

قائمة المواصفات الفنية للمواد ( المتممات والصمامات والأنابيب الرئيسية ) اللازمة لربط البئر المهر 6 بمحطة المهر الغازية

notes	Qu.	Details	Size	Item	Sr
PIPE API5LX65 wt 12.7 mm	2	ASTM 694 F65 ,class 1500# beveled end	6"	ANCHOR FLANGE	1
ASME B16.5	20	WN CL1500 RTJ MSS-SP-44 , ASTM A694 GR F65 ,12.7 MM	6"	flange	2
	10	BW MSS-SP-75 A694 GR F65 MSS-SP-97 WT XXS	6"*2"	Weldolet	3
ASME B16.5	10	WN CL1500 RTJ MSS-SP-44 A694 GR , ASTM A694 GR F65 , XXS	2"	flange	4
ASME B16.5	5	CL1500 RTJ MSS-SP-44 , ASTM A694 GR F65	2"	blind flange	5
seamless	5	A860-WPHY 65 MSS SP-75, XXS	2" * 1"	Tee Reducing	6
ASME B16.5	6	WN CL1500 RTJ MSS-SP-44 , ASTM A694 GR F65 , XXS	1"	flange	7
ASME B16.5	6	CL1500 RTJ MSS-SP-44 , ASTM A694 GR F65	1"	blind flange	8
	3	CI1500 RTJ A216-WCB , TRUNNION MOUNTED, fire-safe /antistatic design, anti-blowout stem, trim : ASTM A479 UNS S31803,PEEK , Gear operated , according to API6D, Flange according to B16.5,Face to Face according to B16.10 , Full Bore	6"	ball valve	9
ASME B16.5	4	CL1500 RTJ MSS-SP-44 , ASTM A694 GR F65 ,with ½" NPT hole	2"	blind flange	10
PRESSURE SEAL BONNET, flexible wedge, removable seat	5	Gate valve OS&Y rising stem hand-wheel operator flange 1500 RTJ , body A216WCB,Trim ASTM A182 F51	2"	Gate valve	11
Solid wedge	4	Gate valve OS&Y rising stem hand-wheel operator flange 1500 RTJ , body A216WCB,Trim ASTM A182 F51	1"	Gate valve	12
	5	A860-WPHY 65 MSS SP-75 WT sch160	6"	Barred Equal Tee	13
	5	BW ASTMA105,WT XXS	6"*2"	Weldolet	14
	5	BW MSS-SP-75 A694 GR F65 MSS-SP-97 WT XXS	6"*1"	Weldolet	15
	5	BW ASTMA105,WT XXS	6"*1"	Weldolet	16

ASME B16.5	5	CL600 , RF,A105 ,with ½" NPT hole	1"	blind flange	17
ASME B16.5	5	WN CL600 RF ,A105 sch XXS	1"	flange	18
seamless	2	ASTM 234WPB WT sch 120	6"	Equal Tee	19
LR , seamless	3	ASTM 234WPB WT sch 120	6"	Elbow 90	20
ASME B16.5	8	WN CL600 , RF,A105 , WT sch 120	6"	flange	21
	3	CI 600 RF, A216-WCB ,TRUNNION MOUNTED, fire-safe /antistatic design, anti-blowout stem, trim : , ASTM A479 UNS S31803PEEK , according to API6D, Flange according to B16.5,Face to Face according to B16.10	6"	ball valve	22
seamless	1	A234WPB , SCH100 * SCH120	12"*6"	Red Tee	23
Solid wedge	2	Gate valve OS&Y rising stem hand-wheel operator flange 600 RF , body A216WCB,Trim ASTM A182 F51	1"	Gate valve	24
ASME B16.5	5	WN CL600,RF,A105, SCH100	12"	flange	25
ASME B16.5	15	WN CL1500 RTJ MSS-SP-44 , ASTM A694 GR F65 ,sch160	6"	flange	26
ASME B16.5	1	WN CL1500 , RF,A105 , WT sch 120	6"	flange	27
ASME B16.5	5	WN CL600 RF ,A105 sch XXS	2"	flange	28
ASME B16.5	5	CL1500 RTJ MSS-SP-44 , ASTM A694 GR F65	6"	blind flange	29
LR, seamless	6	A860-WPHY 65 MSS SP-75 12.7 MM WT	6"	45 deg ELBOW	30
ASME B16.5 , ASME B16.20	33	RTJ oval ring class 1500 soft iron,ASME 16.20	6"	Gasket	31
ASME B16.5 , ASME B16.20	20	RTJ oval ring class 1500 soft iron,ASME 16.20	2"	Gasket	32
ASME B16.5 , ASME B16.20	16	RTJ oval ring class 1500 soft iron,ASME 16.20	1"	Gasket	33
	300	Stud bolt with two heavy hex head nuts A193-B7/A194-2H,1.3/8" Dia * 265 mm lg	6"	Stud bolt	34
	150	Stud bolt with two heavy hex head nuts A193-B7/A194-2H,7/8" Dia * 145 mm lg	2"	Stud bolt	35
	24	Stud bolt with two heavy hex head nuts A193-B7/A194-2H,7/8" Dia * 125 mm lg	1"	Stud bolt	36

ASME B16.5 , ASME B16.20	12	SS314 SWG, Graphite filler , 316SS inner ring ,CS outer ring ,4.5 mm thickness,class 600	6"	Gasket	37
ASME B16.5 , ASME B16.20	5	SS314 SWG, Graphite filler , 316SS inner ring ,CS outer ring ,4.5 mm thickness,class 600	2"	Gasket	38
ASME B16.5 , ASME B16.20	15	SS314 SWG, Graphite filler , 316SS inner ring ,CS outer ring ,4.5 mm thickness, class600	1"	Gasket	39
ASME B16.5 , ASME B16.20	5	SS314 SWG, Graphite filler , 316SS inner ring ,CS outer ring ,4.5 mm thickness, class600	12"	Gasket	40
	100	Stud bolt with two heavy hex head nuts A193-B7/A194-2H,1" Dia * 170 mm lg	6"	Stud bolt	41
	30	Stud bolt with two heavy hex head nuts A193-B7/A194-2H,5/8" Dia * 110 mm lg	2"	Stud bolt	42
	30	Stud bolt with two heavy hex head nuts A193-B7/A194-2H,5/8" Dia * 90 mm lg	1"	Stud bolt	43
	60	Stud bolt with two heavy hex head nuts A193-B7/A194-2H,1.1/4" Dia * 225 mm lg	12"	Stud bolt	44
	2	WN CL5000 RTJ A694 GR F65,API6A type 6B, to suit 3" NPS,XXS THK	3 1/8"	flange	45
seamless	2	A860-WPHY 65 MSS SP-75,Sch160 * XXS	6"*3"	Concentric Reducer	46
LR , seamless	4	A860-WPHY 65 MSS SP-75 Sch160	6"	Elbow 90	47
seamless	4	A860-WPHY 65 MSS SP-75,Sch 160 * XXS	6" * 3"	Barred Tee Reducing	48
ASME B16.5	4	WN CL1500 RTJ MSS-SP-44 , ASTM A694 GR F65 , XXS	3"	flange	49
ASME B16.5	4	CL1500 RTJ MSS-SP-44 , ASTM A694 GR F65	3"	blind flange	50
	4	CI1500 RTJ A216-WCB , TRUNNION MOUNTED, fire-safe /antistatic design, anti-blowout stem, trim : ASTM A479 UNS S31803,PEEK , Gear operated , according to API6D , Full Bore	3"	ball valve	51
	2	A860-WPHY 65 MSS SP-75 WT sch160	6"	Equal Tee	52
	4	RTJ ring class 5000 soft iron	3 1/8"	Gasket	53
	10	RTJ oval ring class 1500 soft iron,ASME 16.20	3"	Gasket	54
	50	Stud bolt with two heavy hex head nuts A193-B7/A194-2H, 1.1/8" Dia * 180 mm lg	3"	Stud bolt	55
	25	Stud bolt with two heavy hex head nuts A193-B7/A194-2H, 1.1/8" Dia * 185 mm lg	3 1/8"	Stud bolt	56

Dims according to ASME B36.10	100 meter	Pipe seamless beveled end API5L X65,wt 12.7 mm	6"	Pipe	<b>57</b>
Dims according to ASME B36.10	12 meter	Pipe seamless beveled end API5L X65,wt XXS	3"	Pipe	<b>58</b>
Dims according to ASME B36.10	12 meter	Pipe seamless beveled end API5L X65,wt XXS	2"	Pipe	<b>59</b>
Dims according to ASME B36.10	12 meter	Pipe seamless beveled end API5L X65 , wt XXS	1"	Pipe	<b>60</b>
Dims according to ASME B36.10	80 meter	Pipe seamless beveled end API5L X65, WT sch160	6"	Pipe	<b>61</b>
Dims according to ASME B36.10	80 meter	Pipe seamless beveled end A106 Gr B , WT sch120	6"	Pipe	<b>62</b>
Dims according to ASME B36.10	12 meter	Pipe seamless beveled end A106 Gr B , WT sch100	12"	Pipe	<b>63</b>
Dims according to ASME B36.10	12 meter	Pipe seamless beveled end A106 Gr B , WT XXS	1"	Pipe	<b>64</b>
Dims according to ASME B36.10	12 meter	Pipe seamless beveled end A106 Gr B , WT XXS	2"	pipe	<b>65</b>

**General requirements:**

- 1- Bidder shall Provide the individual price of the items and the total price
- 2- Bidder shall Provide mil test certificates upon supply
- 3- Bidder shall provide data sheet and general arrangement drawings for all valve upon supply
- 4- Bidder shall provide valid API certificates for all valves upon supply
- 5- Bidder shall provide general arrangement drawings for all valve with his technical offer
- 6- Manufacturer name ,material specification, thickness, heat number ,applicable standard shall be stamped clearly on all piping and fittings as per international standard (deep engraved)
- 7- The materials must be new and not renewed
- 8- All ball valve shall be according to API 6D
- 9- All Gate valve shall be according to API 600
- 10- Check valve shall be according to API694
- 11- All Ball Valve shall be Fire Safe as per API 607 ,API 6FA standard
- 12- All pipe and fitting shall be seamless
- 13- All valve flanges according to ANSI B16.5
- 14- All parts (Valve body, ball, stem, and wedge) should be one piece, welding is prohibited.
- 15- Dimensions of all valves (Face to face & end to end) shall comply with ANSI/ASME B16.10.
- 16- Ball valves shall have Vents or drain connections
- 17- Valves of 50 kg and heavier shall be fitted with lifting two points and self-supporting.
- 18- The flow direction shall be clearly marked on the body of the valve. Tagging is not acceptable.
- 19- All valves shall be provided with its technical data sheets and drawings which should clearly show all internal and external parts(position, material description, quantity....etc)
- 20- Design temperature shall be (-29÷ 90)°C, unless otherwise specified.
- 21- Ball valve Body cavity over-pressure shall be prevented by self-relieving seat rings/assemblies.
- 22- Seat rings shall be renewable
- 23- The ball valve seat rings shall be spring energized to ensure sealing at low differential pressure.
- 24- The valve stem shall be capable of withstanding the maximum operating torque required to operate the valve against the maximum differential pressure in accordance with the appropriate class.
- 25- All valves of trunnion mounted type shall have sealant injection to seats and stem seal
- 26- Valve Body material shall be ASTM 216WCB or A105
- 27- Valve Mill test certificates include the chemical analysis and mechanical properties of the materials used for the valve construction in accordance with the applicable standards
- 28- Valve Test certificates for hydrostatic and pneumatic tests shall be submitted complete with duration and pressure records of each test upon supply
- 29- Test reports of NDT tests for valve shall be submitted upon supply
- 30- Test report on operation of valves shall be submitted upon supply



### **General requirements:**

- 31- The Company has the right to witness all tests, inspections of material at the manufacturers workshop to ensure conformance to the material requisition specifications and requirements and international standards , the Contractor shall arrange such visit for company team and to be responsible for-all cost
- 32- Valve specification & information shall be die-stamped or deep engraved on a stainless steel name plate fastened to the valve with SS pan head screws. Each nameplate shall show, as a minimum: (diameter, ANSI class. pressure rating, body material and internal components materials, part number ,serial number, reference standard )
- 33- valve will have surfaces coated with an anti-corrosive varnish, and shall be blanked to protect the gasket surfaces and internals, protective covers may be wood, wood fiber, plastic or metal and shall be securely attached to the valve, then they will be packed in waterproof wooden boxes in such a manner that the flange faces will be separated from other by wood or fiber board. Weight of each case not to exceed one tone.  
One copy of the packing list shall be fastened in a sealed waterproof envelope to the outside of the box
- 34- All ball valves shall be transported in the fully open condition.
- 35- All pipes and fittings shall be coated with an anti-corrosive varnish
- 36- All pipes and shall be blanked to protect the internal surface
- 37- All fitting will be packed in waterproof wooden boxes in such a manner that the bevel will be separated from other by wood or fiber board. Weight of each case not to exceed one tone.
- 38- steel pipes shall be bundled by strapping cleats above and below the load, with boards between each pipe layer, and secured by through bolts
- 39- Pipe Tolerance of dimensions, wall thickness, weight, and Out of Roundness shall be according to API 5L / ASTM standards.
- 40- The thickness in the tables of quantities is the minimum permissible thickness for pipes ,fittings and flanges
- 41- The contractor is responsible for any damage arise in all items
- 42- Mill certificate & mechanical Acceptance test certificate (The mill certificate shall include chemical analysis, heat& product analysis, carbon equivalent, heat treatment, tensile tests, hardness tests, charpy v-notch impact tests, elongation, hydrostatic test... etc.), Pipe certificates must be in accordance to DIN 50049-EN 10204
- 43- All submitted documents shall be written in English and shall be signed and stamped by the manufacturer
- 44- Length of pipes shall be as per international standards
- 45- All pipes, fittings and flanges shall be bevel end as per ASME B16.25
- 46- Warranty period shall be 180 days As From issuing correct technical reception report date
- 47- Supply period shall be / 5/ months as from the next day of reciving date of HPC's Purchase order

