

BHEL REPLIES AGAINST PRE-BID QUERIES FOR WATER SPRAY SYSTEM PACKAGE
PROJECT: 4 X 270 MW BHADRADRI TPS
TENDER No: T7E1Q06491 & NIT_33317

Date- 12.07.17

SL NO	Clause No	Description as per specification	Queries by bidder	BHEL REPLY
1			We request you to please provide us the Plan drawing of the Boiler Burners at different level.	Bidder to note that the elevation of Boiler Burner front details are indicated in Drg No. 0-00-022-76763-R3 i.e. GA of Boiler Sectional Side Elevation. Please note that plan drawing of each floor where burner fronts are located shall be made available during detailed engineering stage.
2	8.5, Page 21 of 244		We refer to the Clause No. 8.5, Page 21 of 144 of the Technical Specification No. PY51212 Rev No. 01, we noted that calculation of Zones for MVW Spray System is permitted as per pumping capacity of 410 M3/Hr. However, available Spray Water Pumping Capacity is 820 M3/Hr. Hence, we recommend to use 820 M3/Hr. pumping capacity for the calculation of Number of Zones in Conveyors and Cable Galleries. Please confirm the same.	Bidder request is not acceptable. Bidder to follow the specification requirement i.e. Bidder to note that the maximum flow available for single largest protected equipment is 410 m3/hr accordingly bidder has to size the zoning details applicable for the protected equipment/area including Conveyors and Cable Galleries. Note: But for protection of the Crusher house through MVWS system, the maximum water availability shall be considered as 820 m3/hr. Bidder to note that surface area of the complete floor of Crusher house shall be considered to arrive water demand for each floor of Crusher house. As well as for protection of HFO tank, the maximum water availability shall be considered as 820 m3/hr.
3			We request you to please furnish us the dimension of the Fuel Oil Forwarding Pump House. In the absence of the same, at present we have assumed the dimension of Fuel Oil Forwarding Pump House as (48 Mtr X 14 Mtr.). Please confirm.	Bidder to follow the dimension indicated in the Plot Plan PE-DG-411-100-M001, R1 for Fuel oil Forwarding pump house as well as for Fuel oil Unloading & Pressurizing pump house. Details drawing of the pump houses shall be made available during detailed engineering stage.
4			We request you to please provide us a minimum pressure of 5.5 Bar at each tap-off for Deluge Valve. Kindly confirm us the availability of required pressure. Also, please provide us the discharge pressure of Spray Water Pump.	Please refer to cl. no.8.3 of purchase specification PY51212 Rev No. 01. Bidder to note that the tap-off pressure at each deluge valve will be in the range of 7 to 10 kg/cm2(g). Bidder to note that Spray water pump configuration are as follows: a) Main spray water pumping system consists of two Electric motor driven Spray water pumps (working) and one diesel engine driven spray water pump as stand by. The parameter of each pump is 410 m3/hr @ 115 MWC The main spray water pumps are not in the scope of bidder. These pumps are supplied by BHEL.
5	Bidder's scope of supply, Clause No. 6.1.1, SL. No.10	MV spray system for 02 Nos. HFO Tanks (18M dia x 13 M ht)	In general HFO tanks are insulated tanks and generally spray system are not required for insulation tanks. Only foam protection system is required for HFO tanks. Please recheck the requirement of MV spray system and confirm the requirement.	MVWS system for HFO tanks are required. Bidder to follow the specification requirement.
6	Bidder's scope of supply, Clause No. 6.1.1, SL. No. 7 & 16	MV spray system with water curtain nozzles and QB Detectors requirement in Coal Bunker Bay.	The spray protection of coal conveyor is only upto bunker bay entry with water curtain nozzles. The QB detectors are to be provided at ceiling level @ 8.0M height. The function of QB detector is very difficult. Please also clarify that where this detection line is to be connected.	Bidder's understanding for protection of Bunker conveyor by MVWS system is correct. Since MVWS system for Bunker conveyor shall be protected upto bunker bay, hence there is no requirement for provision of QBD inside the Tripper bay of Bunker floor.

7	Bidder's scope of supply, Clause No. 8.17	Pressure drop across Y-Type Strainer in clean condition shall not exceed 0.15 Kg/cm2 at design flow of deluge valve.	The pressure drop across Y-Type Strainer should be 1.5 Kg/cm2 at design flow of deluge valve.	Bidder to follow the specification requirement.
			Also please note that the pressure drop 0.15 kg/cm2 is not practical. As per our standard pressure drop for other project the minimum pressure drop for 150 NB strainer is 1.0 kg/cm2 at 6833 lpm. Please recheck the value and confirm accordingly.	
8	Bidder's scope of supply, Clause No. 6.1.1,	MV spray system for cable galleries.	Incase the water requirement exceeds the one spray pump capacity i.e. 6833 lpm than both pump shall be operated similar to HFO tanks. Please confirm.	Bidder to consider 410 m ³ /hr, i.e. one pump flow only, for zoning of the cable cellars. Also refer the clarification Sl. No.2 above.
9	Bidder's scope of supply, Clause No. 6.1.1, Sl. No. 11	MV spray system for LDO Tanks.	As per layout drg. no. 0-38316-00028, Rev.03P. The 01 no. LDO tank is shown. Whereas, in technical specification 02 nos. LDO tanks to be considered. Please clarify.	Bidder to note that tank form has been shown as a block in Composite layout drg. no. 0-38316-00028, Rev.03P. Tanks are not indicated in composite layout. The tank form has two LDO tanks as mentioned in technical specification. Bidder to provide MVWS for two LDO tanks.
10		Rate of Rise type detector for HFO/LDO Tank & Fuel Oil Pump House are indicated in P&ID.	As per cl.no.8.2.1,Sr.No. 5,6 ,Pg.19 of 33 (pg.19 of 144) QBD are required for Fuel Oil Pump House. Kindly confirm your requirement.	Bidders to note that: 1.Probe type detectors shall be provided for fuel oil tanks. However probe detectors are not part of this specification & shall be supplied by others. 2. QBD type detection system shall be given for Fuel oil unloading and pressurizing Pump house & Fuel oil forwarding pump house.
11	19 of Page 102 of 144	PRESSURE SWITCH 19. Accessories - 1/2" NPT 2 Valve SS-316 barstock manifold	Kindly note that the SS-316 barstock manifold is required for high pressure system & it will add the cost. Please confirm the requirement.	Bidder to follow the specification requirement.
12	11 of Page 104 of 144	DATASHEET OF SOLENOID VALVE 11. Body material - SS bar stock	Kindly note that the SS-316 barstock material is required for high pressure system & it will add the cost. Please confirm your requirement.	Bidder to follow the specification requirement.
13	8.3 of Page 20 of 144	8.3. Required pressure (apprx 7 to 10 kg/cm2) shall be provided at the inlet of the deluge valve. The location of the spray header is indicated in the Composite layout of Hydrant and Spray system. (Attached as an input drawings). A tap up connection shall be provided from the nearest spray network up to the upstream isolation valve of the deluge valve . From the tap up point, bidder has to take the routing for the complete spray system and the same shall be indicated in the each layout drawings of HVWS and MVWS system.	If require pressure at the inlet of deluge valve will increased beyond 10 kg/cm2 for maintain the minimum pressure at remotest nozzle , booster pump for the same shall be provided by BHEL.	Bidder proposal is not accepted. Hence bidder to modify the pipe network downstream of deluge valve to maintain minimum pressure at remotest point. Hence no booster pump shall be provided by BHEL.
14	10.5 of 20 of 33 Page (20 of 144)	Erection & Commissioning Documentation		

		c) Following may be noted wrt the drawing submission schedule: First submission of drawings / documents under approval and information category 30 days from the date of Purchase Order progressively.	First submission of drawings / documents - 30 days from the date of receiving base inputs drawings in autocad format.	Bidder to note that inputs required for Spray system package are already attached as Annexures to the specification in PDF format for bidding purpose. Successful bidder shall be provided with input data in Autocad format wherever possible. Successful bidder shall inform the requirements of additional inputs, if any, after the award of contract by Kick-off meeting which shall be conducted within two weeks after the award of contract. The drawing flow shall start within two weeks after award of contract and bidder shall adhere to the schedule furnished in Master Document List (MDL).
15	Page 97 of 144	ANNEXURE-7 TDS for HVW Spray Nozzle 6. Material of Construction a) Body : SS 304 b) Scroll : SS 304	Kindly note that as per UL standard ,MOC of spray nozzle will be SS 316 instead of SS 304.	Noted. Bidders may propose the MOC as given in data sheet or better grade of materials.
16	Page 98 of 144	ANNEXURE-7 TDS for MVW Spray Nozzle 6. Material of Construction a) Body : SS 304 b) Scroll : SS 304	Kindly note that as per UL standard ,MOC of spray nozzle will be SS 316 instead of SS 304.	Noted. Bidders may propose the MOC as given in data sheet or better grade of materials.
17		Structural steel to support DV, water spray grid etc for the equipments in the scope of bidder.	Please confirm that this steel structure pertains to piping beyond deluge valve	Bidder to note that Structural steels requirement for DV shed and downstream of DV (i.e. Structural steel to support DV, water spray grid etc for the equipments in the scope of bidder) shall be given by bidder
18		Erection hardware required for the equipment supplied by bidder	Please provide the detail	Bidder shall include suitable erection hardware to erect the materials supplied by them. The erection hardware requirements are speltout in following clauses. 1. Point no. 24 of scope matrix table given in clause no. 6.1.3, page no. 12. 2. cl. No. 6.2 in page 14. The same is elaborated below. a. All the Support Structural steel required for mounting/ erecting HVWS/MVWS systems - Like pylon supports, structural steel, all types of clamps, anchor fasteners, nuts & bolts etc. b. Structural steel means the support members (like L -channels, U-channels, angles etc) that are to be welded to the equipment structures, to support HVWS/MVWS systems. c. Welding electrodes are EXCLUDED from Bidder's scope. d. The erection hardware shall be quantified by the bidder as per the detailed drawings. It shall be furnished as a part of BOQ.
19		Based on the hydraulic calculation required restriction orifice along with the fittings / flanges shall be provided by bidder.	Please provide the hydraulic calculation upto deluge valve for each risk.	As per Cl. No.8.4 Page 20 of 144 of specification, Bidder to submit the hydraulic calculation of each protected equipment by considering the following things: Pressure drop model in PIPENET for any equipment should include water spray network (from Pumping system upto the DV inlet of the protected equipment) in a single hydraulic calculations. Inputs such as Composite layout of Hydrant and Spray system & Pump characteristics curve shall be made available to bidder during detailed engineering.
20			Please provide specification for local control panel	Please refer to Cl. No. 2.04.00 of attached Specification for Local Control panel is attached here. Click the ICON to open the document. 

21			As per specification for primer paint considered epoxy resin based zinc phosphate primer but for GI pipe this type of each primer is suitable. Please confirm	Bidder to follow painting specification given in Annexure-9 of specification.
22			Please confirm paint for GI pipe is required or not	Bidder shall include quantities of primers and paints for all the materials supplied under the contract - for all pipes including GI pipes, fittings, structural steel etc. GI pipes also shall be painted and required paints & primers shall be included in bidder's quotation.
23			As per boq format Limit switch is mentioned but as per specification limit switch not required --- Please confirm	Bidder to note Limit switch is not required at upstream and downstream of DV.
24		HVWS System for Boiler burner fronts – 4 Sets	Please provide the detail	Please refer clarification Sl. No. 1 above.
25		HVWS system for BFP lube oil tanks, coolers, consoles etc. – 4 Sets	Please provide the detail	Bidder to note that the equipment layout of TG building at EL 0.0 M (drg No PE-DG-411-100- M003,R2) has attached as annexures to the specification. Details GA of BFP lube oil tanks, coolers, consoles etc is also attached herewith. Click the ICON to open the document. 
26		MVWS System for Fuel oil unloading and pressurizing Pump house	Please provide the detail	Bidder to note Plot Plan (PE-DG-411-100-M001, R1) has attached as annexures to the specification, where size of the pump house is indicated. Details Arch drawing of Fuel oil unloading and pressurizing Pump house shall be made available during detailed engineering stage.
27		MVWS System for Fuel oil forwarding pump house	Please provide the detail	Bidder to note Plot Plan (PE-DG-411-100-M001, R1) has attached as annexures to the specification, where size of the pump house is indicated. Details Arch drawing of Fuel oil forwarding pump house shall be made available during detailed engineering stage.
28	Clause 6, page 6 of 33 of Technical Specification	Bidder's Scope of Supply	We have considered Spray System for the equipments/ areas as mentioned in this clause. Protection of any other equipment is not included in our scope.	Noted and confirmed.
29	Clause 6.4.1, page 14 of 33 of Technical Specification	Start up and commissioning spares	We request BHEL to finalize the List/ criteria for Start up and Commissioning Spares prior to Award of Contract.	Bidder shall indicate and include in his scope of supply all the necessary start-up/ commissioning spares for the equipment supplied by them.
30	Clause 6.4.2, page 14 of 33 of Technical Specification	Recommended Spares	We clarify that Recommended Spares are not required beyond Mandatory Spares as mentioned in clause 6.4.3.	Bidder to provide a list of recommended spares as given below: 1. Indigenous origin recommended spares: List of recommended spares for two year with unit prices and total prices. 2. Non-Indigenous origin recommended spares: List of recommended spares for Five year with unit prices and total prices. If any of the recommended spares are appearing in mandatory spares list, then the same shall be excluded from recommended spares list.
31	Clause 8.1.1 & 8.2.1, page 18 of 33 & 20 of 33 of Technical Specification	The velocity in.....10m/sec.	We clarify that velocity will be as per TAC Rules for Water Spray System.	Noted.
32	Page 99 of 144, TECHNICAL DATA SHEET OF PIPES & FITTINGS.	Pipes & Fittings (Normally Dry – Spray Pipe)	Thickness of Pipe is not given for the pipe 200 NB & Above. Kindly provide the same.	Bidder to note that Pipe 200 Nb and above shall be MS, ERW Galvanized to IS:3589 Gr.410, and galvanized as per IS:4736 and The final thickness shall be as given below: For 200 NB pipe - 219.1mm x 6.3mm (OD x t) For 250 NB pipe - 273.0 mm x 6.3mm (OD x t) For 300 NB pipe - 323.9 mm x 7.1 mm (OD x t)

33	S.No.23, page 12 of 33 of Technical Specification	Interconnecting Cable is in bidder's scope. However, Technical Specification of cable is not available in the specification.	We request BHEL to provide Technical Specification of cable.	Specification for Cable is attcahed here. Click the ICON to open the document.	
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