



BHARAT HEAVY ELECTRICALS LIMITED
PROJECT ENGINEERING MANAGEMENT, NOIDA

Date-20-Apr-24

CORRIGENDUM- 03

PROJECT	:	2 X 800 MW NTPC LARA TPP STAGE-II
PACKAGE	:	Gypsum Dewatering Eqpt (Sub-Asbly of FGD)
ENQUIRY NO	:	Enquiry No- E-7459/2024 Dated-12-Apr-24
SUBJECT	:	PRE-BID CLARIFICATION

Type of Corrigendum			
Technical Corrigendum -	<input checked="" type="checkbox"/>	Commercial Corrigendum -	<input type="checkbox"/>

Bidders are requested to go through the following -

- Please find **Annexure A to Corrigenda 03 for clarification** by BHEL against additional pre-bid queries raised by prospective bidders. Bidders are requested to comply the same while quoting for this tender enquiry.

All the other terms and conditions of the tender enquiry remain unchanged. All the bidders are requested to quote accordingly.

Yours faithfully,

**Nitin
Kumar**

Digitally signed by Nitin Kumar For and on behalf of BHEL
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Nitin Kumar
Manager/BOP

Project		2 X 800 MW NTPC LARA TPP STAGE-II	
Bidder		BIDDER	
Package		Gypsum Dewatering Eqpmt (Sub-Asbly of FGD)	
Sl. No	Document name	Page No/Clause No	Client Specification
Deviation / Clarification by BIDDER			
As per Pre-Bid meeting discussion DTD: 18.04.2024			
1	Technicalspecs	7/118 17	Bidder to provide Comprehensive Annual Maintenance Services (AMS) for three (03) years after warranty period for probus instruments of Gypsum dewatering system. As per OEM standard terms & conditions.
2	Technicalspecs	7/118 20.3.1	Periodic Maintenance Site visits, minimum four (4) times in a year (total days expected 16 in a year), schedule of visits to be discussed and finalized jointly between Contractor and client after placement of order/delivery. It shall include inspection of general healthiness of the system, study and advice on daily maintenance, inspection of Hardware & Software, if any problem is reported, running of test programs, on line servicing and solving reported problems. System shall be checked online. Understand that the site visit is on chargeable basis and spares is as per actuals.
3	Technicalspecs	11/118 1.4.3	Both primary and secondary hydro-cyclones shall be of modular construction.
4	Technicalspecs	11/118 1.4.4	The hydro-cyclone shall be of proven design. The primary hydro-cyclone shall me made up of made of polyurethane, urethane or with replaceable rubber lining. The feed chamber shall be provided with a minimum lining thickness of 12 mm. The liners shall have a minimum wear life of not less than 8000 hrs.
5	Technicalspecs	11/118 1.4.5	Each set of hydro-cyclone shall be sized to process the maximum discharge from the secondary hydro-cyclone feed pumps. The capacity or inlet slurry feed flow rate of the hydro cyclones is considered as per the RFQ.
6	Technicalspecs	11 & 12/118 1.5.3	The filter cloth shall be polyester or polypropylene as per the proven design of the supplier and shall be guaranteed for a minimum life of not less than 7000 hours. Noted & confirmed for filter cloth life which is supplied along with the equipment. For spares it is not applicable.
7	Technicalspecs		In case the bidder does not stand guarantee for specified life, they shall supply additional sets of filter cloth(s) to meet the cumulative life of 7000 hours. The same is applicable for main as well as mandatory spares and shall be supplied along with main supplies and mandatory spares.
8	Technicalspecs	12/118 1.5.4	The complete frame of the filter and all parts in contact with gypsum shall be made of corrosion resistant material (such as Corten Steel, SS304 etc.) or shall be provided with corrosion resistant liners of proven design. BIDDER shall provide the filter frames in Mildsteel with Epoxy painted and it is proven design in similar application. For more details please refer the BIDDER proposal.
9	Technicalspecs		The sealing belt shall have minimum life of not less than 7000 hours.
10	Technicalspecs	12/118 1.5.5	In case the bidder does not stand guarantee for specified life, they shall supply additional sets of wear belts(s) to meet the cumulative life of 7000 hours. The same is applicable for main as well as mandatory spares and shall be supplied along with main supplies and mandatory spares.
11	Technicalspecs	12/118 1.5.8	Differential Pressure indicator shall be provided at the discharge line of Belt filter wash Pump for each vacuum Belt filter. Noted & confirmed for wear belt life which is supplied along with the equipment. For spares it is not applicable.
12	Technicalspecs	12/118 1.5.11	Gypsum cake from each belt filter shall be discharged through a hopper onto belt conveyor being provided by the Employer. Hopper means discharge chute only. Gypsum cake from each belt filter shall be discharged through a chute arrangement onto belt conveyor indicated in GA drawing. For cloth/belt wash line considered PI instead of differential pressure indicator. PI is sufficient. BIDDER shall consider the cake discharge chute of standard length of 500mm. Further extension upto conveyor shall be in client scope.
13	Technicalspecs	13/118 1.5.12	A 2000 mm wide floor platform shall be provided all around each belt filter for easy approach & maintenance or it may provide a common platform of 3.3 m (approx.) width. In case, common platform for VBF is provided, a movable platform along with access ladder shall be provided for approaching components on other side of VBF. The elevation of discharge point of vacuum belt filter shall be as per the Gypsum Dewatering Building Drawing provided for compliance. The approach platform around HBF is not in BIDDER scope. The same shall be in client scope.
14	Technicalspecs	13/118 1.6.5	The vacuum receiver and pump internals shall be suitably lined to protect against the corrosive environment. The material selected for vacuum pumps & vacuum receivers shall be proven for similar application and shall be subject to approval of BHEL/Client. Pls refer the proposal for more details on MOC's.
15	Technicalspecs	14/118 1.7.4	The pump shall be provided with seals of proven type and shall be designed for minimization of seal water consumption. The shaft shall be supported on heavy-duty ball/roller bearings. BIDDER considered the pump seals is as per proven practice with similar application.
16	Technicalspecs	14/118 1.7.5	The pumps shall have mechanical seals of cartridge type with self-lubrication sliding ring cartridges. The static part will be mounted on the seal plate with circumferential ring (O-ring) or another flexible sealing ring. Built in seal design will not be accepted.
17	Technicalspecs	14/118 1.7.8	Design pumps not to be damaged during reverse rotation at up to 150% of design RPM, at full discharge head in the event that a pump trips while the other operating pump remain on line. As per OEM standards.

18	Technical specs	16/118 1.7.32	Bidder to provide Pipe & Valve Material as per the of the Specification.	Pls provide the PMS & VMS spec documents.	Please refer datasheets attached in technical specification and cl no 1.5.16 at page no 12 of 108.
19	Technical specs	16/118 1.7.33	A 1000 mm wide platform with suitable approach shall be provided by the bidder for each hydro cyclone.	The approach platform for Hydro cyclones & pump area is not in BIDDER scope. The same shall be in client scope.	As per teams meeting, the 1m wide platform is considered around the Hydro cyclones in BIDDER scope. BHEL informed that the specification is clear, bidder is requested to follow the technical specification.
20	Technical specs	16/118 1.7.35	Equipments requiring monitoring during regular operation shall be approachable from the ground floor through staircase. Staircase with minimum width of 1200 mm shall be provided for approach to elevated structures at 5 m height from the nearest platform. Below this height, a vertical ladder with minimum clear width of 600 mm may also be acceptable.	Not in BIDDER scope.	Bidder to note that approach platform with access ladder for equipments in bidder's scope shall be provided by bidder.
21	Technical specs	21/118 5.0	INSPECTION/TESTING	Please refer the ITP. Inspection and testing of brought out items is as per OEM standards.	Customer approved MCP shall be followed.
22	Technical specs	-	The list of all Bought out items with makes and country of origin and contact details of the manufacturers to be mentioned along with offer to be submitted. Acceptance of makes shall be subject to BHEL's Customer's acceptance during the detailed engineering without cost and delivery implication to BHEL.	Not applicable. Client has to provide the approval for major sub vendor list before award of contract.	Specification is clear, bidder is requested to follow the technical specification.
23	Technical specs	16/118 1.7.21	All equipments shall be provided with name plates (304 Stainless steel plate) indicating the item number and service name.	The name plate MOC for bought out is as per OEM.	Specification is clear, bidder is requested to follow the technical specification.
24	Technical specs	48/118 2.0	Water analysis	Please refer the enclosed seal water quality details provided in the proposal.	Specification is clear, bidder is requested to follow the technical specification.
25	Technical specs	50/118 4.0	Equipment Availability in % (avg. target 98%) Continuous for 120 days	we confirm availability of HBF for 98% (apart from routine maintenance). However since two systems are installed as 1W+1S. Hence 98% availability of de-watering system shall be confirmed provided system should be operated as per OEM's O&M manual	Bidder Query is not clear as same is not present in the technical specification. However, Specification is clear, bidder is requested to follow the technical specification.
26	Technical specs	109/118 1.22.13	Mandatory spares.	BIDDER shall provide the 1No of complete vacuum breaker valve.	Specification is clear, bidder is requested to follow the technical specification.
27	General	-	Supervision of erection and commissioning	60 man days are included for 2No's of filter.(Per day is 8hr per engineer). To & Fro charges from Bangalore to Site. Local conveyance, Boarding & Lodging shall be provided by purchaser.	Specification is clear, bidder is requested to follow the technical specification.
28	General			BIDDER scope and MOC's is limited to proposal, P&ID, E&I annexure & other supporting documents	Specification is clear, bidder is requested to follow the technical specification.

Note: There may be a variations in the page numbers. However the technical specifications are same for both the projects.

2 X 800 MW NTPC LARA TPP STAGE-II				
BIDDER				
Gypsum Dewatering Eqpt (Sub-Asbly of FGD)				
SL No	Document name	Page No/Clause No	Client Specification	Deviation / Clarification by BIDDER
1	Technicalspecs	Point 7/page 7 of 118	Triple Redundancy for Analog & Discrete Instruments	Triple Redundancy for Analog & Discrete Instruments not required for HBF. HBF design is not compatible for Triple redundancy. will provide redundancy
2	Technicalspecs	Point 9/page 7 of 118	230V/415V Power supply providing at single point	Required control supply shall be provided for all LCPs and LIE/LIR by client
3	Technicalspecs	Point 17/page 7 of 118	Comprehensive AMC for Instruments after warranty of 3 Years	Comprehensive AMC is not possible to provide
4	Technicalspecs	Point 19/page 7 of 118	Type test	Type Test applicable to Motors of each rating of 1No. only
5	Technicalspecs	Point 21.2/page 8 of 118	Easy access for VFD card replacement	Normally lower ratings upto 22Kw not possible to replace any card/spare components, whole VFD to be replaced
6	Technicalspecs	Point 21.3/page 8 of 118	100% Interchangeability of VFD Components	Only control cards/module only can be interchanged. Power module/component only interchange for same rating of VFD
7	Technicalspecs	Point 3.8/page 20 of 118	Spacing between Gland plate and centre of bottom Terminal stud	Whatever maximum spacing available with Motor OEM will be provided
8	Technicalspecs	-	VFD by-pass	Not applicable/suitable for current requirement.

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1	General	-	-	In the NIT documents the piping scope and details are not available. Please provide the below details of Interconnecting piping. - Piping software and version details to be provided - PMS to be provided - Model review software and version details - Autocadd Version details - Pipe Material approved vendor list. - Interface details if any - Color coding for the piping's	Same shall be provided during detailed engineering.