



Bharat Heavy Electricals Limited

(A Govt. Of India Undertaking)

Power Sector, Eastern Region

BHEL BHAWAN, PLOT NO. DJ-9/1, SECOTR II,

SALT LAKE CITY, KOLKATA, WEST BENGAL, INDIA

Phone : 033-23398220, 033-23211690 FAX : 033-23211960

Sub	TENDER CHANGE NOTICE (TCN-02 DTD. 27/08/2019)
Job	DESIGN, SUPPLY AND EXPERT SUPERVISION FOR INSTALLATION WORKS OF BOROSILICATE GLASS BLOCK LINING INCLUDING WET STACK FLOW MODEL STUDY FOR 275 M TALL TWIN FLUE CHIMNEY FOR UNIT#2 & SINGLE FLOW CHIMNEY FOR U#3 AT 3X660 MW BARH STAGE-I, DIST. -PATNA, BIHAR.
Ref	TENDER NO.: PSER: PUR: PMX: 373(II): 049: (ENQ: 19: PP: 0015: PUR: 62) Date 13/08/2019, TCN-01 Date 20/08/2019.

1) With reference to above, following clarifications, relevant to tender, may please be noted and complied with while submitting the offer.

Sl. no.	Description/ Tender clause	As appeared in tender				Modified as			
i	INTEGRITY PACT & DETAILS OF INDEPENDENT EXTERNAL MONITOR (IEM) [Sl. No. X of NIT]	IEM DETAILS NAME : Mrs. Pravin Tripathi, IA & AS (Retd.) ADDRESS: D-243, Anupam Gardens, Lane IB, Neb Sarai, Sainik Farms, New Delhi-110 068 EMAIL: pravin.tripathi@gmail.com				IEM DETAILS NAME : Shri Arun Chandra Verma, IPS (Retd.) ADDRESS: Flat No. C -1204, C Tower, Amrapali, Platinum Complex, Sector 119, Noida (U.P.) EMAIL: acverma1@gmail.com & NAME : Shri Virendra Bahadur Singh, IPS (Retd.) ADDRESS: H. No. B-5/64, Vineet Khand, Gomti Nagar, Lucknow - 226010 EMAIL: ybsinghips@gmail.com			
ii	SPECIAL NOTE of NIT: Point no (C)-a	Sl	IEM	Address	Email	Sl	IEM	Address	Email
		1.	Mrs. Pravin Tripathi, IA & AS (Retd.)	D-243, Anupam Gardens, Lane IB, Neb Sarai, Sainik Farms, New Delhi – 110 068	pravin.tripathi@gmail.com	1.	Shri Arun Chandra Verma, IPS (Retd.)	Flat No. C -1204, C Tower, Amrapali, Platinum Complex, Sector 119, Noida (U.P.)	acverma1@gmail.com
						2.	Shri Virendra Bahadur Singh, IPS (Retd.)	H. No. B-5/64, Vineet Khand, Gomti Nagar, Lucknow - 226010	ybsinghips@gmail.com



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Job	DESIGN, SUPPLY AND EXPERT SUPERVISION FOR INSTALLATION WORKS OF BOROSILICATE GLASS BLOCK LINING INCLUDING WET STACK FLOW MODEL STUDY FOR 275 M TALL TWIN FLUE CHIMNEY FOR UNIT#2 & SINGLE FLOW CHIMNEY FOR U#3 AT 3X660 MW BARH STAGE-I, DIST. -PATNA, BIHAR.
Ref	TENDER NO.: PSER:PUR:PMX:373(II):049:(ENQ:19:PP:0015:PUR:62) Date 13/08/2019, TCN-01 Date 20/08/2019.

- 2) Clarifications to bidders' queries are attached at [Annexure-Clarification](#).
- 3) **BIDDERS TO QUOTE THEIR OFFER CONSIDERING THE LATEST SCOPE & PROVISIONS/TERMS AND CONDITIONS OF THE TENDER.**
- 4) Revised 'No deviation certificate' is attached. Bidder to submit their offer along with stamped & signed copy of this TCN & 'No deviation certificate' as per attached format only.
- 5) All other terms & conditions shall remain unchanged.

Thanking you,

Yours faithfully,
for BHARAT HEAVY ELECTRICALS LTD

SR. ENGINEER (PURCHASE)

Encl: As above.

(Signature, date & seal of authorized representative of the contractor)

ANNEXURE - IV

FORMAT FOR NO DEVIATION CERTIFICATE
(To be submitted in the bidder's letter head)

To,
Bharat Heavy Electricals Limited,
POWER SECTOR – EASTERN REGION
2nd FLOOR, Block-DJ, Plot- 9/1, SECTOR
SALT LAKE CITY, KOLKATA – 700 091
FAX – 033-2321-1960

Job: “DESIGN, SUPPLY AND EXPERT SUPERVISION FOR INSTALLATION WORKS OF BOROSILICATE GLASS BLOCK LINING INCLUDING WET STACK FLOW MODEL STUDY FOR 275 M TALL TWIN FLUE CHIMNEY FOR UNIT#2 & SINGLE FLOW CHIMNEY FOR U#3 AT 3X660 MW BARH STAGE-I, DIST. - PATNA, BIHAR.”.

E-Tender No.: PSER:PUR:PMX:373(II):049:(ENQ:19:PP:0015:PUR:62) Date 13/08/2019, TCN-01 Date 20/08/2019, TCN-02 Date 27/08/2019.

Dear Sir/Madam,

With reference to above, this is to confirm that as per tender conditions, we have visited site before submission of our offer and noted the job content & site conditions etc. We also confirm that we have not changed/modified the tender documents as appeared in the website/newspapers and in case of observance at any stage, it shall be treated as null and void.

We hereby confirm that we have not taken any deviation from tender clauses together with other references as enumerated in the above referred NIT *and confirm our acceptance to **reverse auctioning process*** and we hereby convey our unqualified acceptance to all terms and conditions as stipulated in the tender and NIT.

In the event of observance of any deviation in any part of our offer at a later date whether implicit or explicit, the deviations shall stand null & void.

We confirm to have submitted offer strictly in accordance with tender instructions.

Thanking you,

Yours faithfully,

(Signature, date & seal of authorized representative of the contractor)

JOB: DESIGN, SUPPLY AND EXPERT SUPERVISION FOR INSTALLATION WORKS OF BOROSILICATE GLASS BLOCK LINING INCLUDING WET STACK FLOW MODEL STUDY FOR 275 M TALL TWIN FLUE CHIMNEY FOR UNIT#2 & SINGLE FLOW CHIMNEY OF Ur3 AT 3X660 MW BARH STAGE-I,DIST-PATNA BIHAR.				
TENDER NUMBER: PSER:PMX:373(0):049:(ENQ:19-PP:0015:PUR:62) DTD:13/08/2019, TCN-01 DTD: 20/08/2019, TCN-02 DTD: 27/08/2019				
Annexure-Clarification				
Sl. No	Reference Clause of Tender Document	Existing Provision	Bidder's Query	BHEL's Clarification
1	CLAUSE NO 3.2.1 OF VOLUME-1F-TS-1, R-0	Operating conditions shall be as per Annexure-I and specification.	Please clarify about the operating conditions mentioned in Annexure-I as mentioned in below two questions.	Borosilicate lining system will be designed for the worst situation of frequent bypass operation as per technical specification.
1.1			Temp. of flue gas at FGD inlet is mentioned as 135 deg C at Guarantee point and 150 deg C at Design point. How many years such operating temperatures to be considered after lining installation for (1) providing two references of similar applications as per point "B" of Technical Criteria under Pre qualification criteria mentioned in Annexure 1 on page 9 of NIT and (2) Guarantee period mentioned under point 17 on page 7 of TCC	
1.2			Temp. of flue gas at stack inlet is mentioned as 58.2 deg C at Guarantee point and 62 deg C at Design point.How many years such operating temperatures to be considered after lining installation for (1) providing two references of similar applications as per point "B" of Technical Criteria under Pre qualification criteria mentioned in Annexure 1 on page 9 of NIT and (2) Guarantee period mentioned under point 17 on page 7 of TCC	
2	CLAUSE NO 3.5.1.5 OF VOLUME-1F-TS-1, R-0	The blocks shall be resistant to thermal cyclic loading under FGD bypass/ hot gas service conditions, and sudden temperature changes, including high temperature spikes.	1. Please clarify if this requirement is pertaining only for the borosilicate glass block or the back joint adhesive of the borosilicate lining system. 2. Please specify what temperatures are to be considered and how many cycles. 3. Also, is air preheater failure to be considered as a possible upset condition?	1.specification requirement for complete borosilicate lining system including borosilicate glass block, primer and adhesive etc all complete. Specification requirement is clear in this regards. 2.Borosilicate lining system will be designed for the worst situation of frequent bypass operation as per technical specification. 3.Borosilicate lining system will be designed for the worst situation of frequent bypass operation as per technical specification.
3	CLAUSE NO 3.3.3 OF VOLUME-1F-TS-1, R-0	The lining system shall be tested for its wet stack surface properties by an independent institute of sufficient knowledge and experience, subject to acceptance by the project owner, and furthermore the lining system supplier has a demonstrable track record of providing technical advice and support to customers for the design of environmentally effective liquid control systems in flue gas ducts and chimneys.	1. Please explain in detail what specific wet stack surface properties and based on which testing standards or design guide are required to be tested. 2. What flue gas velocity is expected during FGD Wet Stack operation?	1. The lining system (borosilicate glass block and adhesive) shall be tested for its wet stack surface properties by an independent approved institute, subject to acceptance by the customer, and has during such testing been shown to allow, without any significant re-entrainment of flue gas condensate at flue gas velocities mentioned in specification. 2. Relevant data is already available in the specification
4	CLAUSE NO 3.3.5 OF VOLUME-1F-TS-1, R-0	The supplied lining system (borosilicate glass block and adhesive) shall be capable of withstanding fire risk for a minimum period of 2 hours as per ASTM E-119. Proper certification from an independent institute of sufficient knowledge and experience shall be submitted by supplier subject to acceptance by the project owner, showing the capability of the lining system (borosilicate glass block and adhesive) to protect the steel chimney flues from structural damage by fire of said rating.	ASTM E-119 is the Standard Test Methods for Fire Tests of Building Construction and Materials so how this is useful to decide if the Borosilicate glass block lining used as chimney liner will be capable of withstanding fire risk to chimney steel flue and concrete shell. Please explain the reason why the FM Global Approvals Standard 4929 for "Chimney and Flue Liner Materials" specified as technical requirement is removed for the earlier published and later on cancelled same project with tender number as TENDER NO.: PSER:PMX:373(0):003:(ENQ:19-PP:0015:PUR:2) Date 11/04/2019	As per tender.Test procedure and methodology shall be followed as per ASTM E-119.
5	CLAUSE NO 3.3.6 OF VOLUME-1F-TS-1, R-0	Supplier shall produce certificates from an independent institute of sufficient knowledge and experience, subject to acceptance by the project owner, showing that the workers can do the work on supplied lining system safely, without any adverse health effects and without requiring excessive protective measures.	Please explain why the certificate required for lining system is excluding the requirement mentioned as for "actual large scale installation project" in earlier same project tender number PSER:PMX:373(0):003:(ENQ:19-PP:0015:PUR:2) Date 11/04/2019. Does this means lining system safety certificate can be of any conditions for any type of lining installation project.	As per tender.Technical Specification is to be followed in this regard.
6	CLAUSE NO 3.2.2.1 OF VOLUME-IF-CML-REV-00	Expert Supervision and technical support should be provided by bidder during erection of boro-silicate lining system inside MS flue cans along with demonstration and training to erection agency. Number of supervisors to be deployed and period of deployment should be as per site requirement duly agreed with BHEL. The installation of Borosilicate Glass Lining Blocks, mixing of two components adhesive membrane by automatic mixing machine etc. all complete shall be executed by erection agency under the expert supervision of Borosilicate Glass Lining Blocks supplier.	The period of deployment of supervisors has to be for entire duration of lining installation process and should not be reduced for any reason by erection agency or BHEL. The 10 year warranty offered by Hadek is subject to the condition that the complete installation of the lining system has to be supervised and approved by our Hadek Quality Inspectors.	As per tender.
7	CLAUSE NO 17.0 OF VOLUME-IF-CML-REV-00	GUARANTEE PERIOD:Guarantee Period shall be 10 years from the date of successful trial operation of FGD System.	The construction, trial operation and commissioning of the FGD are outside of Hadek's control. The 10 year guarantee period must therefore commence upon first operation of the lined chimney with or without FGD..	GUARANTEE PERIOD:Guarantee Period shall be 10 years from the date of successful trial operation of FGD System or 10 years from the date of taking handing over of chimney by BHEL/NTPC,Whichever is earlier.
8	CLAUSE NO 8.1 OF VOLUME-IF-CML-REV-00	For supply of Borosilicate Glass Block Lining For Foreign Bidder: For Foreign Bidder: d. Eighty percent (80%) of basic price of materials supplied, as per PO, along with taxes and duties (as applicable), shall be paid against CIF Mumbai through usance LC. e. Ten Ten percent (10%) of basic price of materials supplied, as per PO, along with taxes and duties (as applicable), shall be paid against MRC within one month from date of MRC through usance LC. f. Ten Ten percent (10%) of basic price of materials supplied, as per PO, along with taxes and duties (as applicable), shall be paid against after completion of application work certified by project site engineer of Owner/ Purchaser within one month from date of completion of application work through usance LC.	We request payment of 90% of materials price against CIF Mumbai through usance LC and 10% of materials price against MRC within one month from date of MRC through usance LC	As per tender.
9	CLAUSE NO 8.2 OF VOLUME-IF-CML-REV-00	For Wet Stack Flow Model study: 75% basic Payment shall be made after approval of study model report by customer. Balance 25% along with applicable taxes & duties shall be made completion of application work certified by project site engineer of Owner/ Purchaser within one month from date of completion of application work .	We request 100% payment after approval of study model report by customer.	As per tender.
(Signature, date & seal of authorized representative of the contractor)				