 53011		<b>Sheet No.</b> 1 of 1
<b>CHECK VALVE SPECIFICATION</b>			<b>MANUF'S OFFER</b>	
<b>TAG NO. : 53011</b> <b>RATING : 800</b> <b>STANDARD : API 602/ ISO 15761</b> <b>SIZE RANGE : 0.50 " TO 1.50 "</b> <b>ENDS : SW 3000 TO B-16.11</b> <b>PIPING CLASS : A16A,A26A,A28A,A29A,A61A,A64A,A66A,A95A,A97A,A98A,B16A,B26A,B61A,B64A,B66A,B68A,B69A,COPY,D16A</b>			<b>STANDARD :</b> <b>MFGRS CAT/FIG :</b> (For category -II MRs only) <b>RATING :                      ENDS :</b>	
DESCRIPTION	CONSTRUCTION	MATERIAL	CONSTRUCTION	MATERIAL
BODY	FORGED	ASTM A 105		
COVER	BOLTED	ASTM A 105		
DISC/PISTON		STELLITED		
BODY SEAT RING	RENEWABLE/NON-RENEWABLE	STELLITED		
DISC HINGE/HINGE PIN				
COVER STUD BOLT		ASTM A193 GR B7M		
COVER NUT		ASTM A194 GR 2HM		
COVER GASKET		SP WND SS316L-GRAFOIL FILLER		
TYPE	LIFT CHECK TYPE			
OTHERS				
SPECIAL SERVICE CONDITIONS	NACE	SOUR SERVICE; MAX TEMP 427 DEG.C.		
WASHER,NUT,PIN				
HYDROSTATIC TEST PRESSURE	BODY : 2975 PSIG	SEAT : 2175 PSIG		
TEST PRESSURE WITH AIR				

**NOTES**

- 1 THIS VALVE SPEC SHEET SHALL BE READ IN CONJUNCTION WITH TECHNICAL NOTES FOR VALVES, 6-44-0052.
- 2 ONLY IN THE CASE OF CATEGORY - II MRs,BIDDER SHALL CLEARLY WRITE ALL/ ANY DEVIATION AGAINST EACH PART/ MATERIAL OF VALVE IN THE SPACE PROVIDED FOR AND WHEREVER BIDDER AGREES WITH EIL'S SPEC BIDDER SHALL INDICATE "AGREED".
- 3 NO CUTTING/ OVERWRITING BY BIDDER ON EIL'S SPEC IS ALLOWED.
- 4 NACE REQUIREMENTS SHALL BE AS PER MR0103.
- 5 VALVES SHALL BE OF STANDARD BORE DESIGN.

SIGNATURE & SEAL OF MANUFACTURER

SHEET REV NO.	2	3	4	5	6	7
DATE	2-Jan-1995	14-Dec-2000	28-May-2001	31-Dec-2001	30-Jun-2009	26-Apr-2018

**53011**

Client : HPCL		Dept. / Sect : 16\43		
Project : LMBU PROJECT				
Location : MUMBAI		Tag No : 53013		Sheet No. 1 of 1
CHECK VALVE SPECIFICATION			MANUF'S OFFER	
TAG NO. : 53013 RATING : 800 STANDARD : API 602/ ISO 15761			STANDARD :	
SIZE RANGE : 0.50 " TO 1.50 " ENDS : SW 3000 TO B-16.11			MFGRS CAT/FIG : (For category -II MRs only)	
PIPING CLASS : A19A,B19A,D19A			RATING : ENDS :	
DESCRIPTION	CONSTRUCTION	MATERIAL	CONSTRUCTION	MATERIAL
BODY	FORGED	ASTM A 105		
COVER	BOLTED	ASTM A 105		
DISC/PISTON		STELLITED		
BODY SEAT RING	RENEWABLE/NON-RENEWABLE	STELLITED		
DISC HINGE/HINGE PIN				
COVER STUD BOLT		ASTM A193 GR B7		
COVER NUT		ASTM A194 GR 2H		
COVER GASKET		SP WND SS316-GRAFOIL FILLER		
TYPE	LIFT CHECK TYPE			
OTHERS				
SPECIAL SERVICE CONDITIONS		CAUSTIC SERVICE(MAX.TEMP.110 DEG.C) & AMINE		
WASHER,NUT,PIN				
HYDROSTATIC TEST PRESSURE	BODY : 2975 PSIG	SEAT : 2175 PSIG		
TEST PRESSURE WITH AIR				

**NOTES**

- 1 THIS VALVE SPEC SHEET SHALL BE READ IN CONJUNCTION WITH TECHNICAL NOTES FOR VALVES, 6-44-0052.
- 2 ONLY IN THE CASE OF CATEGORY - II MRs,BIDDER SHALL CLEARLY WRITE ALL/ ANY DEVIATION AGAINST EACH PART/ MATERIAL OF VALVE IN THE SPACE PROVIDED FOR AND WHEREVER BIDDER AGREES WITH EIL'S SPEC BIDDER SHALL INDICATE "AGREED".
- 3 NO CUTTING/ OVERWRITING BY BIDDER ON EIL'S SPEC IS ALLOWED.
- 4 VALVES SHALL BE OF STANDARD BORE DESIGN.

SIGNATURE  
&  
SEAL  
OF  
MANUFACTURER

SHEET REV NO.	2	3	4	5	6	7
DATE	2-Jan-1995	14-Dec-2000	28-May-2001	23-Oct-2003	30-Jun-2009	26-Apr-2018

**53013**



<b>Client</b> : HPCL			<b>Dept. / Sect</b> : 16\43	
<b>Project</b> : LMBU PROJECT				
<b>Location</b> : MUMBAI		<b>Tag No</b> : 53050		<b>Sheet No.</b> 1 of 1
<b>CHECK VALVE SPECIFICATION</b>			<b>MANUF'S OFFER</b>	
<b>TAG NO. : 53050</b>			<b>STANDARD :</b>	
<b>RATING : 800</b>			<b>STANDARD : API 602/ ISO 15761</b>	
<b>SIZE RANGE : 0.50 " TO 1.50 "</b>			<b>MFGRS CAT/FIG :</b>	
<b>ENDS : SW 3000 TO B-16.11</b>			<b>(For category -II MRs only)</b>	
<b>PIPING CLASS : A11K,A26K,B11K,BAAD</b>			<b>RATING : ENDS :</b>	
DESCRIPTION	CONSTRUCTION	MATERIAL	CONSTRUCTION	MATERIAL
BODY	FORGED	ASTM A 182 GR.F304L		
COVER	BOLTED	ASTM A 182 GR.F304L		
DISC/PISTON		STELLITED		
BODY SEAT RING	NON-RENEWABLE/RENEWABLE	STELLITED		
DISC HINGE/HINGE PIN				
COVER STUD BOLT		ASTM A193 GR B8M CL.2		
COVER NUT		ASTM A194 GR 8M		
COVER GASKET		SP WND SS316L-GRAFOIL FILLER		
TYPE	LIFT CHECK TYPE			
OTHERS				
SPECIAL SERVICE CONDITIONS		MAX TEMP 427 DEG.C.		
WASHER,NUT,PIN				
HYDROSTATIC TEST PRESSURE	BODY : 2400 PSIG	SEAT : 1775 PSIG		
TEST PRESSURE WITH AIR				

**NOTES**

- 1 THIS VALVE SPEC SHEET SHALL BE READ IN CONJUNCTION WITH TECHNICAL NOTES FOR VALVES, 6-44-0052.
- 2 ONLY IN THE CASE OF CATEGORY - II MRs,BIDDER SHALL CLEARLY WRITE ALL/ ANY DEVIATION AGAINST EACH PART/ MATERIAL OF VALVE IN THE SPACE PROVIDED FOR AND WHEREVER BIDDER AGREES WITH EIL'S SPEC BIDDER SHALL INDICATE "AGREED".
- 3 NO CUTTING/ OVERWRITING BY BIDDER ON EIL'S SPEC IS ALLOWED.
- 4 VALVES SHALL BE OF STANDARD BORE DESIGN.

SIGNATURE & SEAL OF MANUFACTURER

SHEET REV NO.	2	3	4	5	6	7	8
DATE	2-Jan-1995	14-Dec-2000	28-May-2001	16-Apr-2002	30-Jun-2009	26-Apr-2018	25-Jul-2023

**53050**

<b>Client</b> : HPCL			<b>Dept. / Sect</b> : 16\43	
<b>Project</b> : LMBU PROJECT				
<b>Location</b> : MUMBAI		<b>Tag No</b> : 53066		<b>Sheet No.</b> 1 of 1
<b>CHECK VALVE SPECIFICATION</b>			<b>MANUF'S OFFER</b>	
<b>TAG NO. : 53066</b> <b>RATING : 800</b> <b>STANDARD : API 602/ ISO 15761</b>			<b>STANDARD :</b>	
<b>SIZE RANGE : 0.50 " TO 1.50 "</b> <b>ENDS : SW 3000 TO B-16.11</b>			<b>MFGRS CAT/FIG :</b> (For category -II MRs only)	
<b>PIPING CLASS : A1N,A20N,A22N,A26N,A27N,A28N,B26N</b>			<b>RATING :</b> <b>ENDS :</b>	
DESCRIPTION	CONSTRUCTION	MATERIAL	CONSTRUCTION	MATERIAL
BODY	FORGED	ASTM A 182 GR.F316L		
COVER	BOLTED	ASTM A 182 GR.F316L		
DISC/PISTON		STELLITED		
BODY SEAT RING	NON-RENEWABLE/RENEWABLE	STELLITED		
DISC HINGE/HINGE PIN				
COVER STUD BOLT		ASTM A193 GR B8M CL.2		
COVER NUT		ASTM A194 GR 8M		
COVER GASKET		SP WND SS316L-GRAFOIL FILLER		
TYPE	LIFT CHECK TYPE			
OTHERS				
SPECIAL SERVICE CONDITIONS		MAX TEMP 454 DEG. C.		
WASHER,NUT,PIN				
HYDROSTATIC TEST PRESSURE	BODY : 2400 PSIG	SEAT : 1775 PSIG		
TEST PRESSURE WITH AIR				

**NOTES**

- 1 THIS VALVE SPEC SHEET SHALL BE READ IN CONJUNCTION WITH TECHNICAL NOTES FOR VALVES, 6-44-0052.
- 2 ONLY IN THE CASE OF CATEGORY - II MRs,BIDDER SHALL CLEARLY WRITE ALL/ ANY DEVIATION AGAINST EACH PART/ MATERIAL OF VALVE IN THE SPACE PROVIDED FOR AND WHEREVER BIDDER AGREES WITH EIL'S SPEC BIDDER SHALL INDICATE "AGREED".
- 3 NO CUTTING/ OVERWRITING BY BIDDER ON EIL'S SPEC IS ALLOWED.
- 4 VALVES SHALL BE OF STANDARD BORE DESIGN.

SIGNATURE & SEAL OF MANUFACTURER

SHEET REV NO.	2	3	4	5	6	7
DATE	2-Jan-1995	14-Dec-2000	28-May-2001	30-Jun-2009	26-Apr-2018	25-Jul-2023

**53066**

<b>Client</b> : HPCL			<b>Dept. / Sect</b> : 16\43	
<b>Project</b> : LMBU PROJECT				
<b>Location</b> : MUMBAI		<b>Tag No</b> : 53301		<b>Sheet No.</b> 1 of 1
<b>CHECK VALVE SPECIFICATION</b>			<b>MANUF'S OFFER</b>	
<b>TAG NO. : 53301</b> <b>RATING : 150</b> <b>STANDARD : BS-1868</b>			<b>STANDARD :</b>	
<b>SIZE RANGE : 2.00 " TO 24.00 "</b> <b>ENDS : FLGD TO B-16.5 RF/125AARH</b>			<b>MFGRS CAT/FIG :</b> (For category -II MRs only)	
<b>PIPING CLASS : A11A,A1A,A21A,A32A,A91A,A92A,A93A,A94A,A9A</b>			<b>RATING :            ENDS :</b>	
DESCRIPTION	CONSTRUCTION	MATERIAL	CONSTRUCTION	MATERIAL
BODY	CAST	ASTM A 216 GR.WCB		
COVER	BOLTED	ASTM A 216 GR.WCB		
DISC		FACED WITH 13% CR.STEEL/13% CR.STEEL		
BODY SEAT RING	RENEWABLE/NON RENEWABLE	STELLITED		
DISC HINGE		13% CR STEEL/A216 GR WCB/A515 GR 70		
HINGE PIN		13% CR STEEL(NO CASTING)		
COVER STUD BOLT		ASTM A193 GR B7		
COVER NUT		ASTM A194 GR 2H		
COVER GASKET		SP WND SS316-GRAFOIL FILLER/CORRUGATED SS316		
BY PASSES				
TYPE	SWING CHECK TYPE			
REQUIREMENT OF RADIOGRAPHY		REFER TECHNICAL NOTES FOR PURCHASE OF VALVES.		
OTHERS				
SPECIAL SERVICE CONDITIONS		MAX TEMP 371 DEG. C.		
WASHER,NUT,PIN		13% CR STEEL(NO CASTING)/SS410/SS304		
HYDROSTATIC TEST PRESSURE	BODY : 450 PSIG	SEAT : 325 PSIG		
TEST PRESSURE WITH AIR				

**NOTES**

- 1 THIS VALVE SPEC SHEET SHALL BE READ IN CONJUNCTION WITH TECHNICAL NOTES FOR VALVES, 6-44-0052.
- 2 ONLY IN THE CASE OF CATEGORY - II MRs,BIDDER SHALL CLEARLY WRITE ALL/ ANY DEVIATION AGAINST EACH PART/ MATERIAL OF VALVE IN THE SPACE PROVIDED FOR AND WHEREVER BIDDER AGREES WITH EIL'S SPEC BIDDER SHALL INDICATE "AGREED".
- 3 NO CUTTING/ OVERWRITING BY BIDDER ON EIL'S SPEC IS ALLOWED.
- 4 TESTING SHALL BE AS PER BS EN 12266-1.
- 5 5% VALVE CASTINGS SHALL UNDERGO RADIOGRAPHIC EXAMINATION.

SIGNATURE & SEAL OF MANUFACTURER

<b>SHEET REV NO.</b>	2	3	4	5	6	7
<b>DATE</b>	2-Jan-1995	14-Dec-2000	28-May-2001	30-Jun-2009	26-Apr-2018	9-Dec-2019

**53301**

<b>Client</b> : HPCL			<b>Dept. / Sect</b> : 16\43	
<b>Project</b> : LMBU PROJECT				
<b>Location</b> : MUMBAI		<b>Tag No</b> : 53302		<b>Sheet No.</b> 1 of 1
<b>CHECK VALVE SPECIFICATION</b>			<b>MANUF'S OFFER</b>	
<b>TAG NO. : 53302</b> <b>RATING : 150</b> <b>STANDARD : BS-1868</b>			<b>STANDARD :</b>	
<b>SIZE RANGE : 2.00 " TO 24.00 "</b> <b>ENDS : FLGD TO B-16.5 RF/125AARH</b>			<b>MFGRS CAT/FIG :</b> (For category -II MRs only)	
<b>PIPING CLASS : A22A,A2A,A82A</b>			<b>RATING :            ENDS :</b>	
DESCRIPTION	CONSTRUCTION	MATERIAL	CONSTRUCTION	MATERIAL
BODY	CAST	ASTM A 216 GR.WCB		
COVER	BOLTED	ASTM A 216 GR.WCB		
DISC		13% CR STEEL FACING/13% CR. STEEL		
BODY SEAT RING	RENEWABLE/NON RENEWABLE	STELLITED		
DISC HINGE		13% CR. STEEL/A216 GR WCB/A515 GR 70		
HINGE PIN		13% CR STEEL(NO CASTING)		
COVER STUD BOLT		ASTM A193 GR B7		
COVER NUT		ASTM A194 GR 2H		
COVER GASKET		SP WND SS316-GRAFOIL FILLER/CORRUGATED SS316		
BY PASSES				
TYPE	SWING CHECK TYPE			
REQUIREMENT OF RADIOGRAPHY		REFER TECHNICAL NOTES FOR PURCHASE OF VALVES.		
OTHERS				
SPECIAL SERVICE CONDITIONS	I.B.R	STEAM/CONDENSATE/BOILER FEED WATER; MAX TEMP 371 DEG.C.		
WASHER,NUT,PIN		13% CR STEEL(NO CASTING)/SS410/SS304		
HYDROSTATIC TEST PRESSURE	BODY : 450 PSIG	SEAT : 325 PSIG		
TEST PRESSURE WITH AIR				

**NOTES**

- 1 THIS VALVE SPEC SHEET SHALL BE READ IN CONJUNCTION WITH TECHNICAL NOTES FOR VALVES, 6-44-0052.
- 2 ONLY IN THE CASE OF CATEGORY - II MRs,BIDDER SHALL CLEARLY WRITE ALL/ ANY DEVIATION AGAINST EACH PART/ MATERIAL OF VALVE IN THE SPACE PROVIDED FOR AND WHEREVER BIDDER AGREES WITH EIL'S SPEC BIDDER SHALL INDICATE "AGREED".
- 3 NO CUTTING/ OVERWRITING BY BIDDER ON EIL'S SPEC IS ALLOWED.
- 4 TESTING SHALL BE AS PER BS EN 12266-1 & IBR
- 5 ALL VALVES SHALL BE SUPPLIED WITH IBR CERTIFICATE IN FORM-III C.
- 6 ALL VALVES SHALL BE PAINTED RED ON BODY-BONNET JOINT.
- 7 5% VALVE CASTINGS SHALL UNDERGO RADIOGRAPHIC EXAMINATION.
- 8 VALVES TO COMPLY WITH DESIGN REQUIREMENTS OF IBR ALSO.

SIGNATURE & SEAL OF MANUFACTURER

SHEET REV NO.	2	3	4	5	6	7
DATE	2-Jan-1995	14-Dec-2000	28-May-2001	30-Jun-2009	26-Apr-2018	9-Dec-2019

**53302**

<b>Client</b> : HPCL			<b>Dept. / Sect</b> : 16\43	
<b>Project</b> : LMBU PROJECT				
<b>Location</b> : MUMBAI		<b>Tag No</b> : 53311		<b>Sheet No.</b> 1 of 1
<b>CHECK VALVE SPECIFICATION</b>			<b>MANUF'S OFFER</b>	
<b>TAG NO.:</b> 53311 <b>RATING:</b> 150 <b>STANDARD:</b> BS-1868			<b>STANDARD:</b>	
<b>SIZE RANGE:</b> 2.00 " TO 24.00 " <b>ENDS:</b> FLGD TO B-16.5 RF/125AARH			<b>MFGRS CAT/FIG:</b>	
<b>PIPING CLASS:</b> A16A,A26A,A28A,A29A,A61A,A64A,A66A,A95A,A97A,A98A,COPY			<b>(For category -II MRs only)</b>	
			<b>RATING:</b> <b>ENDS:</b>	
DESCRIPTION	CONSTRUCTION	MATERIAL	CONSTRUCTION	MATERIAL
BODY	CAST	ASTM A 216 GR.WCB		
COVER	BOLTED	ASTM A 216 GR.WCB		
DISC		FACED WITH SS 316L/SS 316L		
BODY SEAT RING	RENEWABLE/NON RENEWABLE	FACED WITH SS316L/SS 316L		
DISC HINGE		SS 316L/ A 216 GR.WCB		
HINGE PIN		SS316L (NO CASTING)		
COVER STUD BOLT		ASTM A193 GR B7M		
COVER NUT		ASTM A194 GR 2HM		
COVER GASKET		SP WND SS316L-GRAFOIL FILLER		
BY PASSES				
TYPE	SWING CHECK TYPE			
REQUIREMENT OF RADIOGRAPHY		REFER TECHNICAL NOTES FOR PURCHASE OF VALVES.		
OTHERS				
SPECIAL SERVICE CONDITIONS	NACE	SOUR SERVICE; MAX TEMP 371 DEG. C.		
WASHER,NUT,PIN		SS 316L (NO CASTING)		
HYDROSTATIC TEST PRESSURE	BODY : 450 PSIG	SEAT : 325 PSIG		
TEST PRESSURE WITH AIR				

**NOTES**

- 1 THIS VALVE SPEC SHEET SHALL BE READ IN CONJUNCTION WITH TECHNICAL NOTES FOR VALVES, 6-44-0052.
- 2 ONLY IN THE CASE OF CATEGORY - II MRs,BIDDER SHALL CLEARLY WRITE ALL/ ANY DEVIATION AGAINST EACH PART/ MATERIAL OF VALVE IN THE SPACE PROVIDED FOR AND WHEREVER BIDDER AGREES WITH EIL'S SPEC BIDDER SHALL INDICATE "AGREED".
- 3 NO CUTTING/ OVERWRITING BY BIDDER ON EIL'S SPEC IS ALLOWED.
- 4 TESTING SHALL BE AS PER BS EN 12266-1.
- 5 50% VALVE CASTINGS SHALL UNDERGO RADIOGRAPHIC EXAMINATION.
- 6 NACE REQUIREMENTS SHALL BE AS PER MR0103.

SIGNATURE  
&  
SEAL  
OF  
MANUFACTURER

SHEET REV NO.	2	3	4	5	6	7	8
DATE	2-Jan-1995	14-Dec-2000	28-May-2001	22-Mar-2002	30-Jun-2009	26-Apr-2018	9-Dec-2019

**53311**

<b>Client</b> : HPCL			<b>Dept. / Sect</b> : 16\43	
<b>Project</b> : LMBU PROJECT				
<b>Location</b> : MUMBAI		<b>Tag No</b> : 53313		<b>Sheet No.</b> 1 of 1
<b>CHECK VALVE SPECIFICATION</b>			<b>MANUF'S OFFER</b>	
<b>TAG NO. : 53313</b> <b>RATING : 150</b> <b>STANDARD : BS-1868</b>			<b>STANDARD :</b>	
<b>SIZE RANGE : 2.00 " TO 24.00 "</b> <b>ENDS : FLGD TO B-16.5 RF/125AARH</b>			<b>MFGRS CAT/FIG :</b> (For category -II MRs only)	
<b>PIPING CLASS : A19A</b>			<b>RATING :</b> <b>ENDS :</b>	
DESCRIPTION	CONSTRUCTION	MATERIAL	CONSTRUCTION	MATERIAL
BODY	CAST	ASTM A 216 GR.WCB		
COVER	BOLTED	ASTM A 216 GR.WCB		
DISC		SS 316		
BODY SEAT RING	RENEWABLE/NON RENEWABLE	SS 316		
DISC HINGE		SS 316/A216 GR WCB/A515 GR 70		
HINGE PIN		SS316 (NO CASTING)		
COVER STUD BOLT		ASTM A193 GR B7		
COVER NUT		ASTM A194 GR 2H		
COVER GASKET		SP WND SS316-GRAFOIL FILLER		
BY PASSES				
TYPE	SWING CHECK TYPE			
REQUIREMENT OF RADIOGRAPHY		REFER TECHNICAL NOTES FOR PURCHASE OF VALVES.		
OTHERS				
SPECIAL SERVICE CONDITIONS		CAUSTIC SERVICE(MAX.TEMP.110 DEG.C) & AMINE		
WASHER,NUT,PIN		SS 316 (NO CASTING)		
HYDROSTATIC TEST PRESSURE	BODY : 450 PSIG	SEAT : 325 PSIG		
TEST PRESSURE WITH AIR				

**NOTES**

- 1 THIS VALVE SPEC SHEET SHALL BE READ IN CONJUNCTION WITH TECHNICAL NOTES FOR VALVES, 6-44-0052.
- 2 ONLY IN THE CASE OF CATEGORY - II MRs,BIDDER SHALL CLEARLY WRITE ALL/ ANY DEVIATION AGAINST EACH PART/ MATERIAL OF VALVE IN THE SPACE PROVIDED FOR AND WHEREVER BIDDER AGREES WITH EIL'S SPEC BIDDER SHALL INDICATE "AGREED".
- 3 NO CUTTING/ OVERWRITING BY BIDDER ON EIL'S SPEC IS ALLOWED.
- 4 TESTING SHALL BE AS PER BS EN 12266-1.
- 5 50% VALVE CASTINGS SHALL UNDERGO RADIOGRAPHIC EXAMINATION.

SIGNATURE  
&  
SEAL  
OF  
MANUFACTURER

SHEET REV NO.	2	3	4	5	6	7
DATE	2-Jan-1995	14-Dec-2000	28-May-2001	30-Jun-2009	26-Apr-2018	9-Dec-2019

**53313**

<b>Client</b> : HPCL		<b>Dept. / Sect</b> : 16\43		
<b>Project</b> : LMBU PROJECT				
<b>Location</b> : MUMBAI		<b>Tag No</b> : 53321		<b>Sheet No.</b> 1 of 1
<b>CHECK VALVE SPECIFICATION</b>			<b>MANUF'S OFFER</b>	
<b>TAG NO. : 53321</b> <b>RATING : 150</b> <b>STANDARD : BS 1868</b> <b>SIZE RANGE : 2.00 " TO 24.00 "</b> <b>ENDS : FLGD TO B-16.5 RF/125AARH</b> <b>PIPING CLASS : A3A</b>			<b>STANDARD :</b> <b>MFGRS CAT/FIG :</b> (For category -II MRs only) <b>RATING :                      ENDS :</b>	
DESCRIPTION	CONSTRUCTION	MATERIAL	CONSTRUCTION	MATERIAL
BODY	CAST	ASTM A 216 GR.WCB		
COVER	BOLTED	ASTM A 216 GR.WCB		
DISC		FACED WITH 13% CR.STEEL/13% CR.STEEL		
BODY SEAT RING	RENEWABLE/NON RENEWABLE	STELLITED		
DISC HINGE		13% CR STEEL/A216 GR WCB/A515 GR 70		
HINGE PIN		13% CR STEEL(NO CASTING)		
COVER STUD BOLT		ASTM A193 GR B7		
COVER NUT		ASTM A194 GR 2H		
COVER GASKET		SP WND SS316-GRAFOIL FILLER/CORRUGATED SS316		
BY PASSES				
TYPE	SWING CHECK TYPE			
OTHERS				
SPECIAL SERVICE CONDITIONS				
WASHER,NUT,PIN		13% CR STEEL(NO CASTING)/SS410/SS304		
HYDROSTATIC TEST PRESSURE	BODY : 450 PSIG	SEAT : 325 PSIG		
TEST PRESSURE WITH AIR				

**NOTES**

- 1 THIS VALVE SPEC SHEET SHALL BE READ IN CONJUNCTION WITH TECHNICAL NOTES FOR VALVES, 6-44-0052.
- 2 ONLY IN THE CASE OF CATEGORY - II MRs,BIDDER SHALL CLEARLY WRITE ALL/ ANY DEVIATION AGAINST EACH PART/ MATERIAL OF VALVE IN THE SPACE PROVIDED FOR AND WHEREVER BIDDER AGREES WITH EIL'S SPEC BIDDER SHALL INDICATE "AGREED".
- 3 NO CUTTING/ OVERWRITING BY BIDDER ON EIL'S SPEC IS ALLOWED.
- 4 TESTING SHALL BE AS PER BS EN 12266-1.
- 5 RADIOGRAPHY OF VALVE CASTINGS NOT REQUIRED.

SIGNATURE & SEAL OF MANUFACTURER

<b>SHEET REV NO.</b>	3	4	5	6	7
<b>DATE</b>	14-Dec-2000	28-May-2001	30-Jun-2009	26-Apr-2018	9-Dec-2019

**53321**

<b>Client</b> : HPCL			<b>Dept. / Sect</b> : 16\43	
<b>Project</b> : LMBU PROJECT				
<b>Location</b> : MUMBAI		<b>Tag No</b> : 53345		<b>Sheet No.</b> 1 of 1
<b>CHECK VALVE SPECIFICATION</b>			<b>MANUF'S OFFER</b>	
<b>TAG NO. : 53345</b> <b>RATING : 150</b> <b>STANDARD : BS-1868</b>			<b>STANDARD :</b>	
<b>SIZE RANGE : 2.00 " TO 24.00 "</b> <b>ENDS : FLGD TO B-16.5 RF/125AARH</b>			<b>MFGRS CAT/FIG :</b> (For category -II MRs only)	
<b>PIPING CLASS : A1K,A3K</b>			<b>RATING :</b> <b>ENDS :</b>	
DESCRIPTION	CONSTRUCTION	MATERIAL	CONSTRUCTION	MATERIAL
BODY	CAST	ASTM A 351 GR CF8		
COVER	BOLTED	ASTM A 351 GR.CF8		
DISC		SS 316		
BODY SEAT RING	RENEWABLE/NON-RENEWABLE	SS 316		
HINGE PIN		SS316 (NO CASTING)		
DISC HINGE		SS 304/SS 316		
COVER STUD BOLT		ASTM A193 GR B8M CL.2		
COVER NUT		ASTM A194 GR 8M		
COVER GASKET		SP WND SS316-GRAFOIL FILLER		
BY PASSES				
TYPE	SWING CHECK TYPE			
REQUIREMENT OF RADIOGRAPHY		REFER TECHNICAL NOTES FOR PURCHASE OF VALVES.		
OTHERS				
SPECIAL SERVICE CONDITIONS		MAX TEMP 371 DEG. C.		
WASHER,NUT,PIN		SS 316 (NO CASTING)		
HYDROSTATIC TEST PRESSURE	BODY : 425 PSIG	SEAT : 325 PSIG		
TEST PRESSURE WITH AIR				

**NOTES**

- THIS VALVE SPEC SHEET SHALL BE READ IN CONJUNCTION WITH TECHNICAL NOTES FOR VALVES, 6-44-0052.
- ONLY IN THE CASE OF CATEGORY - II MRs,BIDDER SHALL CLEARLY WRITE ALL/ ANY DEVIATION AGAINST EACH PART/ MATERIAL OF VALVE IN THE SPACE PROVIDED FOR AND WHEREVER BIDDER AGREES WITH EIL'S SPEC BIDDER SHALL INDICATE "AGREED".
- NO CUTTING/ OVERWRITING BY BIDDER ON EIL'S SPEC IS ALLOWED.
- TESTING SHALL BE AS PER BS EN 12266-1.
- 10% VALVE CASTINGS SHALL UNDERGO RADIOGRAPHIC EXAMINATION.
- ALL CASTINGS SHALL BE SOLUTION HEAT TREATED.
- WELD REPAIRS, IF ANY, SHALL BE CARRIED OUT BEFORE SOLUTION HEAT TREATMENT.

SIGNATURE & SEAL OF MANUFACTURER

SHEET REV NO.	2	3	4	5	6	7	8
DATE	2-Jan-1995	14-Dec-2000	28-May-2001	30-Jun-2009	26-Apr-2018	9-Dec-2019	25-Jul-2023

**53345**

<b>Client</b> : HPCL			<b>Dept. / Sect</b> : 16\43	
<b>Project</b> : LMBU PROJECT				
<b>Location</b> : MUMBAI		<b>Tag No</b> : 53361		<b>Sheet No.</b> 1 of 1
<b>CHECK VALVE SPECIFICATION</b>			<b>MANUF'S OFFER</b>	
<b>TAG NO. : 53361</b> <b>RATING : 150</b> <b>STANDARD : BS-1868</b> <b>SIZE RANGE : 2.00 " TO 24.00 "</b> <b>ENDS : FLGD TO B-16.5 RF/125AARH</b> <b>PIPING CLASS : A98M</b>			<b>STANDARD :</b> <b>MFGRS CAT/FIG :</b> (For category -II MRs only) <b>RATING :</b> <b>ENDS :</b>	
DESCRIPTION	CONSTRUCTION	MATERIAL	CONSTRUCTION	MATERIAL
BODY	CAST	ASTM A 351 GR.CF8M		
COVER	BOLTED	ASTM A 351 GR.CF8M		
DISC		SS 316		
BODY SEAT RING	RENEWABLE/NON-RENEWABLE	SS 316		
DISC HINGE		SS 316		
HINGE PIN		SS 316(NO CASTING)		
COVER STUD BOLT		ASTM A193 GR B8M CL.2		
COVER NUT		ASTM A194 GR 8M		
COVER GASKET		SP WND SS316-GRAFOIL FILLER		
BY PASSES				
TYPE	SWING CHECK TYPE			
REQUIREMENT OF RADIOGRAPHY		REFER TECHNICAL NOTES FOR PURCHASE OF VALVES.		
OTHERS				
SPECIAL SERVICE CONDITIONS		MAX TEMP 371 DEG. C.		
WASHER,NUT,PIN		SS 316 (NO CASTING)		
HYDROSTATIC TEST PRESSURE	BODY : 425 PSIG	SEAT : 325 PSIG		
TEST PRESSURE WITH AIR				

**NOTES**

- 1 THIS VALVE SPEC SHEET SHALL BE READ IN CONJUNCTION WITH TECHNICAL NOTES FOR VALVES, 6-44-0052.
- 2 ONLY IN THE CASE OF CATEGORY - II MRs,BIDDER SHALL CLEARLY WRITE ALL/ ANY DEVIATION AGAINST EACH PART/ MATERIAL OF VALVE IN THE SPACE PROVIDED FOR AND WHEREVER BIDDER AGREES WITH EIL'S SPEC BIDDER SHALL INDICATE "AGREED".
- 3 NO CUTTING/ OVERWRITING BY BIDDER ON EIL'S SPEC IS ALLOWED.
- 4 TESTING SHALL BE AS PER BS EN 12266-1.
- 5 10% VALVE CASTINGS SHALL UNDERGO RADIOGRAPHIC EXAMINATION.
- 6 ALL CASTINGS SHALL BE SOLUTION HEAT TREATED.
- 7 WELD REPAIR, IF ANY, SHALL BE CARRIED OUT BEFORE SOLUTION HEAT TREATMENT.

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MANUFACTURER

SHEET REV NO.	2	3	4	5	6	7
DATE	2-Jan-1995	14-Dec-2000	28-May-2001	30-Jun-2009	26-Apr-2018	25-Jul-2023

**53361**

<b>Client</b> : HPCL		<b>Dept. / Sect</b> : 16\43		
<b>Project</b> : LMBU PROJECT				
<b>Location</b> : MUMBAI		<b>Tag No</b> : 53366		<b>Sheet No.</b> 1 of 1
<b>CHECK VALVE SPECIFICATION</b>			<b>MANUF'S OFFER</b>	
<b>TAG NO. : 53366</b> <b>RATING : 150</b> <b>STANDARD : BS-1868</b> <b>SIZE RANGE : 2.00 " TO 24.00 "</b> <b>ENDS : FLGD TO B-16.5 RF/125AARH</b> <b>PIPING CLASS : A1N,A22N,A26N,A27N,A28N</b>			<b>STANDARD :</b> <b>MFGRS CAT/FIG :</b> (For category -II MRs only) <b>RATING :</b> <b>ENDS :</b>	
DESCRIPTION	CONSTRUCTION	MATERIAL	CONSTRUCTION	MATERIAL
BODY	CAST	ASTM A 351 GR CF3M		
COVER	BOLTED	ASTM A 351 GR.CF3M		
DISC		SS 316L		
BODY SEAT RING	RENEWABLE/NON-RENEWABLE	SS 316L		
DISC HINGE		SS 316L		
HINGE PIN		SS316L(NO CASTING)		
COVER STUD BOLT		ASTM A193 GR B8M CL.2		
COVER NUT		ASTM A194 GR 8M		
COVER GASKET		SP WND SS316L-GRAFOIL FILLER		
BY PASSES				
TYPE	SWING CHECK TYPE			
REQUIREMENT OF RADIOGRAPHY		REFER TECHNICAL NOTES FOR PURCHASE OF VALVES.		
OTHERS				
SPECIAL SERVICE CONDITIONS		MAX TEMP 371 DEG. C.		
WASHER,NUT,PIN		SS 316L(NO CASTING)		
HYDROSTATIC TEST PRESSURE	BODY : 425 PSIG	SEAT : 325 PSIG		
TEST PRESSURE WITH AIR				

**NOTES**

- 1 THIS VALVE SPEC SHEET SHALL BE READ IN CONJUNCTION WITH TECHNICAL NOTES FOR VALVES, 6-44-0052.
- 2 ONLY IN THE CASE OF CATEGORY - II MRs,BIDDER SHALL CLEARLY WRITE ALL/ ANY DEVIATION AGAINST EACH PART/ MATERIAL OF VALVE IN THE SPACE PROVIDED FOR AND WHEREVER BIDDER AGREES WITH EIL'S SPEC BIDDER SHALL INDICATE "AGREED".
- 3 NO CUTTING/ OVERWRITING BY BIDDER ON EIL'S SPEC IS ALLOWED.
- 4 TESTING SHALL BE AS PER BS EN 12266-1.
- 5 10% VALVE CASTINGS SHALL UNDERGO RADIOGRAPHIC EXAMINATION.
- 6 ALL CASTINGS SHALL BE SOLUTION HEAT TREATED.
- 7 WELD REPAIR, IF ANY, SHALL BE CARRIED OUT BEFORE SOLUTION HEAT TREATMENT.

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SHEET REV NO.	2	3	4	5	6	7
DATE	2-Jan-1995	14-Dec-2000	28-May-2001	30-Jun-2009	26-Apr-2018	25-Jul-2023

**53366**

<b>Client</b> : HPCL			<b>Dept. / Sect</b> : 16\43	
<b>Project</b> : LMBU PROJECT				
<b>Location</b> : MUMBAI		<b>Tag No</b> : 53401		<b>Sheet No.</b> 1 of 1
<b>CHECK VALVE SPECIFICATION</b>			<b>MANUF'S OFFER</b>	
<b>TAG NO. : 53401</b>			<b>STANDARD :</b>	
<b>RATING : 300</b>			<b>MFGRS CAT/FIG :</b>	
<b>STANDARD : BS-1868</b>			<b>(For category -II MRs only)</b>	
<b>SIZE RANGE : 2.00 " TO 24.00 "</b>			<b>RATING :</b>	
<b>ENDS : FLGD TO B-16.5 RF/125AARH</b>			<b>ENDS :</b>	
<b>PIPING CLASS : B1A,B21A,B24A,B32A,B91A,B9A</b>				
DESCRIPTION	CONSTRUCTION	MATERIAL	CONSTRUCTION	MATERIAL
BODY	CAST	ASTM A 216 GR.WCB		
COVER	BOLTED	ASTM A 216 GR.WCB		
DISC		FACED WITH 13% CR.STEEL/13% CR.STEEL		
BODY SEAT RING	RENEWABLE/NON RENEWABLE	STELLITED		
DISC HINGE		13% CR STEEL/A216 GR WCB/A515 GR. 70		
HINGE PIN		13% CR STEEL(NO CASTING)		
COVER STUD BOLT		ASTM A193 GR B7		
COVER NUT		ASTM A194 GR 2H		
COVER GASKET		SP WND SS316-GRAFOIL FILLER		
BY PASSES				
TYPE	SWING CHECK TYPE			
REQUIREMENT OF RADIOGRAPHY		REFER TECHNICAL NOTES FOR PURCHASE OF VALVES.		
OTHERS				
SPECIAL SERVICE CONDITIONS		MAX TEMP 427 DEG. C.		
WASHER,NUT,PIN		13% CR STEEL(NO CASTING)/ SS 410/SS 304		
HYDROSTATIC TEST PRESSURE	BODY : 1125 PSIG	SEAT : 825 PSIG		
TEST PRESSURE WITH AIR				

**NOTES**

- THIS VALVE SPEC SHEET SHALL BE READ IN CONJUNCTION WITH TECHNICAL NOTES FOR VALVES, 6-44-0052.
- ONLY IN THE CASE OF CATEGORY - II MRs,BIDDER SHALL CLEARLY WRITE ALL/ ANY DEVIATION AGAINST EACH PART/ MATERIAL OF VALVE IN THE SPACE PROVIDED FOR AND WHEREVER BIDDER AGREES WITH EIL'S SPEC BIDDER SHALL INDICATE "AGREED".
- NO CUTTING/ OVERWRITING BY BIDDER ON EIL'S SPEC IS ALLOWED.
- TESTING SHALL BE AS PER BS EN 12266-1.
- 10% VALVE CASTINGS UPTO 16" AND 100% VALVE CASTINGS 18" AND ABOVE SHALL UNDERGO RADIOGRAPHIC EXAMINATION.

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SHEET REV NO.	2	3	4	5	6	7
DATE	2-Jan-1995	14-Dec-2000	28-May-2001	30-Jun-2009	26-Apr-2018	9-Dec-2019

**53401**

<b>Client</b> : HPCL		<b>Dept. / Sect</b> : 16\43		
<b>Project</b> : LMBU PROJECT				
<b>Location</b> : MUMBAI		<b>Tag No</b> : 53402		<b>Sheet No.</b> 1 of 1
<b>CHECK VALVE SPECIFICATION</b>			<b>MANUF'S OFFER</b>	
<b>TAG NO. : 53402</b> <b>RATING : 300</b> <b>STANDARD : BS-1868</b>			<b>STANDARD :</b>	
<b>SIZE RANGE : 2.00 " TO 24.00 "</b> <b>ENDS : FLGD TO B-16.5 RF/125AARH</b>			<b>MFGRS CAT/FIG :</b> (For category -II MRs only)	
<b>PIPING CLASS : B22A,B2A,B81A,B84A</b>			<b>RATING :</b> <b>ENDS :</b>	
DESCRIPTION	CONSTRUCTION	MATERIAL	CONSTRUCTION	MATERIAL
BODY	CAST	ASTM A 216 GR.WCB		
COVER	BOLTED	ASTM A 216 GR.WCB		
DISC		13% CR STEEL FACING/13% CR. STEEL		
BODY SEAT RING	RENEWABLE/NON RENEWABLE	STELLITED		
HINGE PIN		13% CR STEEL(NO CASTING)		
DISC HINGE		13% CR. STEEL/A216 GR WCB/A515 GR 70		
COVER STUD BOLT		ASTM A193 GR B7		
COVER NUT		ASTM A194 GR 2H		
COVER GASKET		SP WND SS316-GRAFOIL FILLER		
BY PASSES				
TYPE	SWING CHECK TYPE			
REQUIREMENT OF RADIOGRAPHY		REFER TECHNICAL NOTES FOR PURCHASE OF VALVES.		
OTHERS				
SPECIAL SERVICE CONDITIONS	I.B.R	STEAM/CONDENSATE/BOILER FEED WATER; MAX TEMP. 427 DEG.C.		
WASHER,NUT,PIN		13% CR STEEL(NO CASTING)/SS 410/SS 304		
HYDROSTATIC TEST PRESSURE	BODY : 1125 PSIG	SEAT : 825 PSIG		
TEST PRESSURE WITH AIR				

**NOTES**

- 1 THIS VALVE SPEC SHEET SHALL BE READ IN CONJUNCTION WITH TECHNICAL NOTES FOR VALVES, 6-44-0052.
- 2 ONLY IN THE CASE OF CATEGORY - II MRs,BIDDER SHALL CLEARLY WRITE ALL/ ANY DEVIATION AGAINST EACH PART/ MATERIAL OF VALVE IN THE SPACE PROVIDED FOR AND WHEREVER BIDDER AGREES WITH EIL'S SPEC BIDDER SHALL INDICATE "AGREED".
- 3 NO CUTTING/ OVERWRITING BY BIDDER ON EIL'S SPEC IS ALLOWED.
- 4 TESTING SHALL BE AS PER BS EN 12266-1 & IBR
- 5 ALL VALVES SHALL BE SUPPLIED WITH IBR CERTIFICATE IN FORM-III C.
- 6 ALL VALVES SHALL BE PAINTED RED ON BODY-COVER JOINT.
- 7 10% VALVE CASTINGS UPTO 16" AND 100% VALVE CASTINGS 18" AND ABOVE SHALL UNDERGO RADIOGRAPHIC EXAMINATION.
- 8 VALVES TO COMPLY WITH DESIGN REQUIREMENTS OF IBR ALSO.

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SHEET REV NO.	2	3	4	5	6	7
DATE	2-Jan-1995	14-Dec-2000	28-May-2001	30-Jun-2009	26-Apr-2018	9-Dec-2019

**53402**

Client : HPCL		Dept. / Sect : 16\43		
Project : LMBU PROJECT				
Location : MUMBAI		Tag No : 53404		Sheet No. 1 of 1
CHECK VALVE SPECIFICATION			MANUF'S OFFER	
TAG NO. : 53404 RATING : 300 STANDARD : BS-1868			STANDARD :	
SIZE RANGE : 2.00 " TO 24.00 " ENDS : FLGD TO B-16.5 RF/125AARH			MFGRS CAT/FIG : (For category -II MRs only)	
PIPING CLASS : B51A,B5A			RATING : ENDS :	
DESCRIPTION	CONSTRUCTION	MATERIAL	CONSTRUCTION	MATERIAL
BODY	CAST	ASTM A 216 GR.WCB		
COVER	BOLTED	ASTM A 216 GR.WCB		
DISC		FACED WITH 13% CR.STEEL/13% CR.STEEL		
BODY SEAT RING	RENWABLE/NON-RENE WABLE	STELLITED		
DISC HINGE		13% CR. STEEL/A216 GR WCB/A515 GR 70		
HINGE PIN		13% CR STEEL(NO CASTING)		
COVER STUD BOLT		ASTM A193 GR B7		
COVER NUT		ASTM A194 GR 2H		
COVER GASKET		SP WND SS316-GRAFOIL FILLER		
BY PASSES				
TYPE	SWING CHECK TYPE			
REQUIREMENT OF RADIOGRAPHY		REFER TECHNICAL NOTES FOR PURCHASE OF VALVES.		
OTHERS				
SPECIAL SERVICE CONDITIONS	H2	MAX TEMP 230 DEG C.		
WASHER,NUT,PIN		13% CR STEEL(NO CASTING)		
HYDROSTATIC TEST PRESSURE	BODY : 1125 PSIG	SEAT : 825 PSIG		
TEST PRESSURE WITH AIR				

**NOTES**

- THIS VALVE SPEC SHEET SHALL BE READ IN CONJUNCTION WITH TECHNICAL NOTES FOR VALVES, 6-44-0052.
- ONLY IN THE CASE OF CATEGORY - II MRs,BIDDER SHALL CLEARLY WRITE ALL/ ANY DEVIATION AGAINST EACH PART/ MATERIAL OF VALVE IN THE SPACE PROVIDED FOR AND WHEREVER BIDDER AGREES WITH EIL'S SPEC BIDDER SHALL INDICATE "AGREED".
- NO CUTTING/ OVERWRITING BY BIDDER ON EIL'S SPEC IS ALLOWED.
- TESTING SHALL BE AS PER BS EN 12266-1.
- 50% OF VALVE CASTINGS UPTO 16" AND 100% OF VALVE CASTINGS 18" AND ABOVE SHALL UNDERGO RADIOGRAPHIC EXAMINATION.
- VALVES SHALL MEET THE REQUIREMENTS FOR HYDROGEN SERVICE AS SPECIFIED IN 'TECHNICAL NOTES FOR VALVES'.

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SHEET REV NO.	2	3	4	5	6	7
DATE	2-Jan-1995	14-Dec-2000	28-May-2001	30-Jun-2009	26-Apr-2018	9-Dec-2019

**53404**

Client : HPCL		Dept. / Sect : 16\43		
Project : LMBU PROJECT				
Location : MUMBAI		Tag No : 53411		Sheet No. 1 of 1
CHECK VALVE SPECIFICATION			MANUF'S OFFER	
TAG NO. : 53411 RATING : 300 STANDARD : BS-1868			STANDARD :	
SIZE RANGE : 2.00 " TO 24.00 " ENDS : FLGD TO B-16.5 RF/125AARH			MFGRS CAT/FIG : (For category -II MRs only)	
PIPING CLASS : B16A,B26A,B61A,B64A,B66A,B68A,B69A			RATING : ENDS :	
DESCRIPTION	CONSTRUCTION	MATERIAL	CONSTRUCTION	MATERIAL
BODY	CAST	ASTM A 216 GR.WCB		
COVER	BOLTED	ASTM A 216 GR.WCB		
DISC		SS 316L FACING/SS 316L		
BODY SEAT RING	RENEWABLE/NON-RENEWABLE	SS 316L FACING/SS 316L		
DISC HINGE		SS 316L/ A 216 GR.WCB		
HINGE PIN		SS316L(NO CASTING)		
COVER STUD BOLT		ASTM A193 GR B7M		
COVER NUT		ASTM A194 GR 2HM		
COVER GASKET		SP WND SS316L-GRAFOIL FILLER		
BY PASSES				
TYPE	SWING CHECK TYPE			
REQUIREMENT OF RADIOGRAPHY		REFER TECHNICAL NOTES FOR PURCHASE OF VALVES.		
OTHERS				
SPECIAL SERVICE CONDITIONS	NACE	SOUR SERVICE; MAX TEMP 427 DEG. C.		
WASHER,NUT,PIN		SS 316L (NO CASTING)		
HYDROSTATIC TEST PRESSURE	BODY : 1125 PSIG	SEAT : 825 PSIG		
TEST PRESSURE WITH AIR				

**NOTES**

- THIS VALVE SPEC SHEET SHALL BE READ IN CONJUNCTION WITH TECHNICAL NOTES FOR VALVES, 6-44-0052.
- ONLY IN THE CASE OF CATEGORY - II MRs,BIDDER SHALL CLEARLY WRITE ALL/ ANY DEVIATION AGAINST EACH PART/ MATERIAL OF VALVE IN THE SPACE PROVIDED FOR AND WHEREVER BIDDER AGREES WITH EIL'S SPEC BIDDER SHALL INDICATE "AGREED".
- NO CUTTING/ OVERWRITING BY BIDDER ON EIL'S SPEC IS ALLOWED.
- TESTING SHALL BE AS PER BS EN 12266-1.
- 50% VALVE CASTINGS UPTO 16" AND 100% VALVE CASTINGS 18" AND ABOVE SHALL UNDERGO RADIOGRAPHIC EXAMINATION.
- NACE REQUIREMENTS SHALL BE AS PER MR0103.

SIGNATURE & SEAL OF MANUFACTURER

SHEET REV NO.	2	3	4	5	6	7	8
DATE	2-Jan-1995	14-Dec-2000	28-May-2001	22-Mar-2002	30-Jun-2009	26-Apr-2018	9-Dec-2019

53411

Client : HPCL			Dept. / Sect : 16\43	
Project : LMBU PROJECT				
Location : MUMBAI		Tag No : 53466		Sheet No. 1 of 1
CHECK VALVE SPECIFICATION			MANUF'S OFFER	
TAG NO. : 53466 RATING : 300 STANDARD : BS-1868			STANDARD :	
SIZE RANGE : 2.00 " TO 24.00 " ENDS : FLGD TO B-16.5 RF/125AARH			MFGRS CAT/FIG : (For category -II MRs only)	
PIPING CLASS : B26N			RATING : ENDS :	
DESCRIPTION	CONSTRUCTION	MATERIAL	CONSTRUCTION	MATERIAL
BODY	CAST	ASTM A 351 GR CF3M		
COVER	BOLTED	ASTM A 351 GR.CF3M		
DISC		SS 316L		
BODY SEAT RING	RENEWABLE/NON-RENEWABLE	SS 316L		
DISC HINGE		SS 316L		
HINGE PIN		SS316L(NO CASTING)		
COVER STUD BOLT		ASTM A193 GR B8M CL.2		
COVER NUT		ASTM A194 GR 8M		
COVER GASKET		SP WND SS316L-GRAFOIL FILLER		
BY PASSES				
TYPE	SWING CHECK TYPE			
REQUIREMENT OF RADIOGRAPHY		REFER TECHNICAL NOTES FOR PURCHASE OF VALVES.		
OTHERS				
SPECIAL SERVICE CONDITIONS		MAX TEMP 454 DEG. C.		
WASHER,NUT,PIN		SS 316L (NO CASTING)		
HYDROSTATIC TEST PRESSURE	BODY : 1100 PSIG	SEAT : 800 PSIG		
TEST PRESSURE WITH AIR				

**NOTES**

- THIS VALVE SPEC SHEET SHALL BE READ IN CONJUNCTION WITH TECHNICAL NOTES FOR VALVES, 6-44-0052.
- ONLY IN THE CASE OF CATEGORY - II MRs,BIDDER SHALL CLEARLY WRITE ALL/ ANY DEVIATION AGAINST EACH PART/ MATERIAL OF VALVE IN THE SPACE PROVIDED FOR AND WHEREVER BIDDER AGREES WITH EIL'S SPEC BIDDER SHALL INDICATE "AGREED".
- NO CUTTING/ OVERWRITING BY BIDDER ON EIL'S SPEC IS ALLOWED.
- TESTING SHALL BE AS PER BS EN 12266-1.
- 10% VALVE CASTINGS UPTO 16" AND 100% VALVE CASTINGS 18" AND ABOVE SHALL UNDERGO RADIOGRAPHIC EXAMINATION.
- ALL CASTINGS SHALL BE SOLUTION HEAT TREATED
- WELD REPAIR, IF ANY, SHALL BE CARRIED OUT BEFORE SOLUTION HEAT TREATMENT.

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SHEET REV NO.	2	3	4	5	6	7
DATE	2-Jan-1995	14-Dec-2000	28-May-2001	30-Jun-2009	26-Apr-2018	25-Jul-2023

**53466**

<b>Client</b> : HPCL		<b>Dept. / Sect</b> : 16\43		
<b>Project</b> : LMBU PROJECT				
<b>Location</b> : MUMBAI		<b>Tag No</b> : 53499		<b>Sheet No.</b> 1 of 1
<b>CHECK VALVE SPECIFICATION</b>			<b>MANUF'S OFFER</b>	
<b>TAG NO. : 53499</b> <b>RATING : 300</b> <b>STANDARD : ANSI-B-16.34</b>			<b>STANDARD :</b>	
<b>SIZE RANGE : 2.00 " TO 24.00 "</b> <b>ENDS : FLGD TO B-16.5 RF/125AARH</b>			<b>MFGRS CAT/FIG :</b> (For category -II MRs only)	
<b>PIPING CLASS : B52AW</b>			<b>RATING :</b> <b>ENDS :</b>	
DESCRIPTION	CONSTRUCTION	MATERIAL	CONSTRUCTION	MATERIAL
BODY	CAST	ASTM A 216 GR.WCB		
COVER	BOLTED	ASTM A 216 GR.WCB		
DISC		FACED WITH SS 316/ SS 316		
BODY SEAT RING	RENEWABLE/NON-RENEWABLE	HARDFACED		
DISC HINGE		SS 316/ A 216 GR.WCB		
HINGE PIN	INTERNAL	SS316; (NO CASTING)		
COVER STUD BOLT		ASTM A193 GR B7M		
COVER NUT		ASTM A194 GR 2HM		
COVER GASKET		SP WND SS316-GRAFOIL FILLER		
BY PASSES				
TYPE	SWING CHECK TYPE			
REQUIREMENT OF RADIOGRAPHY		REFER TECHNICAL NOTES FOR PURCHASE OF VALVES.		
OTHERS				
SPECIAL SERVICE CONDITIONS	NACE + H2	SOUR SERVICE & H2 SERVICE; MAX TEMP 260 DEG. C.		
WASHER,NUT,PIN		SS 316 (NO CASTING)		
HYDROSTATIC TEST PRESSURE	BODY : 1125 PSIG	SEAT : 825 PSIG		
TEST PRESSURE WITH AIR				

**NOTES**

- 1 THIS VALVE SPEC SHEET SHALL BE READ IN CONJUNCTION WITH TECHNICAL NOTES FOR VALVES, 6-44-0052.
- 2 ONLY IN THE CASE OF CATEGORY - II MRs,BIDDER SHALL CLEARLY WRITE ALL/ ANY DEVIATION AGAINST EACH PART/ MATERIAL OF VALVE IN THE SPACE PROVIDED FOR AND WHEREVER BIDDER AGREES WITH EIL'S SPEC BIDDER SHALL INDICATE "AGREED".
- 3 NO CUTTING/ OVERWRITING BY BIDDER ON EIL'S SPEC IS ALLOWED.
- 4 TESTING SHALL BE AS PER BS EN 12266-1.
- 5 50% VALVE CASTINGS UPTO 16" AND 100% VALVE CASTINGS 18" AND ABOVE SHALL UNDERGO RADIOGRAPHIC EXAMINATION.
- 6 NACE REQUIREMENTS SHALL BE AS PER MR0103.
- 7 IF EXTERNAL HINGE PIN IS PROVIDED, THAT SHALL BE SEAL WELDED.
- 8 ALL A 105 MATERIALS, IF ANY, SHALL BE SUPPLIED IN NORMALIZED CONDITION ONLY.
- 9 WALL THICKNESS SHALL BE AS PER API 600/ ISO 10434.
- 10 VALVES SHALL MEET THE REQUIREMENTS FOR HYDROGEN SERVICE AS SPECIFIED IN 'TECHNICAL NOTES FOR VALVES".

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<b>SHEET REV NO.</b>	0
<b>DATE</b>	10-Feb-2026

**53499**

<b>Client</b> : HPCL		<b>Dept. / Sect</b> : 16\43		
<b>Project</b> : LMBU PROJECT				
<b>Location</b> : MUMBAI		<b>Tag No</b> : 534ZD		<b>Sheet No.</b> 1 of 1
<b>CHECK VALVE SPECIFICATION</b>			<b>MANUF'S OFFER</b>	
<b>TAG NO.:</b> 534ZD <b>RATING:</b> 300 <b>STANDARD:</b> BS-1868 <b>SIZE RANGE:</b> 2.00 " TO 24.00 " <b>ENDS:</b> FLGD TO B-16.5 RF/125AARH <b>PIPING CLASS:</b> B25A			<b>STANDARD:</b> <b>MFGRS CAT/FIG:</b> (For category -II MRs only) <b>RATING:</b> <b>ENDS:</b>	
DESCRIPTION	CONSTRUCTION	MATERIAL	CONSTRUCTION	MATERIAL
BODY	CAST	ASTM A 216 GR.WCB		
COVER	BOLTED	ASTM A 216 GR.WCB		
DISC		SS316		
BODY SEAT RING	RENEWABLE/NON-RENEWABLE	SS316		
DISC HINGE		SS 316/A216 GR WCB/A515 GR 70		
HINGE PIN		SS316 (NO CASTING)		
COVER STUD BOLT		ASTM A193 GR B7		
COVER NUT		ASTM A194 GR 2H		
COVER GASKET		SP WND SS316-GRAFOIL FILLER		
BY PASSES				
TYPE	SWING CHECK TYPE			
REQUIREMENT OF RADIOGRAPHY		REFER TECHNICAL NOTES FOR PURCHASE OF VALVES.		
OTHERS				
SPECIAL SERVICE CONDITIONS	H2	MAX TEMP 230 DEG C		
WASHER,NUT,PIN		SS 316 (NO CASTING)		
HYDROSTATIC TEST PRESSURE	BODY : 1125 PSIG	SEAT : 825 PSIG		
TEST PRESSURE WITH AIR				

**NOTES**

- THIS VALVE SPEC SHEET SHALL BE READ IN CONJUNCTION WITH TECHNICAL NOTES FOR VALVES, 6-44-0052.
- ONLY IN THE CASE OF CATEGORY - II MRs,BIDDER SHALL CLEARLY WRITE ALL/ ANY DEVIATION AGAINST EACH PART/ MATERIAL OF VALVE IN THE SPACE PROVIDED FOR AND WHEREVER BIDDER AGREES WITH EIL'S SPEC BIDDER SHALL INDICATE "AGREED".
- NO CUTTING/ OVERWRITING BY BIDDER ON EIL'S SPEC IS ALLOWED.
- TESTING SHALL BE AS PER BS EN 12266-1.
- 50% VALVE CASTINGS UPTO 16" AND 100% VALVE CASTINGS 18" AND ABOVE SHALL UNDERGO RADIOGRAPHIC EXAMINATION.
- VALVES SHALL MEET THE REQUIREMENTS FOR HYDROGEN SERVICE AS SPECIFIED IN 'TECHNICAL NOTES FOR VALVES'

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<b>SHEET REV NO.</b>	0
<b>DATE</b>	11-Feb-2026

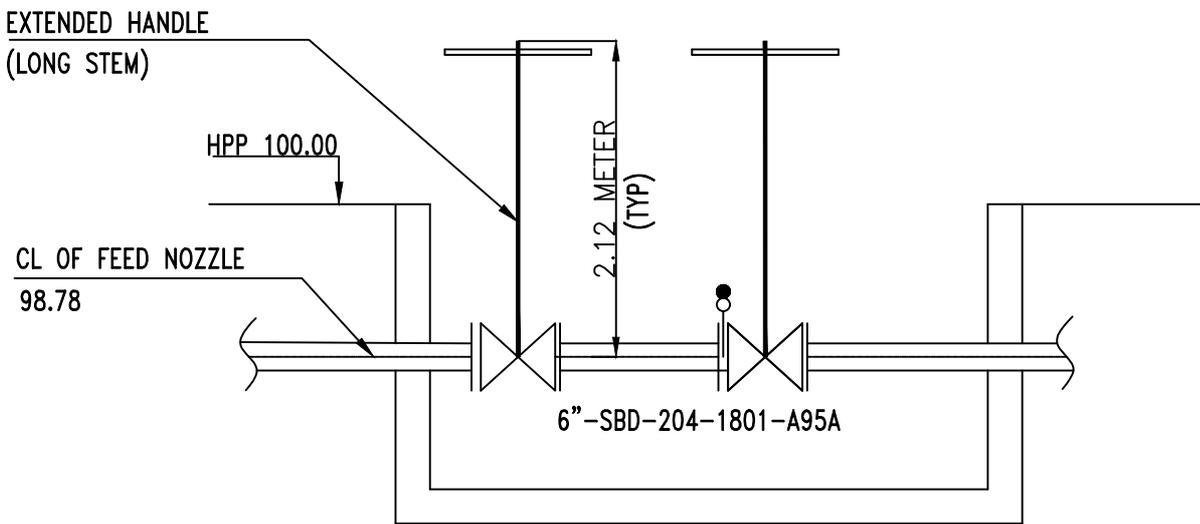
**534ZD**



HINDUSTAN PETROLEUM  
CORP. LTD.

REV.	DATE	REVISION	BY	CHECKED	APPD.	APPD.
0	09.01.2026	ISSUED FOR MTO	ANJALI	AM/AK	DDB	
1	12.01.2026	REVISED & REISSUED FOR MTO	ANJALI	AM/AK	DDB	

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6" GVA (126) - A95A : 1 NO.  
6"-VSBA (152)- A95A : 1 NO.

SOUR WATER BLOW DOWN DRUM  
(204-D-1004)

NOTES:

1. DOCUMENT SHALL BE REFERRED FOR EXTENDED STEM HEIGHT.
2. REFER P&ID NO. C068-79-41-204-1118



ENGINEERS INDIA LIMITED  
NEW DELHI

SKETCH FOR GATE VALVE WITH  
EXTENDED HANDLE INSIDE INLET  
VALVE PIT (SWS/ARU UNIT)

DRAWING NO.

C068-203-81-45-44751

REV.

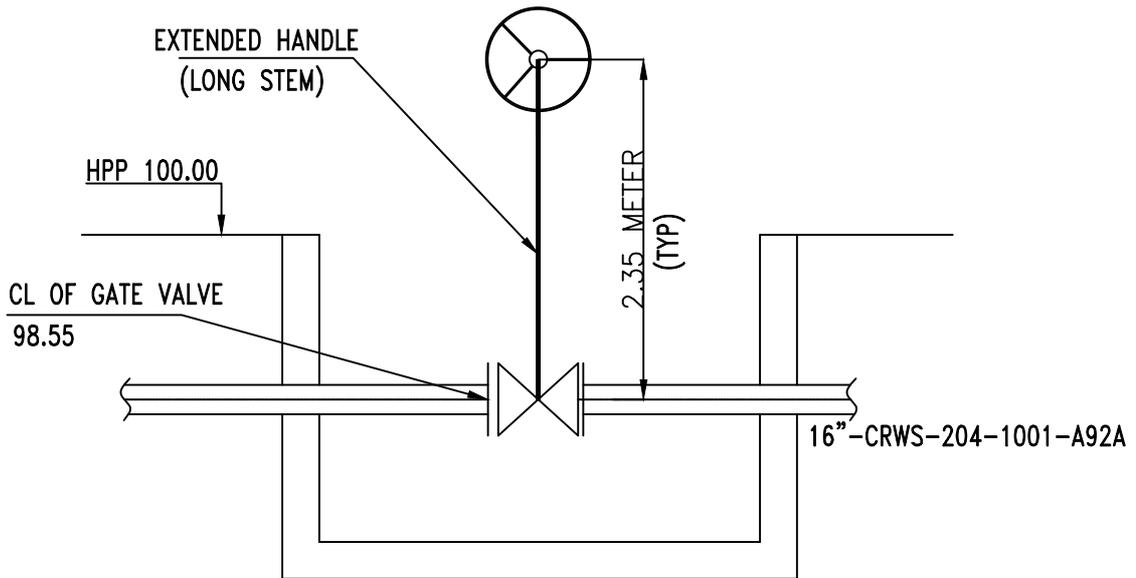
1



HINDUSTAN PETROLEUM  
CORP. LTD.

REV.	DATE	REVISION	BY	CHECKED	APPD.	APPD.
0	09.01.2025	ISSUED FOR MTO	ANJALI	AM/AK	DDB	
1	12.01.2025	REVISED & REISSUED FOR MTO	ANJALI	AM/AK	DDB	

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16" GVA (126) - A92A : 2 NOS.

CRWS TWO WAY VALVE PIT (SWS/ARU UNIT)

**NOTES:**

1. DOCUMENT SHALL BE REFERRED FOR EXTENDED STEM HEIGHT.
2. REFER P&ID NO. C068-203-81-45-04201.



ENGINEERS INDIA LIMITED  
NEW DELHI

SKETCH FOR GATE VALVE WITH  
EXTENDED HANDLE INSIDE CRWS  
TWO WAY VALVE PIT (SWS/ARU UNIT)

DRAWING NO.

C068-203-81-45-44752

REV.

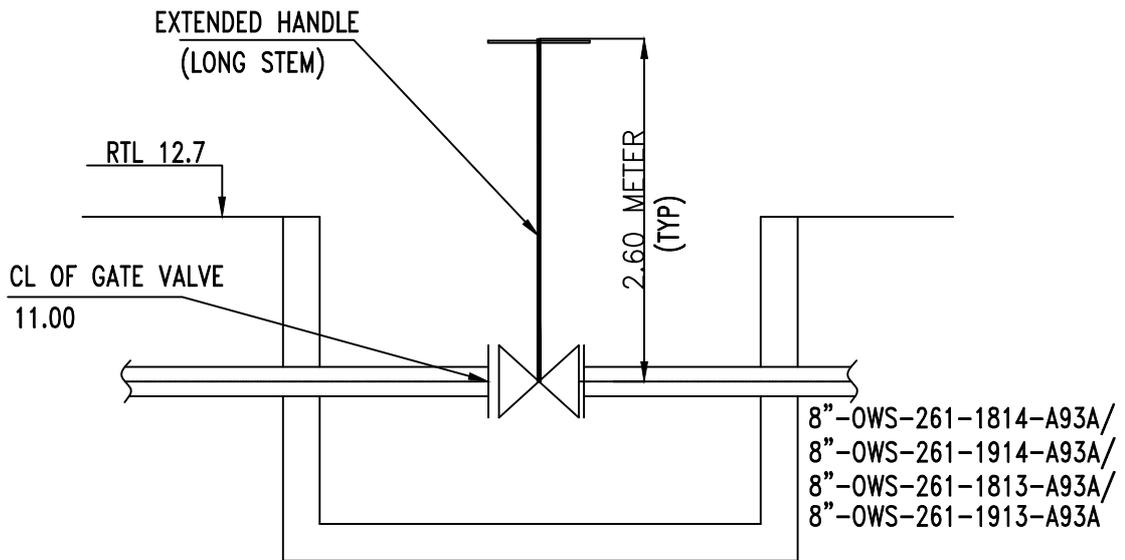
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HINDUSTAN PETROLEUM  
CORP. LTD.

REV.	DATE	REVISION	BY	CHECKED	APPD.	APPD.
0	09.01.2025	ISSUED FOR MTO	ANJALI	AM/AK	DDB	
1	12.01.2026	REVISED AND REISSUED FOR MTO	ANJALI	AM/AK	DDB	

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8" GVA (126) - A93A : 4 NOS.

TWO WAY VALVE PIT (OFFSITE PRODUCT TANK AREA)

**NOTES:**

1. DOCUMENT SHALL BE REFERRED FOR EXTENDED STEM HEIGHT.
2. REFER OWS LAYOUT DRG. NO. C068-261-81-45-04417.



ENGINEERS INDIA LIMITED  
NEW DELHI

SKETCH FOR GATE VALVE WITH  
EXTENDED HANDLE INSIDE TWO WAY  
VALVE PIT (PRODUCT TANK AREA)

**DRAWING NO.**

C068-261-81-45-44753

**REV.**

1