



**BHARAT HEAVY ELECTRICALS LIMITED,
TIRUCHIRAPPALLI 620 014
OUTSOURCING DEPARTMENT**

NIT: 2024OSB018

NIC TENDER ID: 2024_BHEL_41771_1

ANNEXURE-1

CORRIGENDUM

✓ The following documents are revised to address below mentioned points (a) to (c).

1. ANNEXURE-A (PQR)
2. Section-I D- Scope of Work
3. Section I B List of Extra & Scrap recovery rates

a) **PQR-Annexure –A:** Following points are included

SL. No.	Parameter for evaluation	Minimum required
The following points included		
11	Heat treatment furnace with IBR approval & with valid calibration - 4m X 4m capacity to handle length of 16 to 24m. Temperature range : 600-780°C	In-house / Outsource / BHEL
12	Local SR facility with IBR approval & with valid calibration	In-house / Outsource
The following is modified		
	Report of past experience in fabrication of Radiant Roof Panels / Terminal Tube Bends with fin welding / water wall panel / RH/SH/ECO coils with attachment welding supplied to BHEL Trichy. Location of the fabricating firm shall be within 60km from BHEL trichy	Report of past experience in fabrication of Radiant Roof Panels / Terminal Tube Bends with fin welding / water wall panel / RH/SH/ECO coils with attachment welding supplied to BHEL Trichy.

b) **Section-I D: Scope of Work**

Existing	Revised
Obtain Stress relieving(SR) co-operation from BHEL Trichy. SR must be carried out in BHEL works only. Extra rate not applicable for the above scope.	Obtain Stress relieving (SR) co-operation from BHEL Trichy or any other Heat Treatment facility approved by IBR. For Heat Treatment completed at facility other than BHEL then Vendor shall be eligible for an additional payment for Heat Treatment. Additional payment shall be done at Pre fixed Extra rate of Rs.9.40 / kg. Note: For Heat Treatment done at BHEL no extra rate shall be applicable including to and fro charges.

c) **Section-I B: Extra Rate added**

Pre fixed Extra rate for Stress Relieving is **Rs. 9.40/kg.**

✓ Kindly find the following Part drawings enclosed.


SL. No.	Part Drawings
1	4-11-991-04592
2	4-11-991-04593
3	4-11-991-04594
4	4-11-991-04595
5	4-11-991-04596
6	4-11-991-04597
7	4-11-991-04598
8	4-11-991-04600
9	4-11-991-04604
10	4-11-991-04605
11	2-11-991-12733
12	2-11-991-15592
13	2-11-991-15593
14	2-11-991-15594
15	2-11-991-15595
16	2-11-991-15596
17	2-11-991-15597
18	2-11-991-15598
19	2-11-991-15599
20	2-11-991-15601
21	2-11-991-15602
22	2-11-991-15603
23	2-11-991-15605
24	2-11-991-15606
25	3-11-991-09737
26	3-11-991-09738
27	3-11-991-09739
28	3-11-991-09740
29	3-11-991-09741
30	3-11-991-09742
31	3-11-991-09743
32	3-11-991-09744

Above Drawings are in addition to the Drawings already provided in Section IC of Subject NIT.

✓ *The due date for offer submission has been extended till **03-12-2024; 11.00 AM.***

All other Terms and Conditions of NIT remains unchanged.

NOTE: Participation in NIT by a vendor will be considered as acceptance of all Terms & Conditions, including any corrigendum

		BHARAT HEAVY ELECTRICALS LIMITED, TIRUCHIRAPALLI				
OUTSOURCING						
428/004; 01.02.2017		Pre Qualification Requirement for Radiant Roof Panels (RRP) and Terminal Tube Bends with fin welding				
Vendor Name, Address and Contact No.:						
Report of past experience in fabrication of Radiant Roof Panels / Terminal Tube Bends with fin welding / water wall panel / RH/SH/ECO coils with attachment welding supplied to BHEL Trichy. Location of the fabricating firm shall be within 60km from BHEL trichy						
Spot assessment date:						
Part-A (Mandatory)						
SI No	Parameter for evaluation	Minimum required	As given by Firm	As observed in Audit	Remarks	Ok/Not Ok
	LAND DETAILS :					
1	Land area . (If land is taken under lease, registered lease deed for 3 yrs period is required)	0.5 Acres				
2	Covered Shed with concrete flooring	3229 sq. ft				
	EB POWER					
3	Power capacity	100 HP				
	HANDLING FACILITIES					
4	Material handling crane capacity with stability certificate (A frame / EOT / Mobile crane)	10 MT				

SI No	Parameter for evaluation	Minimum required	As given by Firm	As observed in Audit	Remarks	Ok/Not Ok
	SPECIFIC MACHINES :					
5	(SMAW)Welding M/c 400 Amps Inverter / Rectifier	4 Nos				
6	TIG welding machines for tube butt joints	2 Nos				
7	Tube bending machine - capable of bending up to 76.1 mm dia tubes.	1 No				
8	Tube boring and chamferring machine	2 Nos each				
9	Spectrotesting machine - Portable type	In-house or Outsourced				
10	Preheating/post heating - fuel & burner facilities	1 No. for each welding centre				
11	Heat treatment furnace with IBR approval & with valid calibration - 4m X 4m capacity to handle length of 16 to 24m. Temperature range : 600-780°C	Inhouse / Outsource/BHEL				
12	Local SR facility with IBR approval & with valid calibration	Inhouse / Outsource				
13	Hydro testing pumps - 550 Kg/Sq Cm with calibrated pressure gauges	1 No				
14	Firm approval by IBR for boiler pressure parts	Must be available				
15	Ball & Sponge Test Facility with compressor	1 No				
16	Spray painting facility	1 No or Outsourced from BHEL approved source.				
17	D-Meter (for thickness checking)	1 No or Outsourced from BHEL approved source.				
18	Layout marking facilities required	1 No				
	OVEN					
19	Electrode Baking oven	1 No				
20	Electrode Holding oven	1 No				
21	Flask oven	3 Nos				

SI No	Parameter for evaluation	Minimum required	As given by Firm	As observed in Audit	Remarks	Ok/Not Ok
	INSPECTION FACILITIES					
22	LPI Kit	1 Set				
23	Level II LPI,MPI and UT,RT (if UT/RT is in house) qualified personnel with valid certificate	1 Person for each type.				
24	UT, RT	In-house or Outsourced from IBR approved firms				
25	IBR qualified welders for CS/AS	1 person for each category				
	MEASURING INSTRUMENTS					
26	Measuring tapes - 5m, 30m *	1 No each				
27	Vernier caliper - 150 mm	1 No				
28	Paint coating thickness meter	1 No or Outsourced from BHEL approved source.				
	GRINDING MACHINES:					
29	Tube cutting machine	1 No				
30	Grinding machines	3 Nos				
	PAN & GST :					
31	IT Pan Card No	Original to be offered for verification				
32	GST No	Original to be offered for verification				
	OFFICE ROOM :					
33	Office room with 2 PC / LAPTOP , internet facility and printer	Must				
Part-B (Optional)						
01	Gen. set	--				
02	Stenciling/Engraving/Dot punching facility	--				
03	Stud welding machine	--				

NOTE_1:

A. All Measuring instruments/gauges (Tapes - one time calibration) must have valid calibration certificate from any NABL accredited lab.

B. For any outsourced facility mentioned as per checklist, earlier executed POs or valid agreement for facility tie-up must be produced

Part-C: Final Recommendation (for BHEL use only)

Recommendation after checklist verification:

SI No	Parameter for evaluation	Minimum required	As given by Firm	As observed in Audit	Remarks	Ok/Not Ok
Recommendation after spot assessment:						
Assessor.1-TCA (Spot assessment):			Assessor.2 - Co-assessor (Spot assessment):			
Note 2:						
01	Part-A requirement is a must for qualifying the vendor. Hence, filling up all evaluation parameters is a must and all mandatory facilities shall be available at the time of spot assessment					
02	Part-B is only optional and need not be considered for disqualifying the vendor.					

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Scope for fabrication of Radiant Roof Panel(RRP) - NTPC - RS01

1	The welding shall be done by M/S IBR qualified welders.
2	The welding procedure specification (WPS) shall be reviewed and approved by BHEL QC.
3	Welding Consumables are to be procured from the BHEL approved vendors.
4	Fabrication, Inspection and testing shall be carried out as per applicable quality documents (CQP/SQP/SIP/QCP).
5	Form 3B will be vendor's scope
6	Production & common note given in manufacturing GMS has to be followed.
7	Collect the complete tubes and plates from BHEL stores with relevant IBR & NTPC documents.
8	Inspect the raw materials details & specification by spectrometer. All IBR inspection formalities should be followed. If any defects noticed in supplied raw material, inform the same to OS immediately.
9	Shot-blast the tubes.
10	Cut & edge prepare the tubes as per drawing.
11	Any butt joint planned & location of butt joint should be done based on engineering clearance. Prior approval must be obtained from engineering for the same.
12	Build the tubes to required length by Butt joint (TIG welding preferred).
13	Radiographic Test (RT) shall be performed on the Butt joints by BHEL or BHEL approved agency only.
14	RT film shall be evaluated by BHEL NDTL and NTPC.
15	Cut & manufacture the attachments as per drawing.
16	For the purpose of FOT if raw material is required by Firm then it shall be issued by BHEL and shall be treated as scrap for the purpose of material accounting.
17	Bend the tubes as per drawing.
18	Carry out Attachment welding as per drawing.
19	At Butt joint locations, fin should be ground to suit the butt weld reinforcement. Weld over weld should be avoided.
20	Conduct visual inspection on welds. Conduct LPI on welds in the presence of BHEL NDT or BHEL approved agency.
21	All NDT testing such as MPI, LPI, sponge test and etc. wherever called for in the drawing/QWI/PO are to be done by Firm.
22	Straightening to be ensured.
23	Obtain Stress relieving(SR) co-operation from BHEL Trichy or any other heat treatment facility approved by IBR.
24	Conduct hydro test for tubes in the presence of BHEL QC.
25	Offer for Inspection to QC/BHEL, NTPC & IBR for final inspection.
26	Provide Identification and End caps.
27	Paint and Dispatch to shipping with relevant IBR and BHEL documents.
28	During dispatch from Vendors works to BHEL, bundle wise (DU wise & full quantity) dispatch must be ensured. (Split-up of DU quantity is not acceptable).

Scope for fabrication of Terminal Tube bends with fin welding - NTPC - RS02

1	The welding shall be done by M/S IBR qualified welders.
2	The welding procedure specification (WPS) shall be reviewed and approved by BHEL QC.
3	Welding Consumables are to be procured from the BHEL approved vendors.
4	Fabrication, Inspection and testing shall be carried out as per applicable quality documents (CQP/SQP/SIP/QCP).
5	Form 3B will be vendor's scope
6	Production & common note given in manufacturing GMS has to be followed.
7	Collect the complete tubes and plates from BHEL stores with relevant documents.
8	Inspect the raw materials details & specification by spectrometer. All IBR inspection formalities should be followed. If any defects noticed in supplied raw material, inform the same to OS immediately.
9	Shot-blast the tubes.
10	Cut & edge prepare the tubes as per drawing.
11	Any butt joint planned & location of butt joint should be done based on engineering clearance. Prior approval must be obtained from engineering for the same.
12	Build the tubes to required length by TIG welding (Butt joint).
13	Radiographic Test (RT) shall be performed on TIG joints by BHEL or BHEL approved agency only.
14	RT film shall be evaluated by BHEL NDTL and NTPC.
15	Cut & manufacture the attachments as per drawing.
16	For the purpose of FOT if raw material is required by Firm then it shall be issued by BHEL and shall be treated as scrap for the purpose of material accounting.
17	Bend the tubes as per drawing.
18	Carry out Attachment welding as per drawing.
19	At Butt joint locations, fin should be ground to suit the butt weld reinforcement. Weld over weld should be avoided.
20	Conduct visual inspection on welds. Conduct LPI on welds in the presence of BHEL NDT or BHEL approved agency.
21	All NDT testing such as MPI, LPI, sponge test and etc. wherever called for in the drawing/QWI/PO are to be done by Firm.
22	Straightening to be ensured.
23	Obtain Stress relieving(SR) co-operation from BHEL Trichy or any other heat treatment facility approved by IBR.
24	Conduct hydro test for tubes in the presence of BHEL QC.
25	Offer for Inspection to QC/BHEL, NTPC & IBR for final inspection.
26	Provide Identification and End caps.
27	Paint and Dispatch to shipping with relevant IBR and BHEL documents.
28	During dispatch from Vendors works to BHEL, bundle wise (DU wise & full quantity) dispatch must be ensured. (Split-up of DU quantity is not acceptable).

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SECTION IB - LIST OF EXTRA RATE SCHEDULES

SL. No.	YEAR	RS Type	Extra RS Number	DESCRIPTION	RS Category	UOM	Rate (Rs. per UoM)
1	2024	E		Stress Relieving (SR)	SR	Kg	9.40
2	2024	E		BUTT JOINT including RT - Tube Diameter up to 44.5mm and any thickness (Applicable for both CS & AS)	Additional Joints	No	469.00
3	2024	E		BUTT JOINT including RTTube Diameter above 44.5mm and any thickness (Applicable for both CS & AS)	Additional Joints	No	601.00
4	2024	E	18855	Non - Ferrous scrap	Scrap Recovery rates	MT	6,57,500.00
5	2024	E	18856	Non - Ferrous - turnings & Borings scrap	Scrap Recovery rates	MT	3,81,000.00
6	2024	E	18857	"CS/AS Sheets , plates & Structural"	Scrap Recovery rates	MT	32,272.00
7	2024	E	18858	Ferrous Tubes and Pipe Scrap	Scrap Recovery rates	MT	46,300.00
8	2024	E	18859	SS scrap (magnetic)	Scrap Recovery rates	MT	58,089.00
9	2024	E	18860	SS scrap (non-mgnt) other than 310/310S	Scrap Recovery rates	MT	1,16,178.00
10	2024	E	18861	SS scrap (non-mgnt) 310/310S	Scrap Recovery rates	MT	1,16,178.00
11	2024	E	18862	Big size scrap (AS/CS)	Scrap Recovery rates	MT	35,272.00
12	2024	E	18863	Turnings & borings scrap (CS/AS)	Scrap Recovery rates	MT	24,425.00
13	2024	E	18864	Turnings & borings scrap (SS Mgnt)	Scrap Recovery rates	MT	34,195.00
14	2024	E	18865	Turnings & borings scrap (SS Non-mgnt)	Scrap Recovery rates	MT	68,390.00
15	2024	E	18866	"Non return consumables(like ropes ,etc)	Scrap Recovery rates	MT	5,000.00
16	2024	E	23906	DEDUCTION OF DTS (0 - 80 KM)	DTS charge	MT	312.00
17	2024	E	23907	DEDUCTION OF DTS (80 -175 KM)	DTS charge	MT	683.00
18	2024	E	23908	DEDUCTION OF DTS (175 - 350 KM)	DTS charge	MT	1,243.00

Note: Vendor to note that Paint rate will not be paid extra. Vendor to Quote including Paint Rate.