BHEL Tenders

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Tender ID :	2025_BHEL_48689_1
Tender Ref No :	77/25/6028/AAN
Tender Title :	Fuel Oil and Tank package for 2x800 MW SINGRAULI STPP STAGE-III
Corrigendum Type :	Technical Bid

Corrigendum Document Details

Corr.No.	Corrigendum Title	Corrigendum Description	Published Date	Document Name	Doc Size(in KB)
1	CORRIGENDUM- 01	Pre-bid clarification	04-Jun-2025 01:55 PM	CORRIGENDA01.pdf	1016.16

BHARAT HEAVY ELECTRICALS LIMITED

PROJECT ENGINEERING MANAGEMENT, NOIDA

Date-4-Jun-25

CORRIGENDUM- 01

PROJECTs	**:**	**2X800 MW NTPC SINGRAULI STPP STAGE III EPC**
PACKAGE	**:**	**Fuel Oil and Tank package**
ENQUIRY NO	**:**	**No 77/25/6028/AAN Dated 21.05.2025**
SUBJECT	**:**	**Technical Clarification**

Type of Corrigendum			
Technical Corrigendum -	☑	Commercial Corrigendum -	☐

Please find enclosed pre-bid clarification.

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

Yours faithfully,

For and on behalf of BHEL

Aanchal Choudhary
Manager/BOP

2x800 MW SINGRAULI STPP STAGE-III-FUEL OIL AND TANK PACKAGE- BHEL REPLY OF PRE-BID QUERY

Sl.No.	Document	Page	Description	Query	BHEL REPLY
1	Tender Notice 2	Pg: 30	This specification includes, but not limited to Supply part, Services part and Mandatory spares,	Both statements are contradicting. Please confirm supply of steel plates for Roof, shell, bottom and baffels are in whose scope.	kindly note,all the plates and steel structures are in bidders scope and note no 2 stands null and void.
	Tender notice -6	Page No: 395 of 684	Note :2, Steel plates(Only roof, bottom, baffels, and shell plates) shall be free supplied by BHEL		
2	Tender Notice 2	Pg: 30	Two (2) nos twin screw External bearing with mechanical gear transfer LDO pump motor set of capacity 25 m3/hr each with matching simplex strainers (2 Nos for each pump) at their suction	As per this statement 2nos of simplex strainer to be provided for each pump, whereas as per P&ID, 2nos of simplex strainers shown for two pumps. Both are contradictory, please confirm which one to follow	Bidder to follow P&ID
3	Tender Notice 2	Pg: 30	Sump pumps (1W+1S) where ever required due to layout constraints with in terminal point. Type and capacity of these pumps will be decided during detailed engineering stage without and commercial implication	Please confirm whether these pumps are required or not. If required please confirm the location. If required as per Page No: 92 of 684, we are considering 10cum/hr capacity for these pumps. Please clarify	Sump pumps (1W+1S) shall be provided, further capacity of sump pump shall be 10 m3/hr. The location of the pumps shall be provided during detail engineering.
	Tender Notice 2	Pg: 30	Fifteen (15) nos LDO unloading flexible neoprene hoses of size 75NB with minimum length as 8.0m. Each hose shall be to suit the layout in unloading area	These hoses are existing as per the P&ID. We hope the new supplied shall be replaceable with the old hoses. Also the size of hose shall be 80 NB i.e., general practice in India for road tanker unloading.	Bidder to note, clear demarcation for customer scope and vendor scope already shown in P&ID. Also note hoses of 15 no quantities are to be supplied by bidder of 80 NB size
4	Tender Notice 2	Pg: 30	Two (2) nos twin screw External bearing with mechanical gear transfer LDO pump motor set of capacity 25 m3/hr each with matching simplex strainers (2 Nos for each pump) at their suction	Pressure of these transfer pumps are not provided in the specification. Please provide pressure for these pumps.	Bidder to note that the LDO transfer pumps shall deliver LDO to the existing Day oil tank of Stage-II. Further the piping from the LDO transfer pump to LDO day oil tank is approximately 775 M and the Ht of the existing day of tank shall be considered as 8.0M. The LDO pump head shall be decided accordingly by the bidder. Further bidder to note that the piping from the LDO transfer pump to the existing day oil transfer line up to the terminal point shown in the GAD of FOHS (COMPOSITE LAYOUT) shall be in bidder's scope.
5	Tender Notice 2	Pg: 33	Terminal point	In the provided layout we have not found unloading pump house. This is required to connect discharge of unloading pump to new storage tanks	Bidder to note that the unloading pump house (mentioned as FOPH) has been indicated in the GAD of FOHS (COMPOSITE LAYOUT) part of Annexure-V of the specification. Further the unloading pump house and LDO unloading pumps are existing as mentioned in PID. The outlet of the unloading pumps shall be connected to the new LDO tank Inlet. The terminal point along with line sizes have been indicated in the PID and GAD of FOHS (COMPOSITE LAYOUT).
	Tender Notice 2	Pg: 33	Terminal point	As no unloading pump house in layout, we are not able to find terminal point to take tapping of LDO transfer pumps. Please provide the same.	Bidder to note that the tapping for suction of LDO transfer pump shall be taken from the inter tank transfer line near the existing FOPH. The same has been shown in the GAD of FOHS (COMPOSITE LAYOUT).
6	Tender Notice 2	Pg: 33	Terminal point	This project is for Phase -III, in the provided layout tanks are shown as Phase-1. Please clarify	Bidder to note that in the GAD of FOHS (COMPOSITE LAYOUT) there are 4 nos. of LDO tanks. Two nos of tanks are existing and for Stage-I. Same has been mentioned in the drawing. Further, the remaining two nos. of LDO tanks for which piping has been shown are of Stage III and in the scope of bidder.
7	Tender Notice 2	Pg: 33	Terminal point	From recovered oil pit we need to transfer oil to drain tank. Please confirm whether any spare nozzle is there in drain tank	BHEL noted and confirmed. The spare nozzle shall be considered in the drain tank by BHEL.
	Tender Notice 2	Pg: 35	Oily water collected in storage tank area, oil unloading area will normally be collected in OWS pit by gravity either through trench (limited to a depth of 0.5 m) or through buried pipe (limited to a depth of 1.0 m) .	As per standard practice, oil water will be collected through trenches.	Bidder to follow technical specification. However, in cases where trench or underground piping is not feasible, the pipe shall be routed through pedestals to the OWS pit.
8	Tender Notice 2		Hence, bidder to prepare all layout drawings using 3D Modelling software	We will prepare piping layout in plant 3D and will give .nwd output	Noted. However, the type of output file shall be decided during detail engineering.
9	Tender Notice 2	Pg:48	Dealers are not acceptable for any item of the package	No manufacturer will supply small quantites and the same to be procured from dealer. Further flats and rods will be rerolled only	Bidders to follow specification.

10	Tender Notice 2	Pg:48	Supplier shall prepare the Tanks' model in an integrated & intelligent 3D software solution using rulebased,datacentric 3D Design software with equipment drawings, data sheets, BOQ, schematics etc. attached to the respective equipment / systems in the aforesaid 3D model.	Kindly note as given in previous projects, we provide tanks GAD and fabrication drawings in 2D. However for one or two tanks FEA analysis will be submitted	BHEL noted, Bidders to follow specification. However, the number of tanks for FEA analysis (min. 2 nos. of FGD tanks)shall be decided during detail engineering.
11	Tender Notice 2	Page No: 97	Tank dimension is given as 15mtr dia x 10mtr height	For 2000KL tank 10mtr height is not sufficient. Hence we are following 15.5mtr height.	The tank dimensions shall be 15mtr dia x 15.5mtr height in line with the technical specification.
	Tender Notice 4	Page No:311 of 684	LDO tank dimension is given as 15mtr dia x 15.5mtr height		
12	Tender Notice 2	Page No: 97	For sizes 400 NB and below the pipe material shall be conforming to API-5L Gr.B ERW	Getting API 5L ERW is very difficult. Please accept for IS1239/IS3589	Bidders to follow specification.
13	Tender Notice 2	Pg: 30	Painting for LDO tanks	For painting of 2000 KL LDO Storage tanks, we are following the paint system mentioned in pg: 96 of Tender notice 2. Please confirm	Noted, however painting specification shall be submitted by the successful bidder during detail engineering and same shall be subject to customer approval without any commercial implication.
14	Tender Notice 2		Painting for FGD tanks	For painting of FGD tanks and DM, Condensate tanks, we are following as per the schedule mentioned in GAD's provided.	Noted, however painting specification shall be submitted by the successful bidder during detail engineering and same shall be subject to customer approval without any commercial implication.
15	Tender Notice 2		Painting for LDO piping	For painting of LDO piping, we are considering Painting schedule table clause No:2 of Page No:298 of 684	Noted, however painting specification shall be submitted by the successful bidder during detail engineering and same shall be subject to customer approval without any commercial implication.
16	Tender Notice 2	Pg: 30	Buried MS pipes as required along with their wrapping and coating as required	No buried piping is applicable for this package	Noted, however if the same will be found in detail engineering then vendor have to provide without any commercial implication.
17	Annexure - IV (MDL)			We hope this is tentative schedule. The same will be modified DDE	Bidders to follow specification.
18	Tender Notice 2	Pg: 41	PVC Balls (hollow)	Kindly note that the same are PP balls. PVC are a little degradable with temperature and does not have long shelf life like PP balls.	Bidders to follow specification.
19	Tender Notice 2	Page No:32	reparation of all necessary drawings/data/ documents for obtaining necessary Approval of statutory authorities like CCOE	Both statements are contradicting. Please confirm getting CCOE approval is in whose scope	CCOE approval is under Bidder scope.
	Tender Notice 2	Pg: 92	Statutory approval (CCOE)		
20	Tender Notice 2	Pg: 95	Tank shall be designed with provisions so that fixed roof type may be converted into floating roof type for future storage of Methanol	As of now, we have not considered anything for future methanol use	Bidders to follow specification.
21	P&ID		Road tanker commen header	As indicated in P&ID, there is a 450NB existing line, but separately 350NB header is asked. We are not able to understand the purpose of this new header and also we have observed there is a connection from new header to old header. Please clarify	Bidder observation is correct, a new road tanker unloading header on 350 NB is to be connected to the existing suction line of 450 NB of existing LDO pumps with a isolation valve as indicated in the PID.

22	P&ID		TE for 2000 KL LDO Tanks	For LDO tanks, Temperature element is shown which is not required. Further It is shown as direct connection from TE to DDCMIS. Kindly note without TIC or TT, temperature indication cannot be shown in DDCMIS. Please clarify	Bidders to follow specification. Further any TT or TIC required for temperature indication in the DDCMIS shall be in bidder's scope.
23	P&ID		Flow meter	Type of flow meter is not given. As per instrument data sheets, there is a DP based flow meter and mass flow meter. Please confirm which one to be considered	Flow meter (CORIOLIS TYPE) applicable, refer P&ID the same is already mentioned in P&ID. A brief specification for the same is attached as Annexure-I
24	P&ID		Level transmitter on storage tank	Type of level transmitter is not given. We are considering non contact type radar level transmitter. Please confirm	Level transmitter (ULTRASONIC TYPE) applicable, refer P&ID the same is already mentioned in P&ID.
25	P&ID		Level transmitter on recovered oil pit	Type of level transmitter is not given. We are considering ultrasonic level transmitter. Please confirm	Level transmitter (ULTRASONIC TYPE) applicable, refer P&ID the same is already mentioned in P&ID.
26	Tender Notice 8	Page no:444 of 684	Power cables, control cables and screened control cables	As per this statement we understand all power, control and instrumentation cables supply is not in our scope. Please confirm	Bidder to follow technical specification..
27	Tender Notice 9	Page No: 493 of 684	Control of Fuel oil handling system shall be through DCS located in FOPH Control Room	As per exclusion given in Tender notice -2, DCS is not in our scope	BHEL Noted.
28	Tender Notice 9	Page No: 493 of 684	Bidder to consider local control panel for manual operation of pumps or any other equipment specified elsewere in the specification. This local panel will act as interface between the DCS and the field devices for commands & feedbacks	As pumps are located in pump house, same can be operated directly through MCC and LPBS. Separate panel is not required for pumps. Further we are providing instrument junction boxes and all JB's will be configured to a marshalling box(Local panel)	BHEL Noted for all the Fuel oil System Pumps. However. Please note that for oil recovery/sump pumps and pumps in OWS pits, On alarm for HIGH level, or if physically the level is found to be HIGH, respective pumps will be started manually from local push buttons in line with the technical specification. The same shall be in bidder scope.
29	Tender Notice 9	Page No: 493 of 684	Every panel-mounted instrument, requiring power supply, shall be provided with a pair of easily replaceable glass cartridge fuses of suitable rating	Please note there is no panel mounted instrument	BHEL Noted. However, bidder to note that in case panel mounted instruments are applicable the same shall be provided with a pair of easily replaceable glass cartridge fuses of suitable rating in line with the technical specification.
30	Tender Notice 9	Page No: 493 of 684	The PROFIBUS protocol design shall be further validated by BHEL and approved by NTPC during detailed engineering	We follow data sheets to select profibus related instruments/Hart compatible instruments	Bidders to follow specification.
31	Tender Notice 9	Page No: 493 of 684	Triple redundancy for all analog and binary inputs required for protection of system/drives	AS per P&ID there is not triple redundancy. We follow instruments as per P&ID	Bidder to follow P&ID provided in the specification.
32	Tender Notice 9	Page No: 495 of 684	Instrument data sheets	As per information prorived we are considering the instruments as below Profibus compatible instruments 1. Pressure transmitter 2. Radar Level transmitter Hart compatible instruments 1. Flow meter 2. Ultrasonic level transmitter	Bidder to follow technical specification
33	Tender Notice 9	Page No: 501 of 684	FRP Junction box	Please note flame proof cannot be provided in FRP junction boxes. Kindly confirm whether we can provide weather proof junction boxes	Bidder to comply with flame proof requirement as per the statutory codes and standard for the application

34	Tender Notice 9	Page No: 508 of 684	LOCAL INSTRUMENT ENCLOSURE AND LOCAL INSTRUMENT RACK	LIR is not required as we have instruments at different locations. Further as we are providing flame proof instruments, no separate enclosures are required. Please confirm	Noted for flame proof instruments.
35	Price format		Guaranteed power consumption	GPC is not asked for Auxiliary absorbant tank. As of now, we are providing exactly as per the list. Kindly confirm	Noted and Confirmed.
36	General			Will BHEL can able to provide free space for labour quarters inside premises of plant.	no space around the plant premises is available/allocated by NTPC as such, which can be given free to vendor for labour quarters.
37	Tank schedule		Primary Hydrocyclone Feed Tank	For this tank, rubber lining is mentined in tank schedule. While in GAD, glass flake lining is mentioned. Kindly clarify	Bidder to note rubber lining shall be provided for the Primary Hydrocyclone Feed tank in line with the tank schedule.
38	Tender Notice 6	Pg: 24	Filtrate water tank	Nozzle details for Shell Nozzles is not matching with the GAD, we are following the nozzle details table only, Kindly confirm.	Bidder to follow the nozzle details and other accessories as mentioned in the shell and roof appurtenances of the GAD. Further the list provided is for tender purpose only and shall be finalized during detail engineering without any time and price implication.
39	Tender Notice 6	Pg: 26	Auxilary Absorbent tank	Nozzle details for Shell Nozzles is not matching with the GAD, we are following the nozzle details table only, Kindly confirm.	Bidder to follow the nozzle details and other accessories as mentioned in the shell and roof appurtenances of the GAD. Further the list provided is for tender purpose only and shall be finalized during detail engineering without any time and price implication.
40	Tender Notice 7	Pg: 22	Secondary Hydrocyclone Tank	Nozzle details for Shell Nozzles is not matching with the GAD, we are following the nozzle details table only, Kindly confirm.	Bidder to follow the nozzle details and other accessories as mentioned in the shell and roof appurtenances of the GAD. Further the list provided is for tender purpose only and shall be finalized during detail engineering without any time and price implication.
41	The Agitators make is not declared. Hence we are unable to get the supporting quotation from the vendors				Bidder to note that the agitator make shall be proposed by the successful bidder after award of contract. Further proposed agitator make shall meet the Sub-QR requirement mentioned in the NIT and shall be subjected to the end customer approval.
42	All the drain Sump Areas (Absorber,Gypsum , Limestone) Construction along with the Glass Flake Lining in whose scope of supply .				The RCC sumps (Absorber,Gypsum , Limestone) are in BHEL scope. Further, the Supply, E&C of the glass flake viny ester lining for the sumps shall be in scope of bidder.
43	The Inspection cost for the third party inspection shall be borne by BHEL .				Bidder to note that the for Indian sub-vendors, cost of third party inspection shall be borne by BHEL. However, for foreign sub-vendors, bidder has to finalize the inspection agency at their own cost and carry out the inspection as per approved quality plan. List of Third party inspection agency submitted by bidder shall be reviewed and approved by BHEL/NTPC during detail engineering.

3. Should have the remote control facilities for calibrations (Zero & Span) and Measuring Range.

4. Should display multiple Stations on-line data (momentary values) in tabular text and graphic format.

5. Should connect the remote stations through Wireless Communication link.

11.03.02 **Additional features of the Data Logger at Central Station -** AS PER CONTRACTOR's STANDARD AND PROVEN PRACTICE for meeting system and LATEST CPCB REQUIREMENT

11.03.03 **Data Communication System**

Each AAQMS station shall be connected to Central data Acquisition station through a two way wireless communication link. This shall allow for wireless transmission of data periodically to individual and central DAS & do the necessary communication between stations. Bidders shall determine the optimal antenna type required to achieve data transfer rate between all wireless access points. Contractor shall use for this purpose, approved and standard equipment like antennas and/or amplification devices etc required to achieve the above and shall provide agreement of technical support and support availability.

Contractor shall obtain necessary approval for Licenses authorizing the use of communication equipment specified frequencies.

12.00.00 **SPECIFICATION FOR CORIOLIS FLOW TRANSMITTER**

Type	Coriolis
Material of Wetted Parts	316 SS
Material of Housing	304L SS
Accuracy	± 0.2% of Rate
Repeatability	± 0.1% of Rate
Output	4-20 mA DC, HART Compatible
Power Supply	230 VAC or 24VDC operated
Process Temperature range	0-200 degree Celsius
Others	Drain / purging arrangement shall be provided as per standard practice.

Notes: Coriolis Mass flow meter upstream of Burners shall be sized to measure minimum flow corresponding to one burner operation and maximum BMCR rating flow with 25% margin.

The offered Coriolis type flow transmitter shall be suitable for intended application. Contractor shall submit flow and sizing calculation for Employer's approval. For each type of Coriolis type flow transmitter general arrangement and assembly drawing and cable wiring diagram shall be submitted for Employer's approval.

13.00.00 SPECIFICATION FOR FLOW ELEMENTS

13.01.00 Orifice Plate

Features	Essential/Minimum Requirements
Type	Concentric as per ASME PTC-19.5 (Part-II), ISA RP-3.2, 1960 or BS-1042, ISO 5167
Material	316 SS
Thickness	3 mm for main pipe diameter up to 300 mm and6 mm for main pipe dia above300 mm.
Tappings	Flanged weld neck or D & D/2 with 3 pairs of tapping (as applicable). Root valves to be provided in all the tappings. However for flow elements in CPU, DM & PT plant- 2 Pairs of Tappings shall be provided as minimum.
Beta Ratio	0.34 to 0.7

13.02.00 Flow Nozzle

Features	Essential/Minimum Requirements
Type	Long radius, welded type as per ASME PTC-19.5 (Part-III) or BS-1042, ISO 5167
Material	ASME SA182-GRADE 316L. The material of Flow nozzle shall be A182F91/F92, where pipe material is A335P91/P92.
Tapping	Flanged weld neck or D & D/2 with 3 pairs of tapping (as applicable). Root valves to be provided in all the tappings. However for flow elements in CPU, DM & PT plant- 2 Pairs of Tappings shall be provided as minimum.
Beta Ratio	Around 0.7