

TENDER SPECIFICATION

BHEL: PSSR: SCT: 1976

for

**Application of Borosilicate Lining on the existing
flue-can and Duct upto Flange near Chimney Shell,
including all minor Civil, Electrical works, Supply
of all materials, labour, tools and plants in existing
single steel flue Concrete Chimney of 275 metre
height**

At

**1 x 800 MW North Chennai Stage III, Ponneri Taluk,
Thiruvallur District, Tamil Nadu**

VOLUME -II

PRICE BID



BHARAT HEAVY ELECTRICALS LIMITED

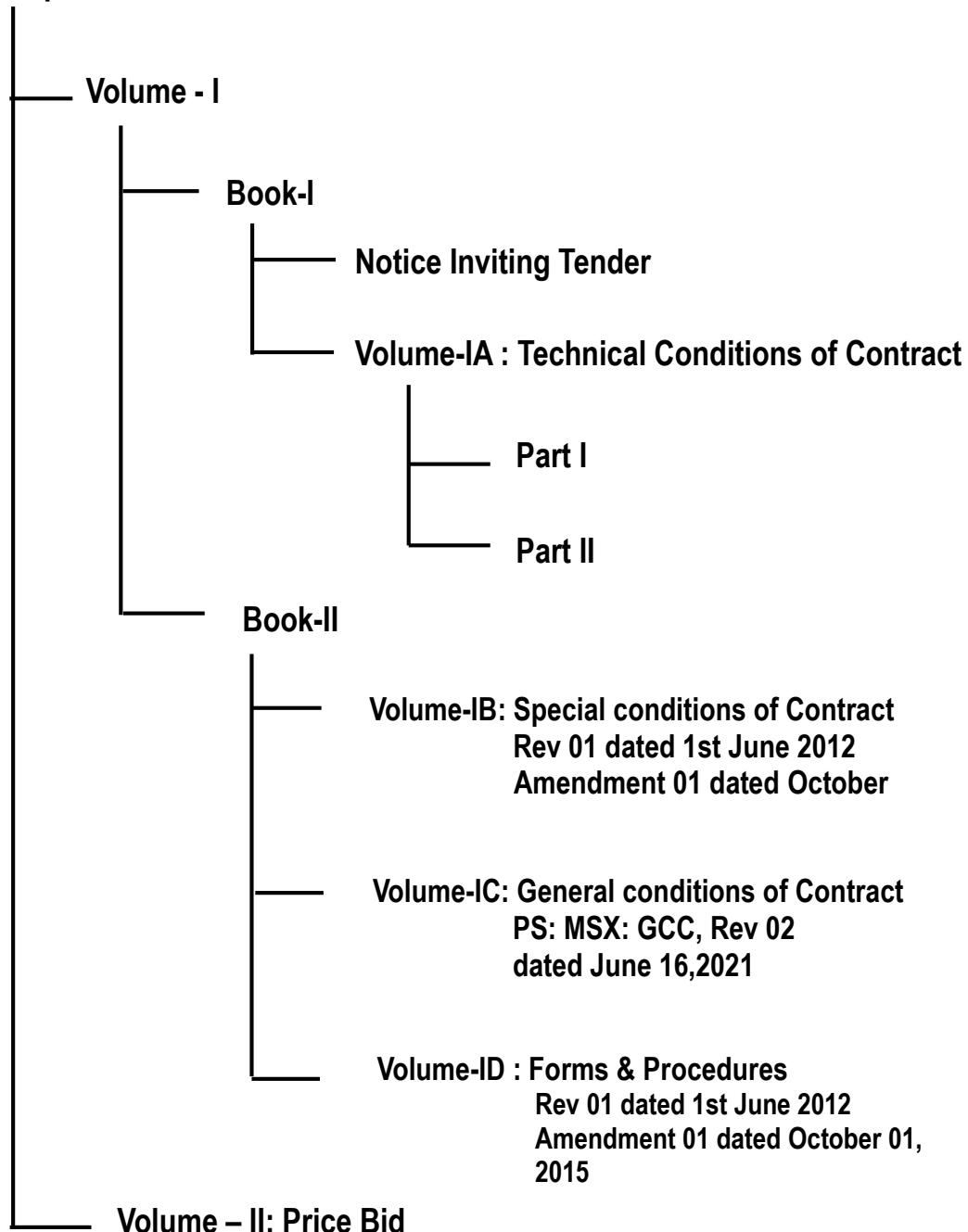
(A Government of India Undertaking)

Power Sector – Southern Region

Tek Towers, No.11, Old Mahabalipuram Road,
Okkiyam Thoraipakkam, Chennai - 600097

TENDER SPECIFICATION CONSISTS OF

Tender Specification



PRICE BID

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PART A

Instruction to Bidders:

1. The quantity indicated in the BOQ in Part C of Price Bid is approximate only and is liable for variation. Payment will be as per actual quantity executed and as certified by BHEL Engineer.
2. Tenderers are requested to affix their company seal and authorized signature in all pages.
3. Bidders shall quote 'Total Amount' in the format enclosed as a separate Excel File in BHEL NIC e-Procurement portal for the subject tender and upload the same under 'Packet details - > Tender covers -> Finance '(Cover Type Description – Price Bid)" and same shall be taken into account for evaluation and awarding and hence, shall be complete in all respect for the full scope of work defined in specification and in accordance with terms & conditions of the tender. Any other entry elsewhere in the price bid shall be treated as Null and Void. Quoting of rates in any other form/formats will not be entertained.
4. The above mentioned 'Total amount' is for the entire Bill of Quantity (BOQ) given in Part -C of the Price Bid.
5. Based on the quantities of individual item and the 'Total amount' as mentioned above, unit rate of individual item shall be derived. This unit rate shall be rounded off to four decimal places.
6. Bidders to note that this is an item rate contract. Payment shall be made for the actual quantities of work executed at the unit rate arrived at as per SI No.5 above.

Part C : Bill of Quantities

**Tender Specification BHEL:PSSR:SCT:1976 for Application of Borosilicate Lining
at 1 X 800 MW NORTH CHENNAI TPS STAGE III - FGD PACKAGE**

Ref.No.	Description	Unit of Measurement	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
C4000	Flue works: Including all labour, material (unless otherwise specified in BOQ/contract specification), equipments unless otherwise specified, transportation, handling etc. at all level as per specification, drawings and as directed by engineer - in - charge for the following:	--		
C4001	Providing, fabricating and erecting at all levels, flues complete with all bends, flanges, stiffeners, all other flue attachments, support system, staying system, collars, cap, access manholes and gas sampling ports alongwith gaskets, cover plates, pipes, bends, fittings,condensate collection and withdrawal arrangement in line with gas-flow-model study report and any other appurtenances as required including material, equipment, transporting, lifting to all heights, setting in place, cutting, grinding, rolling, edge preparation, drilling, bending, electrodes and other consumables, alignment, erection bolts and bolting, welding, preheating and post-heating for welding, testing, etc. and other required accessories, connection design and preparation of fabrication drgs and appointment of a seperate agency for review and approval of fabrication drgs in consultation with BHEL, all complete as per specifications and drawings.	--		
vi)	Components made of C276.	KG	500	.0461367
vii)	Components made of SS of grade A316L.	KG	500	.0123026
viii)	Components made of acid resistant FRP	KG	500	.0196005

Part C : Bill of Quantities

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at 1 X 800 MW NORTH CHENNAI TPS STAGE III - FGD PACKAGE**

Ref.No.	Description	Unit of Measurement	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
C4005 A	Installation of borosilicate glass block lining system at all elevations, in already erected in position flue can (Top 14.40 meters is made of stainless steel, remaining is made of Corten steel), with minimum 51 mm thick closed cell borosilicate glass block and two component adhesive membrane having a minimum thickness of 3 mm including preparation, blast cleaning of internal surface of flue can to near white metal surface finish conforming to Sa 2 1/2 finish and supply & application of suitable primer, testing, ten years warranty for the Borosilicate glass Block Lining System, getting approval of design/drawings and installation procedure from BHEL/owner etc all complete as per specification, drawings and as directed by the Engineer-in-charge including cost of skilled labour, material, tools & tackles, equipments etc all complete. Installation of borosilicate glass block lining shall be done in supervision and as directed by and satisfaction of borosilicate glass block manufacturer under controlled temperature and humidity conditions as mentioned in specification including providing all equipments required to create controlled temperature & humidity conditions inside chimney during installation, hot air blow cleaning of internal surface before application etc. all complete. (Borosilicate shall be supplied by BHEL on free supply basis)	SQM	6,609	.8085749
C4008	Design, supply, fabrication and installation of expansion compensator joints, comprising of non-metallic material (elastomeric) suitable for wet stack operations and acid resistant to withstand acidic flue gas condensates arising out of flue gas parameters & operating conditions as per specification and shall also prevent dust accumulation, including nuts, bolts, washers, screws and any other accessories as required, preparation of detailed fabrication drawings etc all complete as per specification, drawing and as directed by the Engineer-in-charge. Design of expansion joint shall comply EPRI guideline to avoid contact of condensate with expansion joint material and to ensure drainage of condensate and the same shall be approved by BHEL/owner.	SQM	72	.0902265
C4009	Supply of fabricated ready to install expansion compensator in line with item no C4008 as spare including nuts, bolts, washers, screws and any other accessories as required for successful installation.	SQM	18	.0214748
C4014	Providing, and fixing asbestos ropes at expansion joints at all elevation for packing/sealing etc all complete as per specification, drawing and as directed by the Engineer-in-charge for the following.	--		

Part C : Bill of Quantities

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Ref.No.	Description	Unit of Measurement	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
b	12 mm diameter	RM	100	.0016839
TOTAL Weightage				1.0