

PROJECT- 4 X 270MW BHADRADRI THERMAL POWER PLANT
 PLANT- DM PLANT
 SPECIFICATION NO: PE-TS-411-163A-A001,R0

VOLUME	SECTION	CLAUSE NO	PAGE NO	SPECIFICATION	CLARIFICATION	BHEL REPLY/ADDITIONAL CLARIFICATION
TECHNICAL						
IIB	I	2	10 of 443	Ladder & platform (Point No. 53)	Ladder shall be provided for the tanks having height above 2m. Whereas, Ladder & Plaform shall be provided for all storage tanks. Please confirm.	Bidder to provide Ladder & platforms for each tank and sump for easy accessibility & maintenance purpose. The same shall be in bidder's scope.
IIB	I	2	11 of 443	Motorized valve (Point No. 62)	Since instrument air is available in DM plant area we envisage using pneumatic valves based on process requirement.	Bidder to follow the tender specification.
IIB	I	14.3	19 of 443	Vertical pumps (Point No. Xi)	Pumps for clear water application shall be self-lubricating type but the pumps for handling effluent containing solid particle shall be external lubricating type. Please confirm.	Bidder to follow the tender specification. Further Bidder to note that if bidder will use external lubrication type Vertical pumps the lubrication arrangement shall be in bidder's scope.
IIB	I	28	180 of 443	MOC of piping (Point 28.1)	We shall offer SS 304 pipe upto the UF feed pump discharge. The UF skid piping shall be of UPVC Sch 40 inclusive of CIP & CEB system piping. Please confirm.	Bidder to follow the tender specification.
IIB	I	29.6	182 of 443	Dosing tank (IS: 803) Pt.No.29.6.1.6	As per IS 803 the min thickness of the plate recommended is 5mm. Shall we consider the same to design the measuring tank of smaller capacity. Please confirm.	Bidder to note that thickness as specified in datasheet -A of technical specification shall be followed by the bidder for all tanks and the same shall be considered as minimum thickness for plates.
IIB	I	30	184 of 443	Valves for decationised & deionised & DM plant application	We envisage using butterfly valves for DM plant application majorly for service & backwash line. The selection of the valves shall be based on process requirement & chemical compatibility. Please confirm.	Bidder to follow the DM Plant P&ID for type of valves used in DM plant and MOC shall be as pressure rating of these valves shall be as per tender specification of DM plant.
IIB	X	2.00.00	261 of 443	Codes & Standard	IS: 1710 standard resembles to Vertical turbine pumps & not for centrifugal type. Hence, vertical centrifugal pumps shall be selected as HI standard. Please confirm.	All permitted codes for different design of pumps shall be given in the tender specification. Bidder to follow the suitable design code as per the pump details enumerated in datasheet -A for DM plant enclosed with technical specification.

IIB	X	4	284 of 443	Design,Manufacture, Fabrication Erection	The MOC of piping for river, Clarified, Filterd water shall be Mild steel/carbon steel. Please confirm.	Bidder to follow the tender specification.
					The MOC of piping for instrument air shall be SS 316 Sch10. Please confirm.	Instrument air piping shall be as per tender specification, however individual air line going to peumatic actuated valves (in actuator) shall be of SS tubing.
					The MOC of piping for chemicals .ie. Acid & Caustic (concentrated cum diluted) shall confirm to MS/CS with rubberlining . Please confirm.	Bidder to follow the tender specification.
ELECTRICAL & INSTRUMENTATION						
IIB	IB		184 & 187	SPECIFIC REQ OF ELECTRICAL	As per tender we have reviewed two different scope matrix for PT.We have considered final scope matrix as per electrical scope between BHEL and WTP bidder ref pg 184. Please confirm the same.	This query pertains to PT plant and not applicable to DM plant. Hence not replied. Further bidder to refer tender technical specification of DM plant for the same.
IIB	D		327	PLC DATA SHEET-REMOTE I/O PANEL	We don't envisage any requirement of separete RIO panel for this package.	Noted and confirmed.
IIB	D	3.4.1	319 & 327	No of channel per card	As per tender there is some ambiguity in channel density.At present we have considered AI/AO- 8 channel density. Please review.	Noted & Confirmed
IIB	D		326 & 196	LVS	At present we have not considered any LVS other that OWS & EWS and Laptop as per data sheet & PLC configuration.	Kindly follow the tender specification of DM plant.
IIB	ANNEX-VI	PLC-vi	132	MANDATORY SPARES-PLC- Electric pnumatic converters	We have not considered the same which are not applicable.	Bidder to follow mandatory spares list of DM plant attached with tender specfication. Bidder to follow the same.
IIB		3.9.1	321 & 196	UPS BACK UP TIME	Please confirm the UPS back up time for estimation purpose.	Please refer the specification, UPS Scheme, Backup time is 60 mins.
IIB	D		89	Vendor list for PLC	We request you to please provide vendor list for relevant PT package .	Bidder's query is not relevant to DM plant package. However Bidder to refer ANNEXURE -II, sub-vendor list applicbale C&I items as enclosed here with the pre -bid reply for their adherence.Bidder to follow the same.
IIB	D		221	PLC configuration dwg	We don't envisage any requirement of separete RIO panel for this package.	Backup Panel shall be provided as mentioned in PLC Configuration Diagram.
IIB	D	3.4.1	320 & 328	No of channel per card & PLC datasheet	As per tender there is some ambiguity in channel density.At present we have considered AI/AO- 8 channel density. Please review.	Noted & Confirmed.
IIB	ANNEX-VI	PLC-13.4.6	64	MANDATORY SPARES-PLC- Electric pnumatic converters	We have not considered the same which are not applicable.	Bidder to follow mandatory spares list of DM plant atatched with tender specfication.Bidder to follow the same.

IIB			328	UPS BACK UP TIME	Please confirm the UPS back up time for estimation purpose.	Please refer the specification, UPS Scheme, Backup time is 60 mins.
IIB	I/ ANNEX-II		35	Vendor list for C & I	We request you to please provide vendor list details of control & instrumentation and included control system manufacturer.	Bidder to refer ANNEXURE -II, sub-vendor list applicbale C&I items as enclosed here with the pre-bid reply for their adherence.Bidder to follow the same.
IIB	P & ID-PE-DG-411-163A-A001		164	Instruments in DM Plant supply pumps	We are proposing bourden & direct PG/PT instead of chemical seal PG/PT. Since there is no sludge or chemical applications.	Bidder to provide the instruments PG /PT with chemical seal only except for clarified water,filtered water,service water,instrument air and service air.
IIB	P & ID-PE-DG-411-163A-A002	NOTE	12	LEVEL Transmitters at alkali&acid tank	We have considered Ultrasonic type LT. Please confirm.	Bidder to note that Level transmitter used for acid/acidic applications shall radar type and alkali application shall be Ultrasonic type.
IIB	P & ID-PE-DG-411-163A-A003	NOTE	10	Analyzers are panel mounted	We have considered panel mounted silica & sodium analyzers only and same shall mounted in control room.Please confirm our understanding.	All DM plant analysers shall be panel mounted . The same shall be placed in control room.
IIB	P & ID-PE-DG-411-163A-A004			DPT across filters DMF, ACF,SAC,SBA & MB	As per tender filter and resin O/L will have indiviual DPT. However we are proposing one DPT across each filters. Please confirm.	Bidder to follow the tender specification for the same.
IIB	P & ID-PE-DG-411-163A-A005			pH & conductivity at SAC & SBA outlet	We are proposing multi channel pH & conductivity at common outlet of SAC & SBA.Please confirm.	Bidder to follow the tender specification for the same.

ADDITIONAL CLARIFICATION POINTS BY BHEL TO BE CONSIDERED BY ALL BIDDERS OF DM PLANT

						Bidder to note that Valve indicated in the DM plant P&ID, at the inlet line of degasser tower shall be Motorized butterfly type control valve in place of pneumatic on/ off type diaphragm valve. The same shall be provided with manual butterfly isolation valves in upstream and downstream. In addition, one number on-off type pneumatic diaphragm /butterfly type by pass valve shall also be provided by bidder. The same shall be applicable for all three streams of DM plant and shall be in bidder's scope of supply.
						Bidder to provide 5 m capillary type PG and DPG with remote diaphragm seal for all PG & DPG provided for chemical application of DM plant.The same shall be in bidder's scope of supply.

						Bidder to provide 1 no. conductivity analyser at individual Mixed bed rinse outlet line for measurement of conductivity. Hence total 3 nos. of conductivity analysers shall be provided by bidder.The same shall be in bidder's scope of supply.
						Bidder to provide 1 no. cation conductivity analyser at individual Mixed bed outlet line for measurement of cation conductivity. Hence total 3 nos. of cation conductivity analysers shall be provided by bidder.The same shall be in bidder's scope of supply.
						Bidder to refer ANNEXURE -I for different analysers specification as enclosed here with the pre -bid reply for their adherence.Bidder to follow the same.