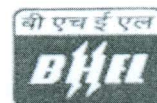


भारत हेवी इलेक्ट्रिकल्स लिमिटेड
(भारत सरकार का उपक्रम)



Bharat Heavy Electricals Limited

(A Govt. of India Undertaking)
Power Sector - Southern Region
New No.690 (Old No.474), Anna Salai,
Nandanam, Chennai-600 035.
Phone : 2433 0015 (10 Lines)
Grams : BHELPOWER

BHEL PSSR SCT 1560

DATE: 25.07.2014

CORRIGENDUM-1 TO TENDER NOTICE SCT 1560

TENDER SPECIFICATION NO BHEL: PSSR: SCT: 1560

Sub: Fabrication & Erection of **Package-A&B** (Unit-1&2) of Structural steel works in Power House, Mill Bunker Floor, Pipe Rack & other Misc buildings for 2 X 500 MW at Neyveli New Thermal Power Station, Neyveli, Cuddalore Dist, TamilNadu

DUE DATE EXTENDED FOR THE SUBJECT TENDER AS BELOW:-

DESCRIPTION	EXISTING IN THE TENDER	REVISED AS
DUE DATE & TIME FOR TENDER SUBMISSION	30.07.2014, 15.00 HRS	06.08.2014, 15.00 HRS
DUE DATE & TIME FOR OPENING OF TECHNICAL BIDS	30.07.2014, 15.30 HRS	06.08.2014, 15.30 HRS

ALL OTHER CONDITIONS REMAIN UNCHANGED.

A. J. M. 25/7/14
GM/HR&SCT

पंजीकृत कार्यालय: 'बी एच ई एल हाउस,' सिरि फोर्ट, नई दिल्ली -110049.
Regd. Office : "BHEL House", Siri Fort, New Delhi - 110049.



**BUREAU
VERITAS**

CORRIGENDUM-2 TO TENDER NOTICE BHEL PSSR SCT 1560,dated:25/7/2014

Some of the bidders sought clarifications in the Tender Specification BHEL PSSR SCT 1560 - Neyveli New TPS,unit-1&2, 2x500MW Fabrication and Erection of structural steel works.BHEL reply against the clarifications are furnished below for information.

Sl no	Reference clause of in tender	Existing provision	Bidder's query	BHEL's clarification
1	Doc No. SCT 1560 VOL II PRICE BID for package-A	In BOQ, Structural Steel	Structural works Fabrication are to be carried out in shop or in site. Kindly clarify.	Structural steel fabrication to be carried out at site only.
2	Doc No. SCT 1560 VOL I BOOK 1A TECHNO COMMERCIAL BID Pg. No. 44 of 477	BHEL shall provide structural steel for incorporation in the permanent work as free supply.	Kindly confirm that the material is free supply.	Supply of structural steel is free issue
3	Doc No. SCT 1560 VOL I BOOK 1A TECHNO COMMERCIAL BID Pg. No. 81 of 477	In sub vendors List of Steel makes – JSW, TISCO, RINL, SAIL.	Present vendor list leaves us with only one option of M/s. SAIL for ISMB,ISMC sections above 200. Please expand the same towards M/s. Topworth & M/s. Mahamaya for avoiding execution troubles at later date.	Tender condition prevails
4	Doc No. SCT 1560 VOL I BOOK 1A TECHNO COMMERCIAL BID Pg. No. 45 of 477	Construction power will be provided to the contractor on free of charges from the nearest substation at one single point by BHEL.	Kindly confirm that construction power will be free of charges for fabrication work also.	Construction power will be provided on free of charges for fabrication works at site at the prevailing tender conditions .
5	Doc No. SCT 1560 VOL I BOOK 1A TECHNO COMMERCIAL BIDPg. No. 54 of 477	TAX clause	How about excise? Is there any exemption?	Tender condition prevails
6	Doc No. SCT 1560 VOL I BOOK 1A TECHNO COMMERCIAL BID Pg. No. 52 of 477	1.7.0 Terms of payment	What about the terms of payment of material supply? Please amend as below.	Tender condition prevails .Hence No Amendment calls for.
7	Doc No. SCT 1560 VOL I BOOK 1A TECHNO COMMERCIAL BIDPg. No. 52 of 477	1.7.0 Terms of payment	Please allow 10% interest free advance for material 60% of items rate of Supply upon receipt of material 15% upon fabrication 15% upon erection	Tender condition prevails
8	Types of Structures		What are the Types of structures?Kindly provide us the drawings.	Refer item specification
9	Price Variation Clause		Kindly clarify on price variation on supply of material.	Tender condition prevails
10	Crane		Contractor calls for mobilization of 75 MT crane from 15 & 30 days. Since this is a fabrication contract the crane will be required after 6 to 8 months. Kindly Amend.	This is a fabrication and erection contract .The bidder should deploy the cranes for execution of the above work as per the deployment schedule in the chapter IV in TCC.Tender conditions prevail hence No amendment calls for.

SI no	Reference clause of in tender	Existing provision	Bidder's query	BHEL's clarification
11	It is indicated in Clause 1.3.6 of Vol 1 Book 1A techno Commercial Bid that 'BHEL shall provide structural steel for incorporation in the permanent work as free supply'.		Whether all sections of structural steel including pipes, round bars, flats will be supplied free of cost by BHEL. In case any sections are to be supplied by the bidder, the same may please be clarified.	MS plates, Rolled steel joist, channel, angles and chequered plates will be supplied by BHEL.
			Whether pipes and other materials required for item no. 2318, 2319, 2320 and A2320 of BOQ will be supplied free of cost by BHEL.	Bidder to quote accordingly as per BOQ.
12	Please clarify whether Foundation Bolts with Nuts and Washers required for erection of structural work will be supplied and installed by BHEL.			Yes
13	Volume I A Part I Technical Conditions of Contract, Chapter II Sope of works for Unit-I and Unit2, page 40 of 477	Besides other areas, Mill Bunker floors has been included in scope	It is presumed that since mill bunker structure like columns, beams, bracings, roof structure and bunkers etc, are not mentioned, these do not form a part of scope and that only bunker floors are covered. Please confirm	Bidder to quote as per tender conditions
14	Volume I A Part I Technical Conditions of Contract, NDE requirements, page 87 of 477 (No page no mentioned in the sheet.	Item-6. (counting from top). Butt welds where thickness exceeds 32mm for carbon steel, when thickness exceeds 16mm for 1CR.1/2 MO steel & all other butt welds of alloy steels-100% RT Item-8. (counting from top). For Grade C steel, 100% RT. For butt weld plate thickness 32mm and above 10%RT will be carried out and below 32mm 2% RT will be carried out.	(a). For butt weld of mild steel plate (IS 2062) thickness 32mm and above 10%RT shall be carried out as per item 8 and not 100% as per item 6. Please confirm. (b). For Grade C steel, RT shall be done 100% for all thickness, but for butt welds only and not for any other welds. Please confirm	Bidder to quote as per tender conditions
15	Volume I I Price Bid for Package-A and Package B. Sln0 801-unit of measurement	Unit of measurement is SQM	The unit should be cum. Please clarify	Bidder to quote accordingly as per BOQ
16	Volume I I Price Bid for Package-A and Package B. Sln0 2301-description Sln0 2321 Sln0 2324testing of welders, inspection, non destructive and special testing..... Seek rates to be quoted for RT/UT/MPT wherever specified"	Non destructive testing is covered in this item meaning thereby that this item rate shall also include this activity i.e. NDT. On the other hand, item SLNOs: 2321, 2322, 2323 & 2324 seek rates to be quoted for NDT (RT/UT/MPT) which are payable for respective NDT work wherever specified". Since there appears to be a contradiction between the descriptions for item 2301 on one side and item 2321 to 2324 on the other, please confirm that rates against items 2321 to 2324 shall be payable for all NDT work (RT/UT, MPT) wherever specified, and that rate against item 2301 includes DPT only wherever specified.	Bidder to quote as per tender conditions

Sl no	Reference clause of in tender	Existing provision	Bidder's query	BHEL's clarification
17	SOR SL No.2301	Including 2 coats of redoxide zinc chromate primer(one coat at shop and one coat after erection) cleaning, application of primer and aint to be paid seprately.	Kindly confirm that unit rate is inclusive of manual cleaning & application of 2 coats of ROZC as per SOR as there is no seprate item for the same	Cleaning and supply and application of primer paint are to be paid seperately and covered under item no 2302A, 2302 B and 2302 C. Refer revised Price Bid
18	SOR SL No.2302A	Instead of primer coat of redoxide zinc chromate, including touch-up painting etc all complete	In normal practice after blast cleaning, applicaion of either inorganic zinc silicate or zinc phosphate primer is carried out which is missing under 2302A & B. Kindly clarify	Refer revised Price Bid
19	SOR SIno.2309	extra over above STNo.2301/2307 for finishing the gratings units with hot dipped galvanisation @ 610gm/sqm over blast cleaned steel surfaces instead of painting with two coats of redoxide zinc chromate primer all complete	Referred SIno. 2307 contains electroforged galvanised grating units rather than coats of red oxide zinc chromate primer. Kindly clarify the desription. We apprehend than item no.2307 electroforged grating shall be applied with two coats of ROZC primer, pl confirm.	Refer revised Price Bid
20	Volume-II	the rate quoted shall be inclusive of cleaning the site of any vegetations dressing and leveling etc required for commencement of site activites No seprate payment will be made towards the same	Land for fabrication yard, site office and store shall be provided leveled and hardcrusted	Bidder is requested to visit site before quoting.
21	price Bid sl. No.2302A	Extra over ST NO. 2301 for blast cleaning of steel structures to near white metal surface to grade ST-2.5 as per SIS05-5900 or as per IS: 1477(Part-I) and applying two coat of red oxide zinc chromate conforming to IS: 2074 in coats of minimum 50 micron (DFT) at shop and 50 micron (DFT) after erection, instead of primer coat of red oxide zinc-chromate, including touch-up painting etc. all complete.	As per recommendation of approved vendor of BHEL, DFT for application of one coat zinc chromate shall be 30 micron	Bidder to quote accordingly as per BOQ.
22	TCC clause No.2.1.2.1	Overrun Compensation	Max amount of Over Run compensation as per SI no 2.12.3.of GCC of Rs 10,00,000/- has been revised to Rs 5,00,000/-Considering the increase in Price trend,request you to increase the max amount of Over Run compensatio as the oruiginal Amount was Rs 10,00,000/- rather than decreasing it.	Tender condition prevails
23	SCT 1560 VOL II PRICE BID for package-A&B – SI No.2301	Supply, fabrication and erection of structural steel with mild steel rolled section / built up section /including 2 coats of redoxide zinc-chromate primer (one coat at shop and one coat after erection)(cleaning, application of primer and paint to be paid separately), of a separate agency, approved by BHEL, for review and approval of fabrication drgs, in consultation with BHEL.	Here, for this given quantity whether supply & application of painting (primer paint of 2 coats) to be included or not. Please confirm.	Refer revised Price Bid
24	SCT 1560 VOL II PRICE BID for package-A&B – SI No.2302A	Extra over ST NO. 2301 for blast cleaning of steel structures to near white metal surface to grade ST-2.5 as per SIS05-5900 or as per IS: 1477(Part-I) and applying two coat of red oxide zinc chromate conforming to IS: 2074 in coats of minimum 50 micron (DFT) at shop and 50 micron (DFT) after erection, instead of primer coat of red oxide zinc-chromate, including touch-up painting etc. all complete.	Here, for this given item & qty ask for blast cleaning & application of 2 coats red oxide zinc chromate primer & also mentioned instead of primer coat of red oxide zinc-chromate etc. Please clarify what to consider against this item.	Refer revised Price Bid
25	SCT 1560 VOL II PRICE BID for package-A&B – SI No.2306	Providing, laying and clamping of crane rails over the crane girder at all elevations as per IS 3443 including all fixtures, clamps, testings etc. all complete as per drawing and specification.	Please provide the size of rails & dimensions etc., need to consider	Refer revised Price Bid

Sl no	Reference clause of in tender	Existing provision	Bidder's query	BHEL's clarification
26	SCT 1560 VOL II PRICE BID for package-A&B – SI No.2307	Supplying, fabrication, erection and alignment of factory made electroforged galvanised grating units with mild steel (having minimum galvanisation of 610 g/sqm) conforming to IS: 2062 in flooring, platforms, drain and trench covers, walk-ways, passages, staircases with edge binding strips and anti- skid nosing in treads etc. including fixing clamps, fittings, fixtures, all taxes, duties, packing, grinding, drilling, welding, edge preparation, etc. all complete.	Please provide the type of gratings & panel sizes etc. need to be considered.	Item 2307 and 2308 shall be referred for type of grating. The maximum unsupported span for 40 th. grating will be max 1.8 m and for 25 mm thick gratings will be max 1.2 m. However, actual details will be finalised during detailed engineering. Bidder to quote accordingly as per BOQ
27	GCC: Clause 2.7.8 of Page 67	In the unforeseen event of inordinate delay in receipt of materials, drawings, fronts etc., due to which inordinate discontinuity of work is anticipated, BHEL at its discretion may consider contractor's request to short close the contract.	In this case please confirm whether any additional compensation will be paid to contractor as we will be mobilizing our resources, equipments, etc. considering the total quantity and execution of complete works.	Tender condition prevails
28	GCC: Clause 2.11.3 of Page 71	However if any 'Time extension' is granted to the contractor to facilitate continuation of work and completion of contract, due to backlog attributable to the contractor alone, then it shall be without prejudice to the rights of BHEL to impose penalty / LD for the delays attributable to the contractor, in addition to any other actions BHEL may wish to take at the risk and cost of contractor.	In case the delay in completion of works attributable to delay in supply of free issue materials from BHEL, contractor shall be suitably compensated for the same. Kindly Confirm	Tender condition prevails
29	GCC: Clause 2.22.2 (ii) of Page 79	Balance 50% of retention amount shall be retained towards 'Performance Guarantee for Workmanship' and shall become refundable after expiry of Guarantee Period, provided all the defects noticed during the guarantee period have been rectified by BHEL Site Engg.	Please provide Performance Guarantee Period or Defects Liability Period	Tender condition prevails
30	SCC: Clause 1.7.6 of Page 5	Preservation / Re-conservation of all the components during storage / erection / commissioning till handling over.	Please provide the specifications for Preservation / Re-conservation for equipment wise or system wise.	Refer The Technical Specification In the TCC
31	SCC: Clause 2.3 of Page 6	Transport of material to their respective places of erection and erection of the complete plant & equipment as supplied under this specifications	Please provide the distance from storage area / yard to erection site	Bidder is requested to visit site before quoting.
32	SCC: Clause 4.2.2.16 (c) of Page 15	In case BHEL cranes are not covered under AMC of BHEL. In case BHEL cranes are covered under AMC of BHEL.	Please confirm which option needs to be considered.	Tender condition prevails
33	SCC: Clause 4.2.2.17 (d) of Page 16	The construction and dismantling of the foundations required for the construction/elevator lifts is included in the scope of the contractor	Please provide the details for the same.	Refer Part-1,chapter-5 in TCC

Sl no	Reference clause of in tender	Existing provision	Bidder's query	BHEL's clarification
	BOQ		As per BOQ item no 2317 -a,b,c,d,& e , the PTFE Type Sliding Bearings, for different Vertical Loads, it is felt that proper prices can be quoted only after Engineering and preparation of the Construction drawings. Therefore we request you to kindly forward the Construction Drawings and the Catalogs of without the same we will not be able to quote for the above items.	The required input is available in the BOQ. For the indicated Load bidder has to design.
34	BOQ		We request you to kindly review the paint specification in items where epoxy based paint is to be applied over red oxide zinc chromate primer. Since red oxide zinc chromate primer is an alkyd based paint it will never withstand the strong solvents of epoxy based paint and the painting system will fail.	Refer item 2302B for clarification
35			kindly provide / clarify the abrasive material to be used for blasting	Refer Technical Specification in the TCC
36	NIT – Details of Tender Document	Due Date & Time of Offer Submission: Date : July 30, 2014, Time :15.00 Hrs Place : BHEL PSSR :Chennai	We request you to extend bid submission date till 04/08/2014.	Refer Corrigendum released separately in BHEL web site
37	Volume I Price Bid for Package-A and Package B. Sno 2301-description			Item description 2301 is revised .Refer revised Price Bid.

Sl no	Reference clause of in tender	Existing provision	Bidder's query	BHEL's clarification
38	NIT		Please be informed that we are an established fabrication and erection company. We are presently executing major works. In this regard please be informed that we are registered with NSIC. Hence kindly clarify whether we are exempted from payment of Tender Document Cost and the EMD ?	MSE suppliers can avail the intended benefits only if they submit along with offer, attested copies of either EM II certificate having deemed validity (Two years from the date of issue of acknowledgement in EM-II) or valid NSIC certificate or EM II certificate along with CA certificate (Format enclosed as per Annexure -1) applicable for the year, certifying quantum of investment in plant and machinery within the permissible limit as per the act for relevant status (Micro or small) where the deemed validity of EM II is over. Date to be reckoned for determining the deemed validity will be the last date of technical bid submission. Non submission of such documents will lead to consideration of their bids at par with other bidders and MSE status of such suppliers shall be shifted to Non MSE supplier till the supplier submits these documents".
39	PQR in the NIT	One of the pre-qualifying requirement in Annexure-3 specifies that the bidder, during the period of the last seven years reckoned from the latest due date of bid submission should meet the requirement given below. "The bidder should have executed Mill bunker structure fabrication and erection of at least one unit of 190MW unit capacity or above"	In this connection we wish to submit that our company had executed structural fabrication and erection work for Mill and Bunker Bay in a Thermal Power project, under contract from BHEL PSSR and the work was completed on 31.10.2002. We are also executing similar structural work at NTPC project. We therefore request you to confirm whether BHEL will consider our company as qualified bidder for meeting the above mentioned requirement.	Tender condition prevails
ALL OTHER CONDITIONS REMAIN UNCHANGED.BIDDERS ARE REQUESTED TO SUBMIT THE CORRIGENDUM WITH DULY SIGNED SINCE THIS FORM PART OF TENDER .				

f I m
GM/HR&SCT *25/11/14*

TENDER SPECIFICATION

BHEL: PSSR: SCT: 1560

FOR

Fabrication & Erection of **Package-A&B** (Unit-1&2) of Structural steel works in Power House, Mill Bunker Floor, Pipe Rack & other Misc buildings for 2 X 500 MW

at

Neyveli New Thermal Power Station, Neyveli, Cuddalur Dist,
TamilNadu

VOLUME –II PRICE BID PACKAGE-A Revision 01



BHARAT HEAVY ELECTRICALS LIMITED
(A Government of India Undertaking)
Power Sector – Southern Region
690, Anna Salai, Nandanam, Chennai – 600 035.

PRICE BID

BHARAT HEAVY ELECTRICALS LIMITED
(A Government of India Undertaking)
Power Sector, Southern Region
690, Anna Salai, Nandanam, Chennai – 35

Tender Specification No. BHEL: PSSR: SCT: 1560

for

Fabrication & Erection of **Package-A&B** (Unit-1&2) of Structural steel works in Power House, Mill Bunker Floor, Pipe Rack & other Misc buildings for 2 X 500 MW at Neyveli New Thermal Power Station, Neyveli, Cuddalur Dist, TamilNadu.

One set of Tender documents consisting of

- 1) TECHNOCOMMERCIAL BID - 2 copies
- 2) PRICE BID - 2 copies

Book Sl no

Issued to
M/s

Refer NIT for Last date of submission

Please note this tender document is not transferable

For and on behalf of
BHARAT HEAVY ELECTRICALS LIMITED

GENERAL MANAGER / HR and SCT

Place: Chennai -35

Date:

PRICE BID

PREAMBLE TO THE SCHEDULE OF QTS. (SOQ)

- 1) Details of the items in this Schedule shall be read in conjunction with the corresponding BHEL's Customer specifications and other documents and shall have precedence over any contrary statement mentioned anywhere in this document.
- 2) The work shall be carried out as per construction drawings (which will be issued progressively during the execution), specifications, the description of the items in this schedule and/or Engineer's instructions., The layout, sizes and details of the building, structures and foundations may vary at a large extent during actual construction.
- 3) Items of work provided in this schedule but not covered in the specifications shall be executed strictly as per instructions of the Engineer.
- 4) Unless specifically mentioned otherwise in the contract, the bidder shall quote his rates for the finished items and shall provide for the complete cost towards fuel, tools, tackle, equipment, constructional plant, temporary works, labour, materials, levies, taxes, transport, layout, repairs, rectification, maintenance till handing over, supervision, shops, establishments, services, temporary roads, revenue expenses, contingencies, overheads, profits and all incidental items not specifically mentioned but reasonably implied and necessary to complete the works according to the contract.
- 5) The rate quoted shall be inclusive of cleaning the site of any vegetations, dressing and leveling etc., required for commencement of site activities. No separate payment will be made towards the same.
- 6) The rate shall also be inclusive of carrying out survey of site to establish levels and coordinates at suitable intervals, from existing grid levels and coordinates furnished by the owner, establish bench marks, setting out the location and levels of the proposed structures, constructions and making references, pillars and other identification marks etc. No separate payment will be made towards the same.
- 7) Engineer's decision shall be final and binding on the contractors regarding clarification of items in this schedule with respect to the other section of the contract.
- 8) In case of any discrepancy between item description, relevant drawing and/or specification clarification shall be sought at tender stage itself. Otherwise it shall be assumed that the bidder has quoted for the more stringent requirement.
- 9) Refer the relevant clauses in the GCC for payment of additional items and Quantity variation.
- 10) Refer Relevant Clause in NIT for order of precedence.

RATESCHEDULE FOR TENDER SPECIFICATION BHEL PSSR SCT 1560 PACKAGE-A OF NNTPS 2X500 MW - UNIT 1(revised)					Rev 01		
Sr NO	Description of Item	UOM	Quantity	Rate		Amount	
				In Fig	In words	In Fig	In words
800 GROUTING							
Grouting including all labour, material, equipment, roughening surface, cleaning, ramming, curing etc. at any level unless otherwise specified as per specification, drawings and as directed by engineer - in - charge.							
802	Providing & grouting of pocket holes, pipe sleeves under base plates, machinery, pipe supporting structures etc. with mix 1:1 (1 cement :1 sand) using non shrink admixture etc. all Complete.	CUM	4				
803	Providing & grouting of pocket holes, pipe sleeves and under base plate of structural steel work/ machinery/ pipe supporting structures including roughening of surface, cleaning, ramming, curing etc. all complete with mix 1:1:2 (1 cement : 1 coarse sand : 2 aggregate of 6 mm down graded stonechips) using non shrink admixture. (Cost of all material and cleaning the pocket by compressed air shall be in the scope of the contractor).	CUM	4				
804	Providing & grouting of pocket holes, pipe sleeves and under base plates of structural steel work/ machinery/ pipe supporting structures including roughening of surface, cleaning, ramming, curing etc. all complete with ConbextraGP-1 or equivalent. (Cost of all material and cleaning of the pockets by compressed air shall be in the scope of the contractor).	CUM	18				
805	Providing & grouting of pocket holes, pipe sleeves and under base plates of structural steel work/ machinery/ pipe supporting structures including roughening of surface, cleaning, ramming, curing, etc. all complete with Conbextra GP-2 or equivalent. (Cost of all material and cleaning of the pockets by compressed air shall be in the scope of the contractor).	CUM	4				
2300 STRUCTURAL STEEL							
Structural steel works including all labour, material, equipments, transportation, handling etc. at any level as per specification, drawings and as directed by engineer - in - charge.							

Sr NO	Description of Item	UOM	Quantity	Rate		Amount	
				In Fig	In words	In Fig	In words
2301	Fabrication and erection of structural steel with mild steel rolled section / built up section / combination of both conforming to IS:2062, pipes conforming to IS:1161/ IS:1239, chequered plate conforming to IS: 3052, mild steel rounds, monorails, stays, safety chains, ladders etc. in columns, beams, gantry girders, roof trusses, portals, laced purlins, space frames, hangers, struts, monorails, galleries, stiffeners, wall beams, sheeting runners, brackets, stub columns, bracings, cleats, trestles, base plates, splice plates, chequered plate flooring, decking and seal plates, steel frame grid over false ceiling, walkway platforms, ladders, stairs, stringers, treads, landings, hand-rails etc including 2 coats of redoxide zinc-chromate primer (one coat at shop and one coat after erection)(cleaning, application of primer and paint to be paid separately) , connection design & preparation of fabrication drgs, collection of steel from stores, fabrication, straightening, cutting, bending, rolling, grinding, machining, drilling, welding, electrodes and other consumables, alignment, erection bolts & nuts (weight of erection bolts, nuts and welds not payable), assembly, edge preparation, preheating (min preheat and interpass temperature of 20° C for welding over 20 mm and upto 40 mm & 66° C for welding over 40 mm and upto 63 mm & 110° C for thickness over 63 mm & use of low hydrogen/ radiogenic electrodes), post heating, testing of welders, inspection of welds, visual inspection, non destructive and special testing, rectification and correction of defective welding works, production test plate, inspection and testing, erection scheme, protection against damage in transit, stability of structures, installation of temporary structures, setting column bases, rectification, dismantling and removal of all temporary structures (weight of temporary structures not payable), return of surplus / waste steel materials to store etc all complete. Including appointment of a separate agency, approved by BHEL, for review and approval of fabrication drgs, in consultation with BHEL.	MT	7838				
2302A	Extra over ST NO. 2301 for blast cleaning of steel structures to near white metal surface to grade ST-2.5 as per SIS05-5900 or as per IS:1477(Part-I) and providing and applying two coat of red oxide zinc chromate conforming to IS:2074 in coats of minimum 50 micron (DFT) at shop and 50 micron (DFT) after erection,including touch-up painting etc all complete.	MT	7374				
2302B	Extra over ST NO. 2301 for blast cleaning of steel structures to near white metal surface to grade ST-2.5 as per SIS05-5900 or as per IS:1477(Part-I) and providing and applying two coat of two pack air drying epoxy polyimide resin based red oxide zinc phosphate primer (containing epoxy 15-18% by weight) conforming to IS:12744 in coats of minimum 30 micron (DFT) at shop and 30 micron (DFT) after erection,including touch-up painting etc all complete.	MT	364				
2302C	Extra over ST NO. 2301 for surface preparation of steel structures by means of manual or mechanical power tools as per IS:1477 part 1 and providing and applying two coat of red oxide zinc chromate primer conforming to IS:2074 in coats of minimum 50 micron (DFT) at shop and 50 micron (DFT) after erection, including touch-up painting etc all complete.	MT	100				
2304A	Providing and applying two coats of HB synthetic enamel paint with glossy finish with minimum 75 micron total dry film thickness (DFT) of approved make and shade to achieve an even shade over steel sections already having primer coats and keeping overall DFT with primer not less than 175 microns including protection and cleaning, scaffolding etc. all complete.	MT	6793				
2304B	Providing and applying one coat of 100 micron DFT intermediate paint (two pack air drying high build epoxy resin based paint with MIO) and two coats of finish paint of two pack air drying epoxy polyamide enamel suitably pigmented (minimum 40 micron DFT per coat and total dry film thickness minimum 80 micron) of approved make and shade to achieve an even shade over steel sections already having primer coats and keeping overall DFT with primer not less than 240 microns including protection and cleaning, scaffolding etc. all complete.	MT	364				

Sr NO	Description of Item	UOM	Quantity	Rate		Amount	
				In Fig	In words	In Fig	In words
2305	Providing and applying two coats of epoxy based colour finish paint with minimum 50 micron total dry film thickness (DFT) of approved make and shade to achieve an even shade over steel sections already having primer coats and keeping overall DFT with primer not less than 110 microns including protection and cleaning, scaffolding etc. all complete.	MT	682				
2307	Supply, Fabrication, erection and alignment of factory made electroforged grating units with mild steel with hot dipped galvanisation @ 610 gm/sqm conforming to IS:2062 in flooring, platforms, drain and trench covers, walkways, passages, staircases with edge binding strips and anti-skid nosing in treads etc. including fixing clamps, fittings, fixtures, all taxes, duties, packing, grinding, drilling, welding, edge preparation, etc. all complete.	MT	130				
2308	Supplying, fabrication, erection and alignment of factory made welded grating units with mild steel conforming to IS:2062 in flooring, platforms, drain and trench covers, walk-ways, passages, staircases with edge binding strips and anti-skid nosing in treads etc. including 2 coats of redoxide zinc-chromate primer (one coat at shop and one coat after erection) and two coat of HB synthetic enable paint over blast cleaned steel surfaces, fixing clamps, fittings, fixtures, all taxes, duties, packing, grinding, drilling, welding, edge preparation, etc. all complete.	MT	30				
2310	Providing and fixing in position of permanent mild steel bolts (class 4.6 as per IS : 1367 and grade 'C' as per IS: 1363) and nuts, washers etc. up to and inclusive of 39 mm diameter and upto 300mm long for structural steel work etc all complete.	Quintal	18				
2311	Providing and fixing in positing of high strength structural bolts (of property class 8.8 and product grade 'C' as per IS: 1367) and conforming to IS: 3757 and high strength structural hardened and tempered nuts (of property class '8' as per IS:1367) conforming to IS:6623 with hardened and tempered washers as per IS:6649 etc. up to and inclusive of 39 mm diameter and upto 300 mm long for structural steel work etc all complete.	Quintal	183				
2312	Dismantling of steel structure , lowering of material and carriage of the dismantled material up to field fabrication shop / projects storage including temporary dismantling, cutting, re-welding, supporting, and restoring to correct position all temporarily dismantled members, re-alignment of all adjacent connected members to their correct positions (weight of such adjacent members and temporarily dismantled members not payable), scaffolding, staging, tools & tackles, gas cutting, welding, consumables etc all complete.	MT	28				
2313	Addition to, alterations in and/or modification of " Erection Marks " including cutting of parts, gauging of welds, cutting, grinding, fabrication, welding, drilling holes, straightening, removal of bends, raising to the required level, painting, transportation, return of unutilised steel pieces to the project store, temporarily dismantling, cutting, re-welding, supporting and restoring to correct position of all the temporarily dismantled members, realignment of adjacent connected members (weight of such temporarily dismantled and adjacent members not payable) etc all complete for the following:						
a	In erected position	MT	15				
b	In fabrication yard	MT	15				

Sr NO	Description of Item	UOM	Quantity	Rate		Amount	
				In Fig	In words	In Fig	In words
2314	Re-erection of dismantled fabricated structural steel members including carriage of modified "Erection Marks" from the field fabrication shop to erection site, lifting to required position, aligning in position, tack welding, final welding and touch up painting including temporary dismantling and re-erection of temporarily dismantled members, cutting, rewelding, supporting and restoring to the correct position of all temporarily dismantled members, re-alignment of adjacent connected members (weight of such temporarily dismantled members and adjacent members not payable), scaffolding, staging, tools & tackles, gas cutting, welding, consumables etc all complete.	MT	30				
2317	Providing and fixing in position PTFE type sliding bearings of reputed manufacturer, individual bearing suitable for required vertical loads as per the construction drawings and for maximum displacement of ± 50 mm including all taxes, duties, transportation, installation, drilling, bolting, erecting, aligning etc all complete for following vertical loads.						
a	20 Tons	EACH	5				
b	25 Tons	EACH	3				
c	40 Tons	EACH	3				
d	50 Tons	EACH	1				
e	60 Tons	EACH	1				
2318	Providing and fixing flexible open ended bellow strap of neoprene of minimum thickness 2 mm and minimum width 200 mm with aluminium stripped edges as sealing below top of bunker and bottom of tripper floor to avoid the coal dust nuisance all complete.	RM	50				
2319	Supply, fabrication and fixing of stainless steel pipe hand railing of 32 mm/40 mm dia including transportation, loading/unloading etc. all complete..	MT	3				
2320	Supply, fabrication and fixing of GI pipe hand railing (900 mm high) of 32 mm/40 mm dia (Medium Grade) including transportation, loading/unloading, painting etc. all complete..	MT	6				
2321	Conducting radiography test on welds wherever specified including equipments, measuring devices, gauges, test report etc. all complete.	RM	56				
2322	Conducting ultrasonic test on welds wherever specified including equipments, measuring devices, gauges, test report etc. all complete.	RM	56				

Sr NO	Description of Item	UOM	Quantity	Rate		Amount	
				In Fig	In words	In Fig	In words
2323	Conducting ultasonic test on steel plates as per ASTM-A435 or equivalent wherever specified including equipments, measuring devices, gauges, test report etc. all complete.	SQM	56				
2324	Conducting magnetic particle test on welds wherever specified including equipments, measuring devices, gauges, test report etc. all complete.	RM	56				
2325	Conducting dye penetration test on welds wherever specified by the engineer including provision of necessary equipments, measuring devices, gauges etc. all complete (over and above the work already specified in the specifications.)	RM	56				
	TOTAL						

TENDER SPECIFICATION

BHEL: PSSR: SCT: 1560

FOR

Fabrication & Erection of **Package-A&B** (Unit-1&2) of Structural steel works in Power House, Mill Bunker Floor, Pipe Rack & other Misc buildings for 2 X 500 MW

at

Neyveli New Thermal Power Station, Neyveli, Cuddalur Dist,
TamilNadu

VOLUME –II PRICE BID
PACKAGE-B Revision 01



BHARAT HEAVY ELECTRICALS LIMITED
(A Government of India Undertaking)
Power Sector – Southern Region
690, Anna Salai, Nandanam, Chennai – 600 035.

PRICE BID

BHARAT HEAVY ELECTRICALS LIMITED
(A Government of India Undertaking)
Power Sector, Southern Region
690, Anna Salai, Nandanam, Chennai – 35

Tender Specification No. BHEL: PSSR: SCT: 1560

for

Fabrication & Erection of **Package-A&B** (Unit-1&2) of Structural steel works in Power House, Mill Bunker Floor, Pipe Rack & other Misc buildings for 2 X 500 MW at Neyveli New Thermal Power Station, Neyveli, Cuddalur Dist, TamilNadu.

One set of Tender documents consisting of

- 1) TECHNOCOMMERCIAL BID - 2 copies
- 2) PRICE BID - 2 copies

Book Sl no

Issued to
M/s

Refer NIT for Last date of submission

Please note this tender document is not transferable

For and on behalf of
BHARAT HEAVY ELECTRICALS LIMITED

GENERAL MANAGER / HR and SCT

Place: Chennai -35

Date:

PRICE BID

PREAMBLE TO THE SCHEDULE OF QTS. (SOQ)

- 1) Details of the items in this Schedule shall be read in conjunction with the corresponding BHEL's Customer specifications and other documents and shall have precedence over any contrary statement mentioned anywhere in this document.
- 2) The work shall be carried out as per construction drawings (which will be issued progressively during the execution), specifications, the description of the items in this schedule and/or Engineer's instructions., The layout, sizes and details of the building, structures and foundations may vary at a large extent during actual construction.
- 3) Items of work provided in this schedule but not covered in the specifications shall be executed strictly as per instructions of the Engineer.
- 4) Unless specifically mentioned otherwise in the contract, the bidder shall quote his rates for the finished items and shall provide for the complete cost towards fuel, tools, tackle, equipment, constructional plant, temporary works, labour, materials, levies, taxes, transport, layout, repairs, rectification, maintenance till handing over, supervision, shops, establishments, services, temporary roads, revenue expenses, contingencies, overheads, profits and all incidental items not specifically mentioned but reasonably implied and necessary to complete the works according to the contract.
- 5) The rate quoted shall be inclusive of cleaning the site of any vegetations, dressing and leveling etc., required for commencement of site activities. No separate payment will be made towards the same.
- 6) The rate shall also be inclusive of carrying out survey of site to establish levels and coordinates at suitable intervals, from existing grid levels and coordinates furnished by the owner, establish bench marks, setting out the location and levels of the proposed structures, constructions and making references, pillars and other identification marks etc. No separate payment will be made towards the same.
- 7) Engineer's decision shall be final and binding on the contractors regarding clarification of items in this schedule with respect to the other section of the contract.
- 8) In case of any discrepancy between item description, relevant drawing and/or specification clarification shall be sought at tender stage itself. Otherwise it shall be assumed that the bidder has quoted for the more stringent requirement.
- 9) Refer the relevant clauses in the GCC for payment of additional items and Quantity variation.
- 10) Refer Relevant Clause in NIT for order of precedence.

RATESCHEDULE FOR TENDER SPECIFICATION BHEL PSSR SCT 1560 PACKAGE-B OF NNTPS 2X500 MW - UNIT 2 (revised)					Rev 01		
Sr No	Description	UOM	Quantity	Rate		Amount	
				In Fig	In words	In Fig	In words
800 GROUTING							
Grouting including all labour, material, equipment, roughening surface, cleaning, ramming, curing etc. at any level unless otherwise specified as per specification, drawings and as directed by engineer - in - charge.							
802	Providing & grouting of pocket holes, pipe sleeves under base plates, machinery, pipe supporting structures etc. with mix 1:1 (1 cement :1 sand) using non shrink admixture etc. all Complete.	CUM	4				
803	Providing & grouting of pocket holes, pipe sleeves and under base plate of structural steel work/ machinery/ pipe supporting structures including roughening of surface, cleaning, ramming, curing etc. all complete with mix 1:1:2 (1 cement : 1 coarse sand : 2 aggregate of 6 mm down graded stonechips) using non shrink admixture. (Cost of all material and cleaning the pocket by compressed air shall be in the scope of the contractor).	CUM	4				
804	Providing & grouting of pocket holes, pipe sleeves and under base plates of structural steel work/ machinery/ pipe supporting structures including roughening of surface, cleaning, ramming, curing etc. all complete with ConbextraGP-1 or equivalent . (Cost of all material and cleaning of the pockets by compressed air shall be in the scope of the contractor).	CUM	12				
805	Providing & grouting of pocket holes, pipe sleeves and under base plates of structural steel work/ machinery/ pipe supporting structures including roughening of surface, cleaning, ramming, curing, etc. all complete with Conbextra GP-2 or equivalent . (Cost of all material and cleaning of the pockets by compressed air shall be in the scope of the contractor).	CUM	4				
2300 STRUCTURAL STEEL							
Structural steel works including all labour, material, equipments, transportation, handling etc. at any level as per specification, drawings and as directed by engineer - in - charge.							
2301	Fabrication and erection of structural steel with mild steel rolled section / built up section / combination of both conforming to IS:2062, pipes conforming to IS:1161/ IS:1239, chequered plate conforming to IS: 3052, mild steel rounds, monorails, stays, safety chains, ladders etc. in columns, beams, gantry girders, roof trusses, portals, laced purlins, space frames, hangers, struts, monorails, galleries, stiffeners, wall beams, sheeting runners, brackets, stub columns, bracings, cleats, trestles, base plates, splice plates, chequered plate flooring, decking and seal plates, steel frame grid over false ceiling, walkway platforms, ladders, stairs, stringers, treads, landings, hand-rails etc including 2 coats of redoxide zinc-chromate primer (one coat at shop and one coat after erection)(cleaning, application of primer and paint to be paid separately), connection design & preparation of fabrication drgs, collection of steel from stores, fabrication, straightening, cutting, bending, rolling, grinding, machining, drilling, welding, electrodes and other consumables, alignment, erection bolts & nuts (weight of erection bolts, nuts and welds not payable), assembly, edge preparation, preheating (min preheat and interpass temperature of 20o C for welding over 20 mm and upto 40 mm & 66o C for welding over 40 mm and upto 63 mm & 110o C for thickness over 63 mm & use of low hydrogen/ radiogenic electrodes), post heating, testing of welders, inspection of welds, visual inspection, non destructive and special testing, rectification and correction of defective welding works, production test plate, inspection and testing, erection scheme, protection against damage in transit, stability of structures, installation of temporary structures, setting column bases, rectification, dismantling and removal of all temporary structures (weight of temporary structures not payable), return of surplus / waste steel materials to store etc all complete. Including appointment of a seperate agency, approved by BHEL, for review and approval of fabrication drgs, in consultation with BHEL.	MT	7125				

Sr No	Description	UOM	Quantity	Rate		Amount	
				In Fig	In words	In Fig	In words
2302A	Extra over ST NO. 2301 for blast cleaning of steel structures to near white metal surface to grade ST-2.5 as per SIS05-5900 or as per IS:1477(Part-I) and providing and applying two coat of red oxide zinc chromate conforming to IS:2074 in coats of minimum 50 micron (DFT) at shop and 50 micron (DFT) after erection,including touch-up painting etc all complete.	MT	7125				
2302C	Extra over ST NO. 2301 for surface preparation of steel structures by means of manual or mechanical power tools as per IS:1477 part 1 and providing and applying two coat of red oxide zinc chromate primer conforming to IS:2074 in coats of minimum 50 micron (DFT) at shop and 50 micron (DFT) after erection, including touch-up painting etc all complete.	MT	100				
2304A	Providing and applying two coats of HB synthetic enamel paint with glossy finish with minimum 75 micron total dry film thickness (DFT) of approved make and shade to achieve an even shade over steel sections already having primer coats and keeping overall DFT with primer not less than 175 microns including protection and cleaning, scaffolding etc. all complete.	MT	6444				
2305	Providing and applying two coats of epoxy based colour finish paint with minimum 50 micron total dry film thickness (DFT) of approved make and shade to achieve an even shade over steel sections already having primer coats and keeping overall DFT with primer not less than 110 microns including protection and cleaning, scaffolding etc. all complete.	MT	682				
2307	Supply, Fabrication, erection and alignment of factory made electroforged grating units with mild steel with hot dipped galvanisation @ 610 gm/sqm conforming to IS:2062 in flooring, platforms, drain and trench covers, walkways, passages, staircases with edge binding strips and anti-skid nosing in treads etc. including fixing clamps, fittings, fixtures, all taxes, duties, packing, grinding, drilling, welding, edge preparation, etc. all complete.	MT	130				
2308	Supplying, fabrication, erection and alignment of factory made welded grating units with mild steel conforming to IS:2062 in flooring, platforms, drain and trench covers, walkways, passages, staircases with edge binding strips and anti-skid nosing in treads etc. including 2 coats of redoxide zinc-chromate primer (one coat at shop and one coat after erection) and two coat of HB synthetic enamel paint over blast cleaned steel surfaces, fixing clamps, fittings, fixtures, all taxes, duties, packing, grinding, drilling, welding, edge preparation, etc. all complete.	MT	30				
2310	Providing and fixing in position of permanent mild steel bolts (class 4.6 as per IS : 1367 and grade 'C' as per IS: 1363) and nuts, washers etc. up to and inclusive of 39 mm diameter and upto 300mm long for structural steel work etc all complete.	Quintal	16				
2311	Providing and fixing in positing of high strength structural bolts (of property class 8.8 and product grade 'C' as per IS: 1367) and conforming to IS: 3757 and high strength structural hardened and tempered nuts (of property class '8' as per IS:1367) conforming to IS:6623 with hardened and tempered washers as per IS:6649 etc. up to and inclusive of 39 mm diameter and upto 300 mm long for structural steel work etc all complete.	Quintal	167				
2312	Dismantling of steel structure , lowering of material and carriage of the dismantled material up to field fabrication shop / projects storage including temporary dismantling, cutting, re-welding, supporting, and restoring to correct position all temporarily dismantled members, re-alignment of all adjacent connected members to their correct positions (weight of such adjacent members and temporarily dismantled members not payable), scaffolding, staging, tools & tackles, gas cutting, welding, consumables etc all complete.	MT	28				
2313	Addition to, alterations in and/or modification of " Erection Marks " including cutting of parts, gauging of welds, cutting, grinding, fabrication, welding, drilling holes, straightening, removal of bends, raising to the required level, painting, transportation, return of unutilised steel pieces to the project store, temporarily dismantling, cutting, re-welding, supporting and restoring to correct position of all the temporarily dismantled members, realignment of adjacent connected members (weight of such temporarily dismantled and adjacent members not payable) etc all complete for the following:						

Sr No	Description	UOM	Quantity	Rate		Amount	
				In Fig	In words	In Fig	In words
a	In erected position	MT	15				
b	In fabrication yard	MT	15				
2314	Re-erection of dismantled fabricated structural steel members including carriage of modified "Erection Marks" from the field fabrication shop to erection site, lifting to required position, aligning in position, tack welding, final welding and touch up painting including temporary dismantling and re-erection of temporarily dismantled members, cutting, rewelding, supporting and restoring to the correct position of all temporarily dismantled members, re-alignment of adjacent connected members (weight of such temporarily dismantled members and adjacent members not payable), scaffolding, staging, tools & tackles, gas cutting, welding, consumables etc all complete.	MT	30				
2317	Providing and fixing in position PTFE type sliding bearings of reputed manufacturer, individual bearing suitable for required vertical loads as per the construction drawings and for maximum displacement of ± 50 mm including all taxes, duties, transportation, installation, drilling, bolting, erecting, aligning etc all complete for following vertical loads.						
a	20 Tons	EACH	5				
b	25 Tons	EACH	3				
c	40 Tons	EACH	3				
d	50 Tons	EACH	1				
e	60 Tons	EACH	1				
2318	Providing and fixing flexible open ended bellow strap of neoprene of minimum thickness 2 mm and minimum width 200 mm with aluminium stripped edges as sealing below top of bunker and bottom of tripper floor to avoid the coal dust nuisance all complete.	RM	50				
2319	Supply, fabrication and fixing of stainless steel pipe hand railing of 32 mm/40 mm dia including transportation, loading/unloading etc. all complete..	MT	3				
2320	Supply, fabrication and fixing of GI pipe hand railing (900 mm high) of 32 mm/40 mm dia (Medium Grade) including transportation, loading/unloading, painting etc. all complete..	MT	3				
2321	Conducting radiography test on welds wherever specified including equipments, measuring devices, gauges, test report etc. all complete.	RM	56				
2322	Conducting ultrasonic test on welds wherever specified including equipments, measuring devices, gauges, test report etc. all complete.	RM	56				
2323	Conducting ultrasonic test on steel plates as per ASTM-A435 or equivalent wherever specified including equipments, measuring devices, gauges, test report etc. all complete.	SQM	56				

Sr No	Description	UOM	Quantity	Rate		Amount	
				In Fig	In words	In Fig	In words
2324	Conducting magnetic particle test on welds wherever specified including equipments, measuring devices, gauges, test report etc. all complete.	RM	56				
2325	Conducting dye penetration test on welds wherever specified by the engineer including provision of necessary equipments, measuring devices, gauges etc. all complete (over and above the work already specified in the specifications.)	RM	56				
	TOTAL						

Annexure

Certificate by Chartered Accountant on letter head

This is to certify that M/s. _____, (hereinafter referred to as 'company') having its registered office at _____ is registered under MSMED Act 2006, (Entrepreneur Memorandum No (Part-I) _____ dtd. _____, Category: _____ (Micro / Small)). (Copy enclosed)

Further verified from the Books of Accounts that the investment of the company as per the latest audited financial year _____ as per MSMED Act 2006 is as follows:

1. **For Manufacturing enterprises:** Investment in plant and machinery (i.e., original cost excluding land and building and the items specified by the Ministry of Small Scale Industries vide its notification No.S.O.1722(E) dated October 5, 2006 :

Rs. _____ Lacs

2. **For Service Enterprises:** Investment in equipment (original cost excluding land and building and furniture, fittings and other items not directly related to the service rendered or as may be notified under the MSMED Act, 2006:

Rs. _____ Lacs

(Strike off whichever is not applicable)

The above investment of Rs. _____ Lacs is within permissible limit of Rs. _____ Lacs for _____ Micro / small (Strike off which is not applicable) category under MSMED Act 2006.

or

The company has been graduated from its original category (Micro / Small) (Strike off which is not applicable) and the date of graduation of such enterprise from its original category as notified vide S.O.No. 3322(E) dated 01-11-2013 published in gazetee notification dated 04-11-2013 by Ministry of MSME.

Date:

(Signature)

Name-

Membership number-

Seal of Chartered Account