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TENDER SPECIFICATION

**TENDER NO. BHEL:PARICHA-III: STRU\_STEEL:369**

**FOR**

**Fabrication, erection, testing, painting, grouting etc related to Power house building, Bunkers, Bunker bay & pipe rack structures including supply of all materials except those proposed to be supplied by BHEL for 2 x 250 MW units (STAGE-III, UNIT 5 & 6) at Paricha Thermal Power Plant (PTPP) of UPRUVNL at Paricha, Jhansi , UP.**

**PART II – PRICE BID**

**PART - A**

Bharat Heavy Electricals Limited  
(A Govt. Of India Undertaking)  
Power Sector – Northren Region,  
Plot No. 25 , Sector - 16A ,  
Distt. Gautam Budh Nagar, NOIDA – 201 301.INDIA

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SL NO	ITEM NO	ITEM DESCRIPTION	UNIT	QTY- STR-A	RATE ( IN FIG URE AND WORDS ) ( RS .)	AMOUNT ( RS .)
	700	<b>M.S. EMBEDMENTS</b>		.		
1	704	Supply, Fabrication, erection, installation and alignment of <b>MS foundation bolt</b> assembly in concrete along with nuts, lock nuts, anchor plates, stiffner plates, protective tape etc. - including furnishing of labour, materials, equipments, welding, cutting, grinding, threading, drilling etc. all complete as per specification, drawing and instruction of the engineer.	MT	24		
	2300	<b>Structural steel works. All items for fabrication should include supply (AS APPLICABLE ), fabrication drawings as per specifications including painting with a coat of primer and also inclusive of all necessary quality tests to the satisfaction of engineer/customer for the following. ( ALL STRUCTURAL STEEL , WHEREVER MENTIONED , WILL BE SUPPLIED BY BHEL )</b>		.		
2	2301	Preparation of detail fabrication drawing and review by appd Consultant, supply (AS APPLICABLE ), fabrication of <b>structural steel</b> (rolled section, built up section or combination), delivery at site, transportation, work in columns, girders, beams, gantry girders, trusses, purlins, circular coal bunkers, bracings, cleats, shear connectors, platforms, lugs, safety chains etc. along with base plates & other fittings & fixtures including cutting, grinding, machining, wherever applicable, drilling, bolting (including cost of HT & HSFG bolts of property class 8.8 minimum as per IS:1367(Latest) of GKW or equivalent make for field connection, etc.), welding (shop connections are welded), preheating of welded joints (& use of low hydrogen /radiogenic electrodes as per spec.), shop coat of painting & touch up painting, complete as per specifications. Nominal connections in field like purlins, stairs, wall beams shall be done by 16mm dia. MS black bolts as per IS:1363(Latest). Builtup section shall be submerged welded as per specification. The primer coats shall be 2 coats of Redoxide Zinc Chromate, one coat applied in shop and second coat applied at the	MT	9900		
3	2302	Supply, fabrication of <b>chequered plates</b> and delivery at site including shop coat of painting and touch up painting complete as per specifications. The primer coat shall be as per details explained under item no 2301(a)	MT	170		
4	2303	Supply, fabrication of <b>MS grating</b> and delivery at site including shop coat of painting and touch up painting complete as per specifications. The primer coat shall be as per details explained under item no 2301(a).	MT	145		
5	2305	Supply, fabrication and delivery at site, transportation, loading/unloading of various sizes, <b>MS pipe hand railing</b> including painting and fixing as per specification, labour and material completer for heavy duty class.	MT	62		
6	2307	<b>Erection of structural steel works</b> including the receiving the fabricated material either from Project site or from any where at Project site, all field connections, bolting including HSFG bolts wherever applicable and welding and fixtures wherever necessary as shown on drawings and as directed by the engineer, labour and material, for all heights as per the drawings issued from time to time at the time of execution.	MT	9900		

SL NO	ITEM NO	ITEM DESCRIPTION	UNIT	QTY- STR-A	RATE ( IN FIG URE AND WORDS ) ( RS .)	AMOUNT ( RS .)
7	2308	<b>Erection of chequered plate, handrail and grating</b> including the receiving material either from Project store or from any where at Project site all field connection, bolting, welding and fixtures wherever necessary as per specifications and as shown on drawings and as directed by the engineer, labour and material, for all heights as per the drawings.	MT	396		
8	2310	Supply and application of 2 coats of <b>synthetic enamel paint</b> of Berger or equivalent make, approved colour over primer coat at all heights and levels for all steel structures including chequered plates and gratings. Total DFT of finished paint shall be minimum 100 microns complete as per specifications.	MT	10200		
9	2314	Conducting <b>radiography test</b> on welds wherever specified by the engineer including provision of necessary equipments, measuring devices, gauges, materials and labour as per specifications complete (over and above the work already specified in the specifications.	RM	89		
10	2315	Conducting <b>ultasonic test on welds</b> wherever specified by the engineer including provision of necessary equipments, measuring devices, gauges, materials and labour as per specifications complete (over and above the work already specified in the specifications.	RM	35		
11	2316	Conducting <b>magnetic particle test on welds</b> wherever specified by the engineer including provision of necessary equipments, measuring devices, gauges, materials and labour as per specifications complete (over and above the work already specified in the specifications.	RM	35		
12	2320	<b>Dismantling of existing steel structures</b> at any elevations including lowering of material and carriage of materials to fabrication shop as per specifications and instructions of engineer.	MT	20		
13	2321	<b>Re erection of dismantled fabricated structural steel</b> members requiring modifications including carriage from field fabrication shop complete as per specification and instructions of the engineer.	MT	10		
		<b>TOTAL</b>				

**NOTE:**

- 1 **PLEASE NOTE THAT RATE SCHEDULE FOR PART-A AND PART-B ARE TO BE SUBMITTED IN SEPARATE SEALED ENVELOPS. AS PER RATE SCHEDULE. PLEASE REFER CLAUSE- 56.3 (RATE SCHEDULE)**
- 2 **The contractor while quoting the price / rates as above, categorically confirm having understood the fullest implications of the price variation provisions contained in clause 51.0 of this tender. Accordingly, taking into considerations all aspects thereof, quoted the above rates. Further the contractor confirms that he will not come up with any other claim/compensation on account of any increase whatsoever during entire period of execution including extended period, if any.**

SL NO	ITEM NO	ITEM DESCRIPTION	UNIT	QTY- STR-A	RATE ( IN FIG URE AND WORDS ) ( RS .)	AMOUNT ( RS .)
3		As per Government of India notification, applicable w.e.f 01.08.04, fly ash bricks only have to be used. The contractor while quoting the price / rates as above, categorically confirm having understood the fullest implications of this.				
4		In case of omission in quoting any rate, the evaluation will be done considering the highest quoted rate obtained against that item but the work, if awarded, will be on the lowest quoted rate obtained against that item				
5		The rate shall be entered in figures as well as in words. In case of difference in rates between words and figures, the lesser of the two will be treated as valid rate.				
6		The bidders shall enter both 'Unit Rate' & 'Amount'. In case of any mismatch between 'Total Amount based on Unit Rate' & 'Total Amount as quoted', the lower of the two shall be considered for evaluation and award.				
7		The quantities indicated against each item above are tentative and same are liable to vary depending upon the site requirement. The contractor has to handle all items indicated by BHEL Engineer for completion of work				

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**PART II – PRICE BID**

**PART - B**

Bharat Heavy Electricals Limited  
(A Govt. Of India Undertaking)  
Power Sector – Northren Region,  
Plot No. 25 , Sector - 16A ,  
Distt. Gautam Budh Nagar, NOIDA – 201 301.INDIA

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SL NO	ITEM NO	ITEM DESCRIPTION	UNIT	QTY- STR-B	RATE ( IN FIG URE AND WORDS ) ( RS .)	AMOUNT ( RS .)
	700	<b>M.S. EMBEDMENTS</b>		.		
1	704	Supply, Fabrication, erection, installation and alignment of <b>MS foundation bolt</b> assembly in concrete along with nuts, lock nuts, anchor plates, stiffner plates, protective tape etc. - including furnishing of labour, materials, equipments, welding, cutting, grinding, threading, drilling etc. all complete as per specification, drawing and instruction of the engineer.	MT	8		
	2300	<b>Structural steel works. All items for fabrication should include supply (AS APPLICABLE ), fabrication drawings as per specifications including painting with a coat of primer and also inclusive of all necessary quality tests to the satisfaction of engineer/customer for the following. ( ALL STRUCTURAL STEEL , WHEREVER MENTIONED , WILL BE SUPPLIED BY BHEL )</b>		.		
2	2301	Preparation of detail fabrication drawing and review by appd Consultant, supply (AS APPLICABLE ), fabrication of <b>structural steel</b> (rolled section, built up section or combination), delivery at site, transportation, work in columns, girders, beams, gantry girders, trusses, purlins, circular coal bunkers, bracings, cleats, shear connectors, platforms, lugs, safety chains etc. along with base plates & other fittings & fixtures including cutting, grinding, machining, wherever applicable, drilling, bolting (including cost of HT & HSFG bolts of property class 8.8 minimum as per IS:1367(Latest) of GKW or equivalent make for field connection, etc.), welding (shop connections are welded), preheating of welded joints (& use of low hydrogen /radiogenic electrodes as per spec.), shop coat of painting & touch up painting, complete as per specifications. Nominal connections in field like purlins, stairs, wall beams shall be done by 16mm dia. MS black bolts as per IS:1363(Latest). Builtup section shall be submerged welded as per specification. The primer coats shall be 2 coats of Redoxide Zinc Chromate, one coat applied in shop and second coat applied at the	MT	6600		
3	2302	Supply, fabrication of <b>chequered plates</b> and delivery at site including shop coat of painting and touch up painting complete as per specifications. The primer coat shall be as per details explained under item no 2301(a)	MT	113		
4	2303	Supply, fabrication of <b>MS grating</b> and delivery at site including shop coat of painting and touch up painting complete as per specifications. The primer coat shall be as per details explained under item no 2301(a).	MT	97		
5	2305	Supply, fabrication and delivery at site, transportation, loading/unloading of various sizes, <b>MS pipe hand railing</b> including painting and fixing as per specification, labour and material completer for heavy duty class.	MT	41		
6	2306	Supply, fabrication including preparation of fabrication drawings, delivery at site, transportation, loading, unloading etc. of <b>MS coal bunkers</b> in cylindrical or rectangular shape with bottom conical portion (with circular or rectangular mouth piece attached) with all special fixtures such as stiffeners, supporting brackets for mounting of steel frame structure as per specification, labour, material, welding (use of low hydrogen radiographic electrodes) complete including shop coat of painting and touch up painting.	MT	2000		

SL NO	ITEM NO	ITEM DESCRIPTION	UNIT	QTY- STR-B	RATE ( IN FIG URE AND WORDS ) ( RS .)	AMOUNT ( RS .)
7	2307	<b>Erection of structural steel works</b> including the receiving the fabricated material either from Project site or from any where at Project site, all field connections, bolting including HSFG bolts wherever applicable and welding and fixtures wherever necessary as shown on drawings and as directed by the engineer, labour and material, for all heights as per the drawings issued from time to time at the time of execution.	MT	6600		
8	2308	<b>Erection of chequered plate, handrail and grating</b> including the receiving material either from Project store or from any where at Project site all field connection, bolting, welding and fixtures wherever necessary as per specifications and as shown on drawings and as directed by the engineer, labour and material, for all heights as per the drawings.	MT	264		
9	2309	<b>Erection of coal bunkers</b> as mentioned above on structural steel frame work including deceiving fabricated material either from project store or anywhere at project site, all field connections, bolting, welding complete as shown on drawings and as directed by engineer, labour and material complete.	MT	2000		
10	2310	Supply and application of 2 coats of <b>synthetic enamel paint</b> of Berger or equivalent make, approved colour over primer coat at all heights and levels for all steel structures including chequered plates and gratings. Total DFT of finished paint shall be minimum 100 microns complete as per specifications.	MT	6800		
11	2311	<b>Painting of structural steel works for coal bunkers</b> with 2 coats of synthetic enamel paint of Berger or equivalent make, approved colour over primer coat at all heights and levels on <b>external face</b> . Total DFT of finished paint shall be minimum 100 microns complete as per specifications.	MT	2000		
12	2312	Supply, fabricate and erect <b>3.10mm thick stainless steel liner</b> of grade AISI-304; Finish Grade 2B (Cold rolled, Annealed & Pickled and Skin passed) on M.S. plate for entire inside surfaces of hopper & mouth of hopper of bunker as directed by the Engineer including fixing with studs, bolting/welding etc. complete as per specifications and IS standards. Electrode classification shall be E308L for welding of stainless steel to stainless steel and E309 for stainless steel to mild steel.	MT	150		
13	2314	Conducting <b>radiography test</b> on welds wherever specified by the engineer including provision of necessary equipments, measuring devices, gauges, materials and labour as per specifications complete (over and above the work already specified in the specifications.	RM	59		
14	2315	Conducting <b>ultasonic test on welds</b> wherever specified by the engineer including provision of necessary equipments, measuring devices, gauges, materials and labour as per specifications complete (over and above the work already specified in the specifications.	RM	24		
15	2316	Conducting <b>magnetic particle test on welds</b> wherever specified by the engineer including provision of necessary equipments, measuring devices, gauges, materials and labour as per specifications complete (over and above the work already specified in the specifications.	RM	23		

SL NO	ITEM NO	ITEM DESCRIPTION	UNIT	QTY- STR-B	RATE ( IN FIG URE AND WORDS ) ( RS .)	AMOUNT ( RS .)
16	2320	<b>Dismantling of existing steel structures</b> at any elevations including lowering of material and carriage of materials to fabrication shop as per specifications and instructions of engineer.	MT	20		
17	2321	<b>Re erection of dismantled fabricated structural steel</b> members requiring modifications including carriage from field fabrication shop complete as per specification and instructions of the engineer.	MT	10		
		<b>TOTAL</b>				

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