



## Bharat Heavy Electricals Limited

(A Govt. Of India Undertaking)

**Power Sector, Eastern Region**

BHEL Bhawan, Plot No. DJ-9/1, Sector- II,  
Salt Lake City, Kolkata, WEST BENGAL, INDIA

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

### NOTICE INVITING TENDER (NIT)

OFFERS ARE INVITED FROM REPUTED & EXPERIENCED BIDDERS (MEETING PRE-QUALIFICATION CRITERIA AS MENTIONED) **THROUGH E-PROCUREMENT PORTAL** <https://bhel.abcprocure.com> **ONLY** for THE SUBJECT JOB BY THE UNDERSIGNED ON BEHALF OF BHARAT HEAVY ELECTRICALS LIMITED AS PER THE TENDER DOCUMENT. ISSUE OF TENDER TO ANY BIDDER SHALL NOT CONSTRUCT THAT THE BIDDER IS CONSIDERED TO BE QUALIFIED. FOLLOWING POINTS RELEVANT TO THE TENDER MAY PLEASE BE NOTED AND COMPLIED WITH.

#### Salient Features of NIT

SL NO	ISSUE	DESCRIPTION	
i	E-TENDER NUMBER	PSER:PUR:SAS:RC-S383:19 Date 22/11/2019.	
ii	Broad Scope of job	"RATE CONTRACT FOR "SUPPLY & APPLICATION OF DRY TYPE (CERAMIC BLANKET) INSULATION OF TURBINE FOR RATING FROM 195 TO 525 MW (KWU) SETS" AT BHEL-PSER."	
iii	ISSUE OF TENDER DOCUMENTS	a) <i>Online through e-procurement platform at <a href="https://bhel.abcprocure.com">https://bhel.abcprocure.com</a></i> b) <i>in BHEL website (<a href="http://www.bhel.com">www.bhel.com</a> &amp; CPP Portal) : For tender view purpose only</i>	1. <i>Applicable</i> 2. <i>Applicable</i>
iv	DUE DATE & TIME OF OFFER SUBMISSION	Date: 02/12/2019, Time: 15-00 Hrs. (Offer to be submitted online only through e-procurement platform at <a href="https://bhel.abcprocure.com">https://bhel.abcprocure.com</a> )	<i>Applicable</i>
v	TECHNO-COMMERCIAL BID OPENING OF TENDER	Date: 02/12/2019, Time: 16-00 Hrs. (online only through e-procurement platform at <a href="https://bhel.abcprocure.com">https://bhel.abcprocure.com</a> , participating bidders may witness the same online only)	<i>Applicable</i>
vi	EMD AMOUNT	INR 3,44,440 (Indian Rupees Three Lakh Forty Four Thousand Four Hundred & Forty Only)  <i>[To be submitted in the form and manner as mentioned below]</i>	<i>Applicable</i>
vii	COST OF TENDER	--	<i>Not Applicable</i>
viii	LAST DATE FOR SEEKING CLARIFICATION	Date: 27/11/2019 (UP TO 11:00 Hrs.)	<i>Applicable</i>
ix	SCHEDULE OF Pre Bid Discussion (PBD)	If any, shall be intimated through Tender Change Notice (TCN)	<i>Not Applicable</i>
x	INTEGRITY PACT & DETAILS OF INDEPENDENT EXTERNAL MONITOR (IEM)	--	<i>Not Applicable</i>

xi	Latest updates	Latest updates on the important dates, Amendments, Correspondences, Corrigenda, Clarifications, Changes, Errata, Modifications, Revisions, etc to Tender Specifications will be hosted in BHEL webpage ( <a href="http://www.bhel.com">www.bhel.com</a> →Tender Notifications →View Corrigendums & <a href="http://www.bhel.com">CPP portal</a> →Tender Notice & E-PROCUREMENT PORTAL <a href="https://bhel.abcpocure.com">https://bhel.abcpocure.com</a> ). Bidders to keep themselves updated with all such information.	Shall be intimated to bidder
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The offer shall be submitted as per the instructions of tender document. Only One set of tender document (in original, downloaded from website) signed by authorised company rep. of bidder and stamped on each page shall be submitted as detailed further, as given below. Bidders to note specifically that all pages of tender document, including these NIT pages etc. appearing in the website for this particular tender shall be submitted by them (after signing/stamping on each page) as a part of their offer. **Price shall not be mentioned by them anywhere in the techno-commercial portion of offer. Price shall be mentioned in the relevant price schedule only and to be submitted in e-procurement portal/platform in the form and manner mentioned in tender.**

**For E-PROCUREMENT ASSISTANCE & TRAINING, M/s E-PROCUREMENT TECHNOLOGIES LIMITED HELPDESK PERSONS AS PER FOLLOWING: -**

- a) Mr. Prashant Rajyaguru, Asst. Manager–Implementation & Support, Ph:+91 7940270545, e-mail id: prashant@eptl.in
- b) Mr. Ankur Bhatt, Ph: +91 (79)68136823, +91 (79)68136872, +91 92655 62819, e-mail ID: ankur.bhatt@eptl.in,
- c) Mr. Devendra Rajpurohit, Ph: +91 (79) 68136871, e-mail ID: devendra.r@eptl.in,
- d) Mr. Dinesh Kumar, Ph: +91 (79)68136861, e-mail ID: dinesh.k@eptl.in,
- e) Mr. Pankesh Kumar, Ph: +91 (79)68136848, e-mail ID: Pankesh@eptl.in,
- f) Mr. Nikhil khalas, Ph:+91 (79)68136854, +91 76220 00287, e-mail ID: Nikhil@eptl.in,
- g) Ms. Kanika Dani, Ph: +91 (79)68136809, e-mail ID: [kanika.dani@eptl.in](mailto:kanika.dani@eptl.in)

or for any difficulty in downloading the tender from internet website, they should contact this office (Dy. GM, Purchase or AGM, Purchase Phone no. 033-23398221/8220). No alteration/changes by bidders is permitted in the tender/NIT appeared in the website.

Successful bidder shall have to submit additional set of tender/sign on tender document provided by BHEL, if so decided by BHEL.

1. Earnest Money Deposit (EMD) of **INR 3,44,440.00 (Indian Rupees Three Lakh Forty Four Thousand Four Hundred & Forty Only)** in the form & manner prescribed in tender, shall be submitted by bidder as mentioned below, failing which the bidder's offer is liable for rejection.

**SCAN COPY OF DOCUMENTS IN SUPPORT OF SUBMISSION OF EMD TO BE UPLOADED ALONG WITH TECHNO-COMMERCIAL OFFER IN M/s E-PROCUREMENT TECHNOLOGIES LIMITED E-PROCUREMENT PORTAL/PLATFORM. IN CASE OF EMD SUBMISSION THROUGH BANKER'S CHEQUE/PAY ORDER/DEMAND DRAFT, SAME TO BE SUBMITTED IN SEALED ENVELOPE (SUPERSCRIBING TENDER REFERENCE) TO HEAD-PURCHASE/ PURCHASE, BHEL BHAWAN, DJ-9/1, SECTOR-2, KARUNAMOYEE, SALT LAKE CITY, KOLKATA-700091, WEST BENGAL PRIOR TO LATEST DUE DATE OF SUBMISSION OF OFFER.**

One time EMD of Rs. 5,00,000/- (Rupees Five Lakh only) for BHEL-PSER, SAS jobs will also be valid for all such PSER-SAS jobs. Parties/bidders who have submitted/submits One Time EMD (OEMD) in this Power Sector Region (i.e. BHEL-PSER) for Service After Sales (SAS) a sum of amount Rs. 5,00,000/- (Rupees Five Lakh only) are exempted from payment of E.M.D. on each such tender in that unit on case to case basis. (evidence of deposit must be submitted in scanned copy and to be uploaded along with techno-commercial offer in M/s E-PROCUREMENT TECHNOLOGIES LIMITED portal/platform) will be exempted from submission of EMD with this tender. The followings may be noted:

In case the bidder deposits separate EMD as mentioned above, there will be no change

- a) In existing clauses of this tender.
- b) In case of bidders having one time EMD; one time EMD can not be used for SD purpose.
- c) Security deposit shall be submitted as per provision of tender. **Security deposit shall cover the entire duration of work plus the performance guarantee period plus three months notice period prior to release of the same.**
- d) **The EMD shall be enclosed with the Techno-Commercial Bid in the form and manner as mentioned above.**

2. **This is an E-tender floated online through our E-Procurement Site <https://bhel.abcpocure.com>. The bidder should respond by submitting their offer online only in our e-Procurement platform at <https://bhel.abcpocure.com>. Offers are**

**invited in two-parts only. No Hard copy bid or bids through email/ fax shall be accepted. Bids are invited in two parts & shall be submitted as described below:**

OFFER DESCRIPTION	DOCUMENTS TO BE UPLOADED & MODALITY OF UPLOADING
<b>TECHNICAL OFFER</b>	1.Scanned copy of Covering letter of offer (To be attached in <b>Attachment</b> section) 2. Scanned copy of Entire tender documents signed & stamped in each page by authorized representative of the bidder except price bid (To be attached in <b>Attachment</b> section). 3. Scanned copy of Techno-Commercial Offer (To be attached in <b>Attachment</b> section) 4. Duly filled all annexures except price & unpriced format (To be attached in <b>Attachment</b> section). 5. Copy of records notes of Pre-Bid Conference, if applicable/ pre-bid MOM. (To be attached in <b>Attachment</b> section) 6. Copy of Tender change notice (TCN), if applicable (To be attached in <b>Attachment</b> section) 7. All supporting documents/ Annexures etc. as applicable (To be attached in <b>Attachment</b> section). 8. No deviation certificate in bidder's letterhead as per format given in Tender (To be attached in <b>Attachment</b> section).
<b>PRE-QUALIFICATION PART</b>	9. Pre-qualifying documents with all credentials as per tender. (To be attached in PQ <b>Attachment</b> section)
<b>UNPRICED PRICE BID</b>	10. Price schedule –Unpriced but mentioning only quoted / unquoted against each item as per tender. (To be attached in Unpriced bid Attachment section)
<b>PRICE BID</b>	11. Duly filled in Price Schedule as per tender. (To be attached in price bid <b>Attachment</b> section) Any other document uploaded in the price bid, apart from tendered Price schedule, shall not be taken into cognizance for evaluation of offer.

**SPECIAL NOTE:**

- A) Offer & documents submitted with the offer shall be signed and stamped in each page by authorised representative of the bidder. No overwriting/correction in tender documents by bidders shall be allowed. However, if correction is unavoidable, the same may be signed by authorized signatory.
- B) All documents / Annexures submitted with the offer shall be properly annexed and placed in respective places of the offer as per enclosure list mentioned in the covering letter. BHEL shall not be responsible for any missing documents.
- 4.0 No deviation with respect to tender clauses and no additional clauses/ suggestions/ clarification in Techno-commercial bid/Price bid shall normally be considered by BHEL. Bidders are requested to positively comply with the same. Offers with deviation are liable for rejection.
- 5.0 BHEL reserves the right to accept or reject any or all offer without assigning any reasons thereof. BHEL also reserve the right to cancel the tender wholly or partly without assigning any reason thereof. BHEL also reserve the right to split/part award the job. Also, BHEL shall not entertain any correspondence from bidders in this matter (except for the refund of EMD).
- 6.0 Since the job shall be executed at site, the bidders must visit site/ work area and study the job content, facilities available, availability of materials, prevailing site conditions including Law and Order situation, applicable Wage structure, Wage rules, present condition of machines etc. before quoting for this tender. They may also consult this office before submitting their offers, for any clarifications regarding scope of work, facilities available at

sites or on terms and conditions. No additional claim shall be entertained by BHEL in future, on account of non-acquaintance of site/machine conditions at the time of bidding.

- 7.0 For any clarification on the tender document, you may seek the same in writing or through e-procurement portal/platform as per specified format within the last date of seeking clarification as per tender. BHEL shall not be responsible for receipt of queries after due date of seeking clarification due to postal delay, and receipt of any query after due date shall not be entertained.
- 8.0 BHEL may decide holding Pre-bid Discussion [PBD] with all intending bidders. On such communication from BHEL, the bidder shall ensure participation for the same at the appointed time, date and place as may be decided by BHEL. Outcome of PBD (if any) shall also form part of tender.
- 9.0 In case of absence of any queries from bidder(s), their quoted price will be PRESUMED to be final and complete with reference to the tender documents (including Tender change notes (TCNs), clarifications, corrigendum issued by BHEL, if any). Bidders are requested to study the tender documents in detail and prepare their queries/clarifications accordingly. All such queries / clarifications shall be cleared/replied by BHEL. Such clarification letters, corrigendum and/or Tender change notes (TCNs), if issued by BHEL, shall form part of tender document.
- 10.0 In the event of any conflict between requirement of any clause of this specification/ documents /drawings /data sheets etc. or requirements of different codes/ standards specified/ contradictions between any two clauses of tender document, the same to be brought to the knowledge of BHEL by bidders in writing for clarification before due date of seeking clarification, otherwise, more stringent requirement as may be interpreted by BHEL shall prevail and shall be binding on you. Any typing error/missing pages/ other clerical errors in the tender documents, noticed by you must be pointed out before submission of offer, or else, BHEL's interpretation shall prevail & binding on you.
- 11.0 Unless specifically mentioned otherwise, bidder's quoted price shall deemed to be in compliance with tender including PBD.
- 12.0 Tender document containing above mentioned volumes shall be signed & stamped in all pages including this covering letter. Price bid shall be furnished in the specified format enclosed with the tender. Any additional copy, if required, may be taken by photocopying from the tender document given in the web.
- 13.0 **The Bidder has to satisfy the Pre-Qualifying Requirements stipulated for this Tender in order to be qualified. The Price Bids of only those bidders will be opened, who will qualify for the subject job on the basis of pre-qualification evaluation & Techno-Commercial bids etc. BHEL reserves the right to reject the bidders with unsatisfactory past performance in the execution of a contract. BHEL's decision in this regard shall be final & binding.**
- 14.0 While BHEL reserve the right to open the price bid of the offers in camera, the date & time to open the PRICE BID, tender opening shall be intimated to the bidders in case BHEL decides it to be 'Public opening' and in such a case, one authorised representative of the bidder shall be allowed to attend.
- 15.0 **Validity of the offer shall be for Six months from the due date of offer submission (including extension, if any) unless specified otherwise.**
- 16.0 **Firm prices are to be quoted in whole rupees, in the place meant for price or on the price schedule enclosed as applicable for the full scope of work given in tender. The rates quoted must be in figures and words as well (Prices quoted must be workable too for the job involved).**

- 17.0 Prices quoted by the bidders should be inclusive of all taxes and duties leviable by any Statutory Authority for this job as on the date of the tender opening (excluding GST & BOCW Cess).
- 18.0 Price Bids shall be evaluated in the manner as prescribed in Price Schedule. However, Unit Rates shall also be furnished if applicable in the Price Schedule.
- 19.0 *Bid should be free from correction, overwriting, using corrective fluid, etc. Any interlineation, cutting, erasure or overwriting shall be valid only if they are attested under full signature(s) of person(s) signing the bid else bid shall be liable for rejection.*
- 20.0 Bidders are required to submit their BEST price as per tender Price Schedule format in e-procurement portal/platform in the form & manner as mentioned in tender.
- 21.0 *"BHEL reserves the right to go for Reverse Auction (RA) (Guidelines as available on [www.bhel.com](http://www.bhel.com)) instead of opening the sealed envelope price bid, submitted by the bidder. This will be decided after techno- commercial evaluation. Bidders to give their acceptance with the offer for participation in RA. Non- acceptance to participate in RA may result in non-consideration of their bids, in case BHEL decides to go for RA.*
- 22.0 *Those bidders who have given their acceptance to participate in Reverse Auction will have to necessarily submit 'Process compliance form' (to the designated service provider) as well as 'Online sealed bid' in the Reverse Auction. Non-submission of 'Process compliance form' or 'Online sealed bid' by the agreed bidder(s) will be considered as tampering of the tender process and will invite action by BHEL as per extant guidelines for suspension of business dealings with suppliers/ contractors (as available on [www.bhel.com](http://www.bhel.com)).*
- 23.0 *The bidders have to necessarily submit online sealed bid less than or equal to their envelope sealed price bid already submitted to BHEL along with the offer. The envelope sealed price bid of successful L1 bidder in RA, if conducted, shall also be opened after RA and the order will be placed on lower of the two bids (RA closing price & envelope sealed price) thus obtained. The bidder having submitted this offer specifically agrees to this condition and undertakes to execute the contract on thus awarded rates.*
- In case of enquiry through e-procurement portal/platform, the sealed electronic price bid (e-bid) is to be treated as sealed envelope bid.*
- 24.0 *If it is found that L1 bidder has quoted higher in online seal bid in comparison to envelope sealed bid for any item(s), the bidder will be issued a warning letter to this effect. However, if the same bidder again defaults on this count in any subsequent tender in the unit, it will be considered as fraud and will invite action by BHEL as per extant guidelines for suspension of business dealings with suppliers/ contractors (as available on [www.bhel.com](http://www.bhel.com)).*
- 25.0 *Reverse Auction is the type of auction typically conducted to buy goods / items over Internet in which the lowest price bidder wins. In case, the bidders are willing to know the details about the methodology, they may please contact HEAD/PURCHASE OR ASST. ENGINEER /PURCHASE, BHEL, KOLKATA.*
- 26.0 *However, if Reverse Auction process is not adopted or Reverse Auction is unsuccessful as defined in the RA rules/procedures, or for whatsoever reason, then the 'PRICE BID' and price impacts (if any), already submitted in e-procurement portal/platform, submitted by the bidder shall be opened for deciding the successful bidder, as per BHEL's standard practice. BHEL's decision in this regard will be final and binding on bidder.*



- 27.0 Bidders are requested to note that the accepted / agreed tender terms (technical, commercial or on Reverse Auction) in their original offer can not be altered / withdrawn by their own during the processing of tender.
- 28.0 The Bidder along with its associate/collaborators/sub-contractors/sub-vendors/ consultants/service providers shall strictly adhere to BHEL Fraud Prevention Policy displayed on BHEL website <http://www.bhel.com> and shall immediately bring to the notice of BHEL management about any fraud or suspected fraud as soon as it comes to their notice.
- 29.0 The offers of the bidders who are on the banned list as also the offer of the bidders, who engages the services of the banned firms, shall be rejected. The list of banned firms is available on BHEL web site [www.bhel.com](http://www.bhel.com).
- 30.0 The bidder shall submit documents in support of possession of 'Qualifying Requirements' duly self certified and stamped/ digitally signed (as applicable) by the authorized signatory, indexed and properly linked in the format for PQR. In case BHEL requires any other documents/proofs, these shall be submitted immediately.
- 31.0 The bidder may have to produce original document for verification if so decided by BHEL.
- 32.0 Suspension of Business dealings with Suppliers/ Contractors: BHEL reserves the right to take action against contractors who fail to perform or indulge in malpractices, by suspending business dealings with them as detailed in Annexure-A.
- 33.0 "For this procurement, Public Procurement (Preference to Make in India), Order 2017 dated 15/06/2017, 28/05/2018 & 29/05/2019 and subsequent Orders issued by respective Nodal Ministry shall be applicable even if issued after issue of this NIT but before finalization of contract/PO/WO against this NIT. In the event of any Nodal Ministry prescribing higher or lower percentage of purchase preference and/ or local content in respect of this procurement, same shall be applicable".
- 34.0 "MSE suppliers can avail the intended benefits in respect of the procurements related to the Goods and Services only (Definition of Goods and Services as enumerated by Govt. of India vide Office Memorandum F. No. 21(8)/2011-MA dtd. 09/11/2016 office of AS & DC, MSME) if they submit along with the offer, attested copies of either EM II certificate having deemed validity (five years from the date of issue of acknowledgement in EM II) /Udyog Aadhar Memorandum(UAM) or valid NSIC certificate or EM II certificate along with attested copy of a CA certificate (Format enclosed at Annexure-B where deemed validity of EM II certificate of five years has expired) applicable for the relevant financial year (latest audited). Date to be reckoned for determining the deemed validity will be the date of bid opening (Part 1 in case of two part bid). Non submission of such documents will lead to consideration of their bid at par with other bidders. No benefit shall be applicable for this enquiry if any deficiency in the above required documents are not submitted before price bid opening. If the tender is to be submitted through e-procurement portal, then the above required documents are to be uploaded on the portal. Documents should be notarized or attested by a Gazetted officer."

Any Bidder falling under MSME category, shall furnish the following details & submit documentary evidence/Govt. Certificate etc. in support of the same along with their techno-commercial offer: -

Type under MSME	SC/ST owned	Women owned	Others
Micro			
Small			
Medium			

**Note:** - If the bidder does not furnish the above, offer shall be processed construing that the bidder is not falling under MSME category.

**35.0 Order of Precedence: In the event of any ambiguity or conflict between the Tender Documents, the order of precedence shall be in the order below: -**

- i) Amendments/Clarifications/Corrigenda/Errata/Tender change notice (TCN) etc. issued in respect of the tender documents by BHEL
- ii) Notice Inviting Tender (NIT)
- iii) Price Schedule
- iv) Scope of work & other details - Annexure-I, Annexure-BOCW, Annexure-II, Annexure for HSE & OHSAS and Special note to bidders.
- v) SPECIFIC TERMS AND CONDITIONS FOR SERVICES JOBS
- vi) GENERAL & SPECIAL CONDITIONS OF CONTRACT FOR SERVICES JOB

All the bidders are requested to note that all the errata / technical clarifications / corrigendum / extension etc. shall be published THROUGH E-PROCUREMENT PORTAL <https://bhel.abcpurchase.com> and in website, [www.bhel.com](http://www.bhel.com) & <http://eprocure.gov.in> . As such, all the bidders are requested to be in continuous touch with these websites.

for BHARAT HEAVY ELECTRICALS LTD.

**DGM (PURCHASE)**

Agency	Contact details	
BHEL, PSER, Kolkata	Address	BHARAT HEAVY ELECTRICALS LIMITED, POWER SECTOR – EASTERN REGION 2ND FLOOR, BLOCK-DJ, PLOT- 9/1, SECTOR, SALT LAKE CITY, KOLKATA – 700 091
	Phone no.	033-23398267, 23398221, 23398220, 23211690
	FAX no.	033-23211960
	E-mail ID	<a href="mailto:pchandra@bhel.in">pchandra@bhel.in</a> , <a href="mailto:abhakta@bhel.in">abhakta@bhel.in</a> , <a href="mailto:sukhen@bhel.in">sukhen@bhel.in</a>
M/s E-PROCUREMENT TECHNOLOGIES LIMITED	<b>For E-PROCUREMENT ASSISTANCE &amp; TRAINING, M/s E-PROCUREMENT TECHNOLOGIES LIMITED HELPDASK PERSONS AS PER FOLLOWING: -</b>	
	1)	Mr. Prashant Rajyaguru, Asst. Manager – Implementation & Support, Ph: +91 7940270545, e-mail ID: prashant@eptl.in
	2)	Mr. Ankur Bhatt, Ph: +91 (79)68136823, +91 (79)68136872, +91 92655 62819, e-mail ID: ankur.bhatt@eptl.in,
	3)	Mr. Devendra Rajpurohit, Ph: +91 (79) 68136871, e-mail ID: devendra.r@eptl.in, d) Mr. Dinesh Kumar, Ph: +91 (79)68136861, e-mail ID: dinesh.k@eptl.in,
	4)	Mr. Pankesh Kumar, Ph: +91 (79)68136848, e-mail ID: Pankesh@eptl.in, f) Mr. Nikhil khalas, Ph:+91 (79)68136854, +91 76220 00287, e-mail ID: Nikhil@eptl.in,
	5)	Ms. Kanika Dani, Ph: +91 (79)68136809, e-mail ID: kanika.dani@eptl.in

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 II  
SALT LAKE CITY, KOLKATA – 700 091  
FAX – 033-2321-1960

**Job: RATE CONTRACT FOR “SUPPLY & APPLICATION OF DRY TYPE (CERAMIC BLANKET) INSULATION OF TURBINE FOR RATING FROM 195 TO 525 MW (KWU) SETS” AT BHEL-PSER.**

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)



**ANNEXURE - V****PRE – QUALIFICATION CRITERIA**

<b>JOB</b>	RATE CONTRACT FOR SUPPLY & APPLICATION OF THERMAL DRY TYPE (CERAMIC BLANKET) INSULATION OF TURBINE FOR RATING FROM 195 MW TO 525 MW (KWU) SETS AT BHEL-PSER
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<b>SL NO</b>	<b>CRITERIA</b>
<b>A</b>	<b>PRE-QUALIFICATION CRITERIA</b>
1.0	BIDDER SHOULD HAVE AVERAGE ANNUAL TURNOVER OF MINIMUM Rs 24.01 LAKH FOR 195 MW TO 270 MW RATING AND MINIMUM Rs 27.66 LAKH FOR 500 MW / 525 MW RATING DURING LAST 3 (THREE) FINANCIAL YEARS, ENDING ON 31-03-2019 AND SHOULD HAVE POSITIVE NET WORTH AS ON LATEST AUDITED ACCOUNTS AS SUBMITTED FOR PARA 1(c).
(a)	BIDDER MUST HAVE EARNED PROFIT IN ANY ONE OF THE LAST THREE FINANCIAL YEARS ENDING ON 31-03-2019. AUDITED BALANCE SHEET AND PROFIT & LOSS ACCOUNT OF THE COMPANY FOR LAST 3 (THREE) FINANCIAL YEARS, ENDING ON 31-03-2019 NEED TO BE SUBMITTED IN SUPPORT OF ABOVE.
(b)	IN CASE AUDITED BALANCE SHEET AND PROFIT & LOSS ACCOUNT HAS NOT BEEN SUBMITTED FOR ALL THREE YEARS INDICATED ABOVE [as in 1(b)] THEN APPLICABLE FINANCIAL AUDITED STATEMENTS SUBMITTED BY THE BIDDER AGAINST THE REQUISITE THREE YEARS WILL BE AVERAGED FOR THREE YEARS.
(c)	IF FINANCIAL STATEMENTS ARE NOT REQUIRED TO BE AUDITED STATUTORILY, THEN INSTEAD OF AUDITED FINANCIAL STATEMENTS, FINANCIAL STATEMENTS ARE REQUIRED TO BE CERTIFIED BY CHARTERED ACCOUNTANT.
(d)	BIDDER SHOULD HAVE EXECUTED AT LEAST ONE JOB OF "SUPPLY & APPLICATION OF THERMAL DRY TYPE (CERAMIC BLANKET) INSULATION" OF STEAM TURBINE OF UNIT RATING 190 MW OR ABOVE IN ANY UTILITY / INDUSTRIAL PROJECT IN LAST 3 (THREE) YEARS, ENDING ON LATEST DUE DATE OF SUBMISSION OF OFFER. RELEVANT SUPPORTING DOCUMENTS FROM PURCHASER / END USER SHALL BE SUBMITTED.
2.0	
NOTE FOR SL NO 2.0 ABOVE	
THE WORD EXECUTED MEANS: EXECUTED PORTION OF THE JOB SHALL AT LEAST COMPLY WITH COMPLETION OF INSUALTION WORK AND THE UNIT SHOULD BE READY FOR ROLLING EVEN IF THE CONTRACT HAS NOT BEEN COMPLETED OR CLOSED.	
3.0	BIDDER SHOULD HAVE VALID PAN. RELEVANT SUPPORTING DOCUMENTS SHALL BE SUBMITTED.
4.0	NO CONSORTIUM / JV BIDDING IS ALLOWED FOR THIS TENDER.
5.0	BIDDER MUST NOT BE UNDER BANKRUPTCY CODE PROCEEDINGS (IBC) BY NCLT OR UNDER LIQUIDATION / BIFR, WHICH WILL RENDER HIM INELIGIBLE FOR PARTICIPATION IN THIS TENDER, AND SHALL SUBMIT UNDERTAKING TO THIS EFFECT.
<b>Note</b>	<p>THE TENDER COMPRISES OF "195 MW TO 270 MW" RATING &amp; "500 MW / 525 MW" RATING. BIDDER MAY SUBMIT OFFER FOR i) 195 MW TO 270 MW RATING OR ii) 500 MW / 525 MW RATING OR iii) "195 MW TO 270 MW" RATING &amp; "500 MW / 525 MW" RATING. BID FOR "195 MW TO 270 MW" RATING AND "500 MW / 525 MW" RATING WILL BE EVALUATED SEPERATELY. PRICE BID OPENING OF "195 MW TO 270 MW" RATING WILL BE DONE FIRST, FOLLOWED BY PRICE BID OPENING OF "500MW / 525 MW" RATING.</p> <p>BIDDERS ELIGIBILITY FOR QUALIFICATION OF PRE-Q CRITERIA (AVERAGE ANNUAL TURN OVER HERE IN AFTER TERMED AS T.O.) SHALL BE CONSIDER AS PER FOLLOWING:-</p> <ol style="list-style-type: none"> <li>T.O. &lt; Rs 24.01 LAKH- NOT ELIGIBLE TO PARTICIPATE IN TENDER.</li> <li>Rs 24.01 LAKH ≤ T.O. &lt; Rs 27.66 LAKH- ELIGIBLE TO PARTICIPATE IN TENDER FOR "195 MW TO 270 MW" RATING ONLY.</li> <li>Rs 27.66 LAKH ≤ T.O. &lt; Rs 51.67 LAKH- ELIGIBLE TO PARTICIPATE IN TENDER FOR EITHER "195 MW TO 270 MW" RATING OR "500 MW / 525 MW" RATING AS PER THEIR OFFER. IN SUCH CASE IF THE BIDDER HAS QUOTED FOR BOTH AND STANDS L1 FOR "195 MW TO 270 MW" RATING THEN THEIR OFFER SHALL NOT BE CONSIDERED FOR "500 MW / 525 MW" RATING ELSE THEIR OFFER SHALL BE CONSIDER FOR "500 MW / 525 MW" RATING.</li> <li>T.O. ≥ Rs 51.67 LAKH- ELIGIBLE TO PARTICIPATE IN TENDER FOR BOTH "195 MW TO 270 MW" RATING AND "500 MW / 525 MW" RATING AS PER THEIR OFFER.</li> </ol> <p>AFTER SATISFACTORY FULFILLMENT OF ALL THE ABOVE CRITERIA, OFFER SHALL BE CONSIDERED FOR FURTHER EVALUATION AS PER NIT AND ALL OTHER TERMS OF THE TENDER.</p>

**GENERAL INFORMATION:**

VENDOR SHOULD FURNISH INFORMATION REGARDING PROJECTS IN HAND, DETAILS OF CURRENT LITIGATION AND ARBITRATION CASES, ORDERS REGARDING EXCLUSION/EXPULSION OR BLACK LISTING, IF ANY.

CORRIGENDUM/EXTENSION (IF ANY) OF THIS TENDER WILL BE PUBLISHED IN WEBSITES.

INTERESTED BIDDERS MEETING THE ABOVE QUALIFYING REQUIREMENTS MAY DOWNLOAD TENDER DOCUMENTS FROM AFORESAID WEBSITE(S).

i)	DOWNLOAD OF TENDER DOCUMENT STARTS	<b>22/11/2019</b>
ii)	TENDER DOWNLOAD CLOSING ON	<b>02/12/2019 AT 15:00 HRS. IST</b>
iii)	LAST DATE OF SEEKING CLARIFICATIONS	<b>27/11/2019 UP TO 11:00 HRS. IST</b>
iv)	PRE-BID DISCUSSION (IF REQUIRED) ON	<b>N.A.</b>
v)	LAST DATE OF SUBMISSION OF OFFER	<b>02/12/2019 UP TO 15:00 HRS. IST</b>
vi)	DATE OF TECHNO-COMMERCIAL BID OPENING	<b>02/12/2019 AT 16:00 HRS. IST</b>

BHEL RESERVE THE RIGHT TO ACCEPT/REJECT ANY OR ALL THE BIDS WITHOUT ASSIGNING ANY REASON THEREOF.

**NOTE: PRE-BID DISCUSSION, IF TAKE PLACE, SHALL FORM PART OF THE TENDER DOCUMENT. NO CLARIFICATIONS/QUIRIES FROM THE TENDERERS AFTER 27/11/2019 (UP TO 11:00 HRS. IST) OR AFTER PRE-BID DISCUSSION (IF TAKES PLACE) SHALL BE ENTERTAINED BY BHEL.**

ENCLOSURES: --

- i) SCOPE OF WORK, TAXES AND DUTIES & OTHER DETAILS: (ANNEXURE-I: 09 PAGES)
- ii) *SPECIFIC CLAUSE WITH RESPECT TO BOCW ACT & CESS ACT: (ANNEXURE-BOCW: 02 PAGES)*
- iii) LIST OF CONSUMABLES TO BE ARRANGED BY THE CONTRACTOR (ANNEXURE-II: 01 PAGE)
- iv) SPECIAL NOTE TO BIDDERS: 03 PAGES
- v) ANNEXURE FOR HSE & OHSAS: 16 PAGES
- vi) GENERAL & SPECIAL CONDITIONS OF CONTRACT FOR SERVICES JOB (24 PAGES)
- vii) SPECIFIC TERMS AND CONDITIONS FOR SERVICES JOB (14 PAGES)
- viii) NO DEVIATION CERTIFICATE AS PER PRESCRIBED FORMAT (ANNEXURE-IV)
- ix) PRE-QUALIFICATION CRITERIA (ANNEXURE-V)
- x) DECLARATION OF THE BIDDERS (ANNEXURE-VI)
- xi) PRICE SCHEDULE
- xii) *GENERAL TERMS & CONDITIONS OF REVERSE AUCTION (PART – D)*
- xiii) *FORMAT FOR BANK GUARANTEE FOR PERFORMANCE SECURITY*
- xiv) *FORMAT FOR PROFORMA OF BANK GUARANTEE (in lieu of SECURITY DEPOSIT)*
- xv) *RTGS FORMAT (REAL TIME GROSS SETTLEMENT)*
- xvi) *SUSPENSION OF BUSINESS DEALING WITH SUPPLIERS/CONTRACTORS - ANNEXURE-A*
- xvii) *FORMAT FOR CERTIFICATE BY CHARTERED ACCOUNTANT ON LETTER HEAD - ANNEXURE-B*
- xviii) *FORMAT FOR DECLARATION FOR RELATION IN BHEL*
- xix) *FORMAT FOR SEEKING CLARIFICATION*
- xx) *FORMAT FOR DETAILS OF BIDDER*
- xxi) *RTGS DETAILS OF BHEL-PSER FOR EFT BY BIDDER/CONTRACTOR*

**ALL THE PAGES OF NIT SHALL BE DULY SIGNED BY THE BIDDER WHILE SUBMITTING THE OFFER.**

For & on behalf of  
**BHARAT HEAVY ELECTRICAL LIMITED**

DGM (PURCHASE)

**PARTICULARS OF THE TENDER**

- A) WORK : **RATE CONTRACT FOR SUPPLY & APPLICATION OF THERMAL DRY TYPE (CERAMIC BLANKET) INSULATION OF TURBINE FOR RATING FROM 195 MW TO 525 MW (KWU) SETS AT BHEL-PSER**
- C) TENDER SUBMISSION DUE DATE : **ON 02/12/2019 UP TO 15:00 HRS. IST**
- D) TECHNICAL BID OPENING DATE : **ON 02/12/2019 AT 16:00 HRS. IST**
- E) PRICE BID OPENING : .....
- F) VALIDITY OF OFFER : Six months from the due date of offer submission (Including extension, if any)
- G) MOBILIZATION TIME : **As per Annexure-I**
- H) COMPLETION PERIOD : **As per Annexure-I**
- I) TARGET COMPLETION DATE : .....
- J) The vendors should furnish the following documents for our scrutiny along with papers for pre-qualification for qualifying for price bid opening.
- 1) Credential / Experience certificates in line with Pre-Q & requirements in line with tender specifications
  - 2) PAN NO & Photo Copy of PAN CARD.
  - 3) Photo Copy of GSTN Registration Certificate.
  - 4) Latest Banker's certificate for financial soundness.
  - 5) Balance sheets & P&L Accounts for the preceding three years
  - 6) Organizational chart
  - 7) Relevant list of T&P held by the vendor earmarked for the tendered job
  - 8) List of concurrent contracts held by the Contractor.

**Particulars of Tender (Continued)**

Facilities to be provided to contractors as described below:-

All T&P required / recommended for the work against this tender shall have to be mobilized by the contractor fully at their expense within the quoted price.

Any special T&P i.e. T&P made available by the manufacture of the equipment to the customer can be made available to the contractor free of charges subject to availability at site.

Any consumables required / recommended for the work against this tender shall have to be mobilized by the contractor fully at their expenses within the quoted price.

Regarding other facilities for the contractors the following table clarifies adequately. Vendors are expected to quote considering these without any deviations from the provisions of “Notice Inviting Tender”.

Deviated offers are liable for rejection of price bid opening

a)	Water	<b>Free of Charges</b>
b)	Power	<b>Free of Charges</b>
c)	Storage Space	<b>Free of Charges</b>
d)	Covered Space	<b>Free of Charges</b>
e)	Uncovered Space	<b>Free of Charges</b>
f)	E.O.T. Crane	<b>Free of Charges</b>
g)	Operators for the above	<b>Cannot be provided</b>
h)	Residential accommodation	<b>Cannot be provided</b>
i)	Compressed air	<b>Free of Charges</b>
j)	Work shop facilities	<b>Free of Charges</b>

k)	i) Mobile Crane/Hydra for heavy materials, if available	<b>Cannot be provided</b>
	ii) Operator for K (i)	<b>Cannot be provided</b>
	iii) Fuel charges for K (i)	<b>Cannot be provided</b>
l)	Other material handling equipment	<b>Cannot be provided</b>
m)	Trailor	<b>Cannot be provided</b>
n)	Wooden Sleepers	<b>Cannot be provided</b>
o)	Tarpaulins	<b>Cannot be provided</b>
p)	Scaffolding materials	<b>Cannot be provided</b>

No advance is payable to the contractors for mobilizing the site. Any payment can be made only against running bills as per payment terms.

For & on behalf of  
**BHARAT HEAVY ELECTRICALS LIMITED**

DGM (PURCHASE)



ANNEXURE-VIDECLARATION OF THE BIDDERS

**Job: RATE CONTRACT FOR SUPPLY & APPLICATION OF THERMAL DRY TYPE (CERAMIC BLANKET) INSULATION OF TURBINE FOR RATING FROM 195 MW TO 525 MW (KWU) SETS AT BHEL - PSER**

01. I, .....hereby certify that all the information and data furnished by me with regard to this **E-Tender No. PSER:PUR:SAS:RC-S383:19** **Date 22/11/2019** are true and complete to the best of my knowledge.
02. I have gone through the tender specifications, scope of work, terms and conditions mentioned in Annexure as well as General and Special conditions of contract and various stipulations in detail and agree to abide by them and comply with the requirements and intent of specifications.
03. I also certify that there have been no deviations from the tender requirements in the bid submitted against this tender.
04. I further certify that I am duly authorized representative of the under mentioned tenderer and hold a valid power of attorney to this effect, a copy of which is enclosed.

Signature:

Name :

Date :

Designation :

Seal :

**Tenderers Name and address**

**PART-D:**  
**General Terms & Conditions of Reverse Auction**

Against this enquiry for the subject item/ system with detailed scope of supply as per enquiry specifications, BHEL may resort to "REVERSE AUCTION PROCEDURE" i.e., ON LINE BIDDING (THROUGH A SERVICE PROVIDER). The philosophy followed for reverse auction shall be English Reverse (No ties).

1. For the proposed reverse auction, technically and commercially acceptable bidders only shall be eligible to participate.
2. Those bidders who have given their acceptance for Reverse Auction (quoted against this tender enquiry) will have to necessarily submit 'online sealed bid' in the Reverse Auction. Non-submission of 'online sealed bid' by the bidder for any of the eligible items for which techno-commercially qualified, will be considered as tampering of the tender process and will invite action by BHEL as per extant guidelines in vogue.
3. BHEL will engage the services of a service provider who will provide all necessary training and assistance before commencement of on line bidding on internet.
4. In case of reverse auction, BHEL will inform the bidders the details of Service Provider to enable them to contact & get trained.
5. Business rules like event date, time, bid decrement, extension etc. also will be communicated through service provider for compliance.
6. Bidders have to fax the Process Compliance form (**Annexure-III of Business Rule Document of Reverse Auction – shall be shared to bidders along with intimation of RA schedule**) before start of Reverse auction. Without this, the bidder will not be eligible to participate in the event.
7. In line with the NIT terms, BHEL will provide the calculation sheet (e.g., EXCEL sheet) which will help to arrive at "Total Cost to BHEL" like Packing & forwarding charges, Taxes and Duties, Freight charges, Insurance, GST and loading factors (for non-compliance to BHEL standard Commercial terms & conditions) for each of the bidder to enable them to fill-in the price and keep it ready for keying in during the Auction.
8. Reverse auction will be conducted on scheduled date & time.
9. At the end of Reverse Auction event, the lowest bidder value will be known on auction portal.
10. The lowest bidder has to fax/e-mail the duly signed and filled-in prescribed format for price breakup including that of line items, if required, (**as per Annexure-IV of Business Rule Document of Reverse Auction**) as provided on case-to-case basis to Service provider within two working days of Auction without fail.
11. In case BHEL decides not to go for Reverse Auction procedure for this tender enquiry, the Price bids and price impacts, if any, already submitted and available with BHEL shall be opened as per BHEL's standard practice.
12. Bidders shall be required to read the "Terms and Conditions" section of the auctions site of Service provider, using the Login IDs and passwords given to them by the service provider before reverse auction event. Bidders should acquaint themselves of the 'Business Rules of Reverse Auction', which will be communicated before the Reverse Auction.
13. If the Bidder or any of his representatives are found to be involved in Price manipulation/ cartel formation of any kind, directly or indirectly by communicating with other bidders, action as per extant BHEL guidelines, shall be initiated by BHEL and the results of the RA scrapped/ aborted.
14. The Bidder shall not divulge either his Bids or any other exclusive details of BHEL to any other party.
15. In case BHEL decides to go for reverse auction, the H1 bidder (whose quote is highest in online sealed bid) will not be allowed to participate in further RA process provided minimum three bidders are left after removal of H1 bidder. In case of tie for H1 bid (identical online sealed bids), 15 minutes' additional time shall be provided and all the participating bidders shall be informed by mail/message on bidding screen to enable bidders submit revised online sealed bids so as to break the tie.
16. In case H1 bidder happen to be MSE and was removed from further bidding but is within L1 + 15% band, then this bid shall also be considered and to be processed in line with 'Public Procurement Policy for Micro & Small Enterprises (MSEs) order, 2012'.

**ANNEXURE-I**

**JOB: RATE CONTRACT FOR SUPPLY & APPLICATION OF THERMAL DRY TYPE (CERAMIC BLANKET) INSULATION OF TURBINE FOR RATING FROM 195 MW TO 525 MW (KWU) SETS AT BHEL-PSER.**

**Job Duration: 15 (Fifteen) days for preparatory works and 4 (Four) days for applications.**

**Mobilisation: Time: within five (05) days from date of intimation by BHEL**

**Scope of Work:**

- A.** Design, supply, fabrication and completion of thermal dry type insulation of followings:-
- i)** Ceramic fibre insulation for HP and IP turbines, HP & IP Turbine Valves Casing, LPBP stop and control valves Casing.
  - ii)** Mattress insulation for MS/CRH and associated pipelines including MS/HRH Strainers, CRH NRV, HPBP Valves and HPBP Spray valves.
  - iii)** Pipelines: Mattress insulation of Warm up line for HP & IP stop valve/control valve chest connected between respective valves and high pressure drain line (MAL area and flash tank area) for HPSV/CVs and IP stop valve/control valve and LP bypass SV/ CV, loop drains pipe and HPT BP gland leak off to CRH line where re-insulation to be done.
- B.** The insulation work to be done under the joint supervision of BHEL and Customer Engineer. The job comprises of complete supply, transportation of requisite materials, storage, application of insulation, outer most layer of pad insulation to be wrapped with silicon coated glass cloth and aluminum sheet cladding over mattress insulation & ensure safety and security.
- C.** Field Quality plan for each job to be submitted by Vendor prior to commencement of work.
- D.** All material test certificates as per applicable IS for each job to be provided by vendor before shifting of material.
- E.** Arrangement for road permit for transportation of the dry type insulation, insulation machine, materials etc. is within the scope of the vendor.
- F.** Component to be insulated as prescribed below:

A	Equipment Description	Temp (Degree C) Approximate	Thickness of insulation & length of pipe to be insulated	Remarks
1.01	<b>Complete HPT</b> – top and bottom including steam inlet and CRH pipe line including gland pipe lines	538 538	Thickness as reqd. piping insulation upto 2 meter	COMPLETE REINSULATION
1.02	<b>Complete IPT</b> – top and bottom including steam inlet and its flange joint (TOP/BOTTOM) including gland pipe lines	537	Thickness as reqd. piping insulation upto 2 meter	COMPLETE REINSULATION
2.01	Gland steam pipe line 80 (OD)	330	Upto 2 meter	-
2.02	Gland steam pipe line 60 (OD)	330	Upto 2 meter	-
3.00	MS & HRH strainers, CRH NRV and Drain pipe line	538	Drain pipe upto 2 meter	-
4.00	ESV & CV CASING	538	Thickness as reqd.	COMPLETE RE-INSULATION
5.00	IV & CV CASING	538	Thickness as reqd.	COMPLETE RE-INSULATION

6.00	HPBP VALVES & SPRAY VALVES	538	-	PATCH UP WORK
7.00	LPBP STOP & CONTROL VALVE	538	Thickness as reqd.	COMPLETE RE-INSULATION
8.00	Pipelines Warm up line for HP& IP stop valve/control valve chest connected between respective valves and high pressure drain line (MAL area and unit flash tank area) for HPSV/CVs and IP stop valve/control valve and loop drains pipe and HPT BP gland leak off to CRH line.	-	Upto 2 meter of steam pipe line.	replacement work will be done as per requirement in the said area.

#### 1.0 TYPES OF INSULATION:

1.1 TURBINE CASING AND VALVE BODIES: Turbine casing and valve bodies shall be insulated by the following removable & reusable Ceramic Fibre Insulation conforming to IS: 15402-2003/ASTM C 892-10 (In case of CMS). Ceramic material in Type 1 as per IS 15402, Zirconia stabilize and suitable for use upto 1260 deg C. ASTM C892-10 Type –II (In case of CMS).

1.2 CERAMIC FIBRE CLOTH: Ceramic Fibre cloth is suitable for higher temperature service. It contains 15-20% organic carrier fibre to facilitate the carding process, which may burn off at a lower temperature. This however does not change the mechanical features including strength. It exhibit excellent chemical stability, resisting attack from most corrosive agents having thickness of 3 mm.

1.3 GLASS FABRIC CLOTH: Glass fabric cloth of style KLEVOGLASS TEXO 656-1L HTM 600 being manufactured by M/s Klevers GmbH & Co. or equivalent having the following properties conforming to DIN EN 10204-2.2

Test Characteristics	Unit	Nominal value
Total weight	G/m <sup>2</sup>	665 ± 5%
Thickness	Mm	0.85 ± 5%
Warp	Fd/cm	6.8 ± 5%
Weft	Fd/cm	5.8 ± 5%
Material		
Warp	Tex	PT6-500
Weft	Tex	PT6-500
Weave		Plain
Tensile strength		
Warp	N/cm	360 ± 10%
Weft	N/cm	330 ± 10%

1.4 GLASS FIBRE THREAD: Glass fibre thread as per specification No. TEXO 656-1L/HTM 600 being manufactured by M/s Klevers GmbH & Co. or equivalent having the following properties

Test Characteristics	Unit	Nominal value
Weight of the raw fab total weight	g/m <sup>2</sup>	650 ± 5%
	g/m <sup>2</sup>	665 ± 5%
Width	Mm	1000 ± 5%
Thickness	Mm	0.85 ± 5%
Weave		Plain
Threads/ warp	Per cm	6.8 ± 3%
Fineness/ warp	Tex	PT6-500 ± 5%
Tensile strength / weft	N/cm	360 ± 5%
Threads/ weft	Per cm	5.8 ± 3%
Fineness/ weft	Tex	PT6-500 ± 5%
Tensile strength / weft	N/cm	330 ± 10%
Coating quantity	g/m <sup>2</sup>	15
One side / both sides	½	2
Application temp.	Deg C	600
Finish on solitic acid basis.		

1.5 MICRO-POROUS INSULATION: Micro-porous material (Equivalent to SILCAPOR ULTRA 950 of M/s Silca Service-und Vertriebsgesellschaft fur Dammstoffe mbH) for confined area with stainless steel sheet metal cover. Micro-porous insulation shall be applied at TS & GS end of HP & IP Turbine.

1.6 PIPING INSULATION (IS:8183 CLASS-III & IV): The piping shall be insulated with asbestos free bonded mineral wool (rock wool) mattresses conforming to Class-III for metal surface temperature up to 400°C and Class-IV for metal surface temperature above 400°C as per clause 4.2 of IS:8183. Size of wire netting on mineral wool mattresses shall be 19 mm (maximum) x 0.57 mm (minimum) as per IS:3150. Insulated pipes shall finally be covered with metal (Aluminum sheet as per IS: 737) sheathing.

2.0 PREPARATION OF SURFACES AND ATTACHMENTS FOR INSULATION: Insulation work will be carried out during overhauling of the unit. Old insulation will be dismantled and removed by the overhauling contractor for overhauling work. However, the insulation party shall remove the remaining insulation, if any. Prior to application of insulation, surfaces shall be cleaned to remove rust, grease, paint residues, loose scale and moisture as per clause 5.5 of IS: 14164. Firm anchoring shall be welded onto the pads/strips already provided to the casings/equipments.

### 3.0 DESIGN

3.1 The turbine insulation shall be of "Walk-on" design.

3.2 First layer of ceramic felt in thickness 25 mm duly wrapped in ceramic cloth making quilt to be applied on turbine and valves. These quilts to be retained /fixed in position in contact with the hot body by SS retainer welded on the turbine body. Each quilt is designed to the shape of turbine part of which it is to be applied and is numbered properly so that after removal and re-fixing it is easy to identify the quilt and on the position of body to be insulated. The subsequent layers of ceramic quilts are made by wrapping the ceramic fibre in glass fabric cloth 600 HTM being manufactured by M/s Klever GmbH & Co., Germany. Each quilt is having staggered joints retaining the quilt with retainer to keep the quilt in position and intact with the body to be insulated. Total thickness of insulation as per design to be achieved by putting quilt layers of maximum 75 mm thickness and minimum 25 mm thickness. All layers of quilt to be suitably clamped by industrial hooks and quilt to quilt stitching is to be done with the help of SS wire to minimize the gap in between the adjacent quilts.

3.3 The insulation thickness on the bottom halves of HP & IP turbine shall be 20% extra as compare to top halves of these turbines.

3.4 No air pockets are allowed inside the insulation.

3.5 The design of the insulation at the flange joints of the casings shall be such that it can be easily removed and put again without causing major damage to the main insulation while



- opening the casings for carrying out the maintenance of the machine. It shall also ensure that no weak spot exists in the insulation of the flange joints and pipe connections.
- 3.6 Valves and flanges shall be covered with removable cap type of Insulation. HP & IP turbine casing palm (Rest surface on pedestal) shall be covered with 2 mm thick stainless steel perforated sheet for contact protection.
- 3.7 The insulation should be so designed that the heat loss shall not appreciably exceed 180 kcal/m<sup>2</sup> h for natural air flow.
- 3.8 The insulation should be so designed that the difference in temperature between upper and lower halves of both HP & IP casing shall not be more than 15<sup>0</sup> C during normal and stable operating condition at rated load of turbine. The temperature measured by thermocouples, at rated load, fixed in HP outer and IP outer casing will be utilized to determine temperature difference.
- 3.9 THERMAL SHIELDS: At the front and rear ends of the turbine casings, a thermal shield shall be provided to prevent the oil seepage from bearing pedestals onto the insulation and also protect the pedestal from heat transferred from turbine casing wall. Thermal shield shall be placed judiciously so as the sufficient gap shall be there from pedestal and casing insulation for ventilation (Figure-1). Shields will consist of an isolation material core of 8 mm thickness enclosed by two 1 mm thick Aluminum (IS: 737, Gr-19000) plates. The shields are split in two parts and it should be easily mountable and removable.
- 3.10 The ability to function and ease of access to the covers and blind flanges shall not be impaired by the insulation.
- 3.11 DRY TYPE INSULATION: Ceramic fibre insulation shall be applied. Ceramic cloth 3 mm thick conforming to ASTM C 892 with the help of 1 mm SS wire, single layer ceramic cloth encased blanket should not be more than 75 mm thick. The insulation shall be secured to the turbine casing and valve casing. For securing the insulation properly, studs/nuts shall be welded on pads already provided on casing. The studs will be wrapped with asbestos mill board paper to avoid direct contact of the wire mesh with studs. Material of studs/nuts shall be in stainless steel grade of 18/8.
- 3.12 PIPING INSULATION:
- 3.12.1 Standard piping Insulation shall be designed, in accordance with figure - 2. In this connection, the following points shall be taken into consideration:-
- 3.12.1.1 Thermal expansion shall not cause gaps.
- 3.12.1.2 Thermal expansion shall not adversely affect the insulation.
- 3.12.1.3 The designed thickness for thermal insulation shall be adhered to the following points:
- a) Flange transitions
  - b) Drain connections.
  - c) Pressure gauge of thermo wells.
  - d) Instrument ports, and
  - e) Test connections shall be brought out or be provided with funnel or collar.
- 3.12.2 Special fire protection measures shall be taken for the steam lines running in the immediate vicinity of oil lines. The sheet metal jacketing shall be made oil proof by inserting self-adhesive flexible tapes.
- 3.12.3 Particular care shall be taken when insulating the cross-around / cross-over pipes. Hinged connection expansion joints shall be insulated separately, taking care that the hinges and guide sections are still flexible and allow for thermal expansion (figure - 3).
- 3.12.4 The leakage steam headers and gland steam lines shall be insulated because they radiate heat to the foundations.
- 3.12.5 Drain lines shall be insulated down to the bottom edge of the turbine foundation. It shall also be insulated in the vicinity of working area.
- 3.12.6 Where the insulation thickness is more than 75 mm, the insulation shall be done in multi-layers and the joints shall be staggered.
- 3.12.7 Supporting elements made of mild steel grade strips shall be mounted at a maximum distance of 950 mm (in a longitudinal direction) for use as spacers and



centering pieces for sheet metal jacketing. However, the spacers shall not be welded onto the pipes and some other suitable arrangement shall be made for their mounting.

### **3.12.8 METAL SHEATHING:**

- 3.12.8.1** Pipes shall be lagged with Aluminum (IS:737, Gr-19000) sheets of 0.9 mm minimum thickness for piping OD 150 mm and above up to 450 mm and 1.2 mm for above 450 mm.
- 3.12.8.2** For piping in plants near the sea, the Aluminum sheet shall be subjected to special surface treatment of Al, Mg, Mn material (resistant to sea water).
- 3.12.8.3** The following points shall be considered when using Aluminium Sheathing:-
- a) Contact with other material shall be avoided.
  - b) Stainless Steel Parker screw shall be used.
  - c) Supporting rings, which are attached to the spacers, shall be covered with glass felt, plastic or asbestos. This shall ensure that Aluminium jacketing does not come in contact with metal.
  - d) Ingress of moisture shall be avoided.
  - e) The thickness of the aluminium-sheet shall not be less than 0.9 mm.
  - f) Six number Stainless Steel Parker screws shall be inserted on each running meter for securing circumferential and longitudinal joints.
- 3.13** Thermocouple heads and terminals of wall temperature sensors shall be free of insulation. Funnel shaped sheet metal shall be installed if required and properly secured if thickness is too thick (figure-4).

## **4.0 MATERIALS**

- 4.1 GENERAL:** All materials used for insulation, fixing and protection shall be new and shall conform to the specified standards. Correlated test certificate of material to be provide by vendor and the following conditions to be satisfied
- a) All insulating materials shall be chemically inert and non- corrosive to the surface insulated under conditions of limiting operating temperatures.
  - b) Another major consideration is fire resistance (with all that it implies). A fire resistance Insulation shall not feed a fire or give off smoke or toxic gases. It shall not absorb the flammable liquids also.
- 4.2 INSULATING MATERIAL:** Asbestos free Refractory ceramics blanket/Calcium Magnesium Silicate (CMS) conforming to IS: 15402 & ASTM C 892. The density of ceramic fibre blanket shall be carefully controlled at 128 kg/m<sup>3</sup> and thermal conductivity of ceramic fibre blanket shall be 0.052 kcal/m hr deg C at 200 deg C mean temperature. Tensile strength of fibre should be as per IS 15402 only.
- 4.3 CERAMIC FIBRE CLOTH:** Ceramic fibre cloth 3 mm thick shall be high temp special fibre used for variety of industrial application. It should contain 15-20 % organic carrier fibre to facilitate the carding process.
- a) SS 304 industrial hooks holding plate of 1 mm thick having dia 25 mm, with approx. 4 mm pin dia.
  - b) Suitable for temperature applications upto 900 deg C.
  - c) Shall be non- corrosive, non- toxic and non-inflammable.
  - d) Shall not require internal or external drying; thus eliminating steam heating of the cylinders.
- 4.4 FOR PIPING INSULATION:** Machine stitched mattresses of bonded Rock Wool conforming to IS:8183 having bulk density as per Class-III for metal surface temperature upto 400°C and Class-IV for metal surface temperature above 400°C as per clause 4.2 of IS:8183.All other attachments, devices and accessories which shall be required to carry out Thermal insulation as per specification
- 4.5 OTHER MATERIALS:**
- a) Aluminium sheet
  - b) Stainless steel/galvanized wire meshing and lacing-wire used for meshing and lacing shall conform to IS: 820
  - c) All other attachments devices and accessories which shall be required to carry out thermal insulation as per specification.

4.6 FOR MICRO-POROUS INSULATION: Micro-porous insulation board shall be based on ultra fine particles of fumed silica, metal oxides and reinforcement fibre. It should have the following physical properties

Test Characteristics	unit	Nominal Value
Application Temperature (Max.)	° C	950
Bulk Density (+- 10% )	Kg/m3	230
Fire Behavior	DIN 4102	Non Combustible A1
Liner long term Shrinkage, 538° C 815° C & 954° C	%	0.3 0.6 & 1.3
Compression Resistance 5% Compression deformation at 400 ° C 10% Compression deformation at 400 ° C 5% Compression deformation at 800 ° C 10% Compression deformation at 800 ° C	MPa	0.49 1.03 0.62 1.26
Thermal Conductivity 50 ° C 200 ° C 400 ° C 600 ° C 800 ° C	W/mK at tm	0.018 0.020 0.024 0.031 0.040
Chemical Reference Analysis, SiO2 SiC & Others	%	80 15 & 5
Cold Flexural Strength (Flexural Rigidity)	Mpa	0.16

#### 5.0 BILLING BREAK-UP

Please refer to the drawings for details of insulation work in various ratings of unit. Vendor has to carry out the works as may be deemed necessary to complete the insulation application in totality for respective areas mentioned in table-I. Billing break-up shall be followed for payment is detailed below:-

Table-I				
Sl. No.	Item description	Qty	Unit	Percentage allocation
1	Complete HPT top and bottom including steam inlet and CRH pipe line and its flange joints, gland pipe lines upto 2 meter length	1	set	40 %
2	Complete IPT top and bottom including steam inlet and HRH pipe line and its flange joint, gland pipe lines upto 2 meter length.	1	set	42 %
3	Cap nut portion of valves (ESV, IV, HPCV, IPCV, HPBP, LPBP, CRH NRV, HPBP Spray valves ) and minor patch works	1	lot	3%
4	MS STRAINERS including drain pipe upto 2 meter length	2	no.	1.5%
5	HRH STRAINERS including drain pipe upto 2 meter length	2	no.	1.5%
6	ESV & HPCV Casing including Valve Chest (if insulation is replaced)	2	set	4%
7	IV & IPCV Casing including Valve Chest (if insulation is replaced)	2	set	4%
8	HPBP Main Valve Casing (if insulation is replaced)	2	Nos.	1%
9	LPBP Valve casing (if insulation is replaced)	2	Nos.	2%
10	CRH NRV Casing (if insulation is replaced)	1	set	1%
Total				100%

**Note:-**

- a) Prior to mobilization for a particular unit, BHEL will intimate vendor the list of the items of table-I for which the thermal insulation shall be done.
- b) Rate contract will be operated if the percentage sum of the executed items for a particular unit is 40% or above.
- c) Payment will be released only for the executed items and quantity certified by BHEL site engineer in charge. If the quantity for a particular item is more or less payment will be released on pro-rata basis of the allocated percentage.

6.0 All exposed parts of turbine viz. bearing pedestals, sliding surfaces, control gear and other equipments in the vicinity which is likely to be damaged during insulation application are to be protected.

7.0 Cleaning of the plant area after insulation work is over, disposal of scrap/ waste/ insulation generated while insulation at predetermined place indicated by customer including transportation of the waste.

**8.0 TENTATIVE VOLUME OF THE JOB****Tentative quantity of jobs:**

- a) approximate total 02 nos. per year for 195 MW / 200 MW / 210 MW / 250 MW / 270 MW unit,
- b) approximate total 02 nos. per year for 500 MW / 525 MW unit.
- c) However, this volume may vary to any extent as per requirement.**

**9.0 METHOD OF APPLICATION:**

- A. To insulate flat surfaces or moulded shapes they must be first cleaned from rust, dirt, flat and paint remnants. After this rust protection paint from high resistant aluminium bronze must be applied.
- B. The holding construction shall consist of MS strips of 25 mm X 3 mm which shall be secured either with nuts and bolts or welded on the pads already provided on casing surface for this purpose.
- C. All parting plane bolts, studs in the area of insulation shall be covered in aluminum foil to prevent them the ingress and caking of contaminants.
- D. First layer of ceramic blanket of minimum 25 mm is put on the base surface, to prevent any damage of the second layer of ceramic blanket wrapped with ceramic cloth.
- E. Second layer of ceramic fibre pads duly wrapped in glass fibre cloth having arrangement for tightest jointing with adjacent pad without affecting the integrity of the parent material shall be provided.
- F. The joints of the pad shall be stitched properly with SS wire to avoid/sealed the gap in between the blankets. The joint arrangement would be capable of avoiding the gap in between material inside the insulation. Also there should be no air pocket inside the insulation.
- G. The pads shall be held in position with the help of SS speed clip washers provided after piercing this pad to the supporting cage work already fabricated and fixed. The thickness of the insulation required shall be building up by the pads of maximum thickness of 75 mm.
- H. Apply outer most layers of ceramic blankets wrapped in silicon coated glass cloth for fire protection and preventing oil absorption into the insulation.
- I. Skin temperature of the outermost ceramic pad insulation of turbine to be maintained within 20 deg C. above ambient temperature. The temperature of the ambient to be considered is 40 deg C.
- J. Thermal shields to be applied for all the rear and front ends of the turbine casing.
- K. Overall application shall be uniform and shall have aesthetic look.
- L. Any defects identified on application, insulation shall have to be rectified as per the requirement of BHEL by the agency. No additional price is payable.

- M. Apart from the portions of insulation as mentioned in the scope specification, other additional reasonable portions to be insulated, is so desired by customer / BHEL, than the same has to be complied with within the Lump sum quoted price by the bidder.

#### **10.0 RECOMMENDED REPAIR PROCEDURES FOR INSULATED PIPES**

Remove outer insulation layer and replace by new mineral wool mattress to obtain the prescribed/designed thickness along with wire netting as specified. Aluminum sheet cladding to be done over mattress insulation.

#### **11. SPECIFIC CONDITION**

- 11.1 As the time schedule for overhauling job completion is of utmost importance and same is greatly dependent upon timely mobilization, commencement and completion of Turbine Thermal Insulation. The successful bidder has to ensure the followings:-
- (a) Timely availability of all insulation and associated materials at site.
  - (b) Timely mobilization of require machine and accessories at site.
  - (c) Timely mobilization of requisite manpower to work round the clock.
- 11.2 For purpose of transportation of insulation materials, successful bidder will have to make their own arrangement for road permit/ license, suitable transport etc. BHEL or their client will not provide any assistance to the party in this matter.
- 11.3 All exposed parts of turbine viz. bearing pedestals, sliding surfaces, control gear and other equipments in the vicinity which is likely to be damaged during insulation application are to be protected.
- 11.4 Cleaning of the plant area after insulation work is over, disposal of scrap/ waste/ insulation generated while insulation at predetermined place indicated by customer including transportation of the waste.

#### **12 SPECIAL TERMS AND CONDITIONS:**

- 12.1 BHEL reserves the right to accept or reject any or all offer without assigning any reasons thereof. BHEL also reserve the right to cancel the offer wholly or partly without assigning any reason thereof. BHEL also reserve the right to reject the bidder with unsatisfactory past performance in the execution of a contract. BHEL's decision in this regard shall be final & binding.
- 12.2 Rates shall remain firm for the entire period of rate contract. No escalation of rate shall be entertained by BHEL during the entire contract period.
- 12.3 Proper care to be taken while carrying out this operation. Utmost care to be taken up for the safety of our esteemed customer's equipment while execution of this job. Any damage caused due to negligence of contractor's / vendor's operational manpower and equipment, the cost and responsibility shall be on contractor's side.
- 12.4 The duration of this rate contract is for a period of Two (02) Years from the date of placement of rate contract.**
- 12.5 Mobilisation time allowed is 5 days after intimation by BHEL for each job.
- 12.6 Workshop facility, Water, compressed air, EOT crane without fuel & operator will only be provided by BHEL. Three phase power supply & water supply points as per availability with the customer shall be provided to the vendor.
- 12.7 Electrical source will be shown for connection of machine. However, vendor has to arrange own suitable cable along with junction box of suitable capacity.
- 12.8 Service charges shall be quoted as per price Schedule format enclosed. Rates quoted shall remain firm for entire duration of the rate contract.
- 12.9 Vendor should quote their rates irrespective of BHEL-PSER project sites location and no. of days of activity (BHEL-PSER Project sites are mostly located in WB, Bihar, Jharkhand, Orissa, Assam and North East State).

**13 SAFETY:**

Safety precautions should be strictly adhered to, in line with our conditions of contract and Safety clauses enclosed already with our General conditions of contract. Vendor has to adhere the safety norms of the site as imposed by various customers. BHEL will not be responsible for any negligence in safety precaution.

**14 TAXES & DUTIES –GST REGIME**

<b>14.0</b>	<b>TAXES &amp; DUTIES, ETC.</b>
14.1	All taxes excluding GST with applicable cess & BOCW Cess (mentioned elsewhere in the Tender) but including Charges, Royalties, any State or Central Levy and other Taxes for materials if any obtained for the work and for the execution of the contract shall be borne by the bidder and shall not be payable extra by BHEL.
14.2	Any increase in the above at any stage during execution including extension of the contract, if any, shall have to be borne by the contractor. Quoted/ accepted rates/ price shall be inclusive of all such requirements.
14.3	GST with applicable Cess, legally leviable & payable by the successful bidder as per GST Law, shall be paid extra by BHEL. Hence, Bidder shall not include GST with applicable Cess in their quoted price.
14.4	The successful bidder shall furnish proof of GST registration with GSTN Portal covering the services under this contract. Registration should also bear endorsement for the premises from where the billing shall be done by the successful bidder on BHEL for this project/ work.
14.5	Since GST on output will be paid by BHEL separately as enumerated above, bidder's quoted rates/ price should be after considering the Input Credit under GST law at their end.
14.6	TDS under Income Tax shall be deducted at prevailing rates on gross invoice value from the running bills unless exemption certificate from the appropriate authority/ authorities is furnished.
14.7	TDS under GST shall be deducted at applicable rates on gross invoice value from the running bills.
14.8	Bidder shall note that the GST Tax Invoice complying with GST Invoice Rules (Section 31 of GST Act & Rules referred there under) wherein the 'Bill To' details shall be as per following. BHEL GSTN – Refer table-2, GSTN code table of BHEL. NAME - BHARAT HEAVY ELECTRICALS LIMITED ADDRESS – Shall be intimated later.



14.8	Table-2:GSTN code table of BHEL		
	<b>S. No.</b>	<b>State / UT</b>	<b>GST Reg. No.</b>
	1	Andhra Pradesh	37AAACB4146P7Z8
	2	Assam	18AAACB4146P1ZE
	3	Bihar	10AAACB4146P1ZU
	4	Chandigarh	04AAACB4146P1ZN
	5	Chattishgarh	22AAACB4146P1ZP
	6	Daman & Diu	25AAACB4146P1ZJ
	7	Delhi	07AAACB4146P1ZH
	8	Gujarat	24AAACB4146P1ZL
	9	Haryana	06AAACB4146P1ZJ
	10	HP	02AAACB4146P1ZR
	11	Jharkhand	20AAACB4146P5ZP
	12	Karnataka	29AAACB4146P1ZB
	13	Kerala	32AAACB4146P1ZO
	14	Maharashtra	27AAACB4146P1ZF
	15	MP	23AAACB4146P1ZN
	16	Punjab	03AAACB4146P2ZO
	17	Rajasthan	08AAACB4146P1ZF
	18	Tamil Nadu	33AAACB4146P2ZL
	19	Telangana	36AAACB4146P1ZG
	20	Tripura	16AAACB4146P1ZI
	21	UP	09AAACB4146P2ZC
	22	Uttarakhand	05AAACB4146P1ZL
	23	West Bangal	19AAACB4146P1ZC
	24	Mizoram	15AAACB4146P1ZK
	25	Orissa	21AAACB4146P1ZR
	26	Arunachal Pradesh	12AAACB4146P1ZQ
14.9	<p>Bidder to intimate immediately on the day of removal of Goods (in case of any supply of goods) to BHEL along with all relevant details and a scanned copy of Tax Invoice through following communication mode for enabling BHEL to meet its GST related compliances</p> <p>Portal Address – Shall be intimated later.</p> <p>And</p> <p>Email Address – Shall be intimated later.</p> <p>In case of delay in submission of the abovementioned documents on the date of dispatch, BHEL may incur penalty /interest for not adhering to Invoicing Rules under GST Law. The same will be liable to be recovered from the successful bidder, if such delay is attributable to the bidder.</p>		
14.10	<p>In case of raising any Supplementary Tax Invoice (Debit / Credit Note) Bidder shall issue the same containing all the details as referred to in Section 34 read with Section 31 of GST Act &amp; Rules referred there under.</p>		



14.11	Bidder shall Comply with the Time limit prescribed under the GST Law and rules thereof for raising of the tax invoice. If any supply of goods is applicable, Bidder shall also ensure prompt delivery of Goods after dispatch.
14.12	Bidder shall note that in case GST credit is delayed/ denied to BHEL due to delayed / non receipt of goods and /or tax invoice or expiry of the timeline prescribed in GST Law for availing such ITC, or any other reasons attributable to the bidder, GST amount shall be recoverable from the bidder along with interest levied / leviable on BHEL, as the case may be.
14.13	Bidder shall upload the Invoices raised on BHEL in GSTR-1 within the prescribed time as given in the GST Act. Bidder shall note that in case of delay in declaring such invoice in your return and GST credit availed by BHEL is denied or reversed subsequently as per GST Law , GST amount paid by BHEL towards such ITC reversal as per GST law shall be recoverable from the bidder along with interest levied / leviable on BHEL.
14.14	<p>Way Bill: Successful Bidder shall arrange way bill / e-waybill for any transfer of goods for the execution of the contract.</p> <p>The Bidder has to make their own arrangement at their cost for completing the formalities, if required, with Issuing Authorities, for bringing materials, plants &amp; machinery at site for execution of the works under this contract, Road Permit/ Way Bill, if required, shall be arranged by the contractor and BHEL will not supply any Road Permit/ Way Bill for this purpose.</p>
14.15	<p>Any new taxes &amp; duties, if imposed subsequent to the due date of offer submission as per NIT &amp; TCN, by statutory authority during contract period (including extensions for which delay is not attributable to the bidder), shall be reimbursed by BHEL on production of relevant supporting document to the satisfaction of BHEL. However, bidder shall obtain prior approval from BHEL before depositing any such new taxes and duties.</p> <p>Benefits and/or abolition of all existing taxes must be passed on to BHEL against new taxes, if any, introduced at a later date.</p>

## 15. FIGURE

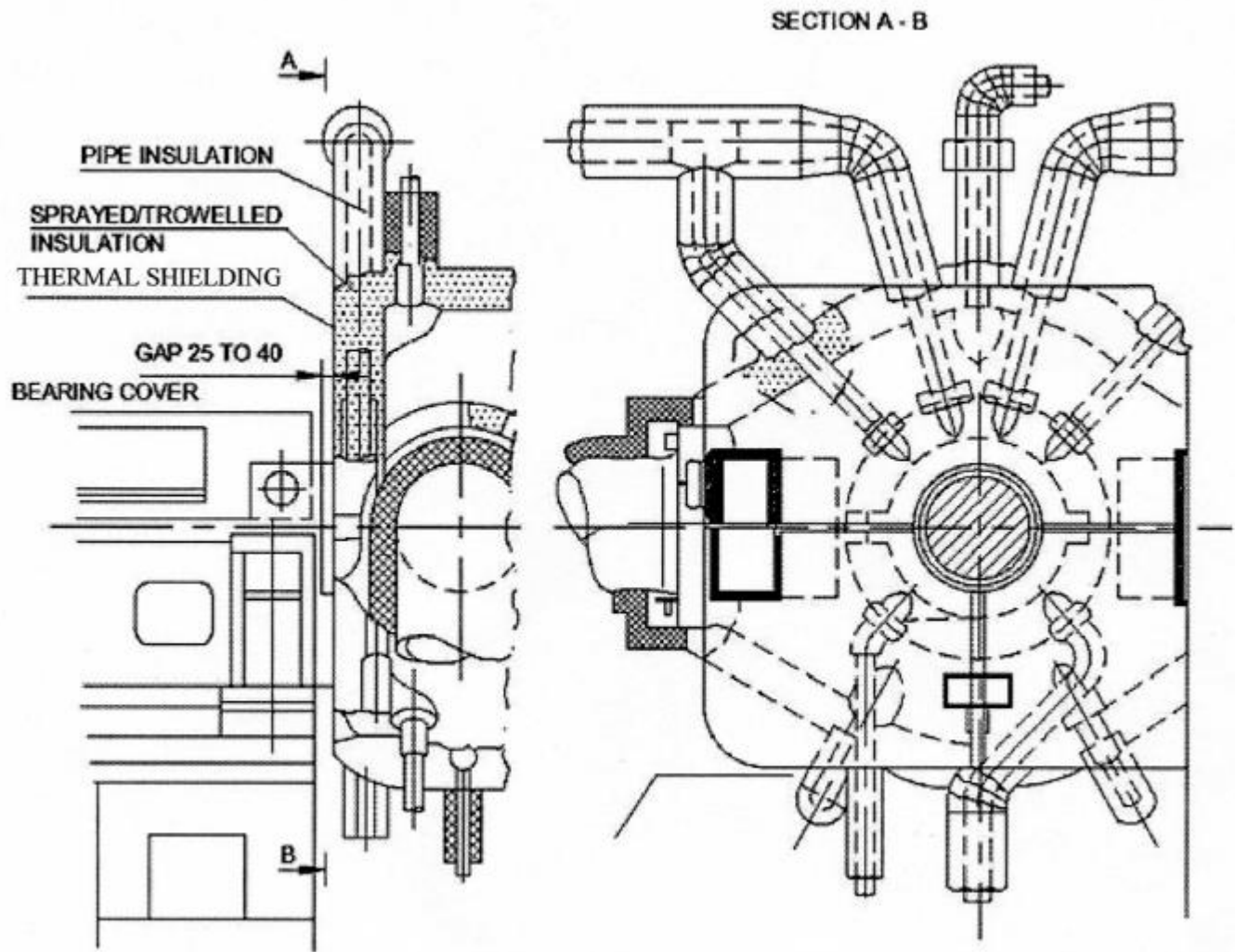


FIGURE-1: ARRANGEMENT OF THERMAL SHIELDING

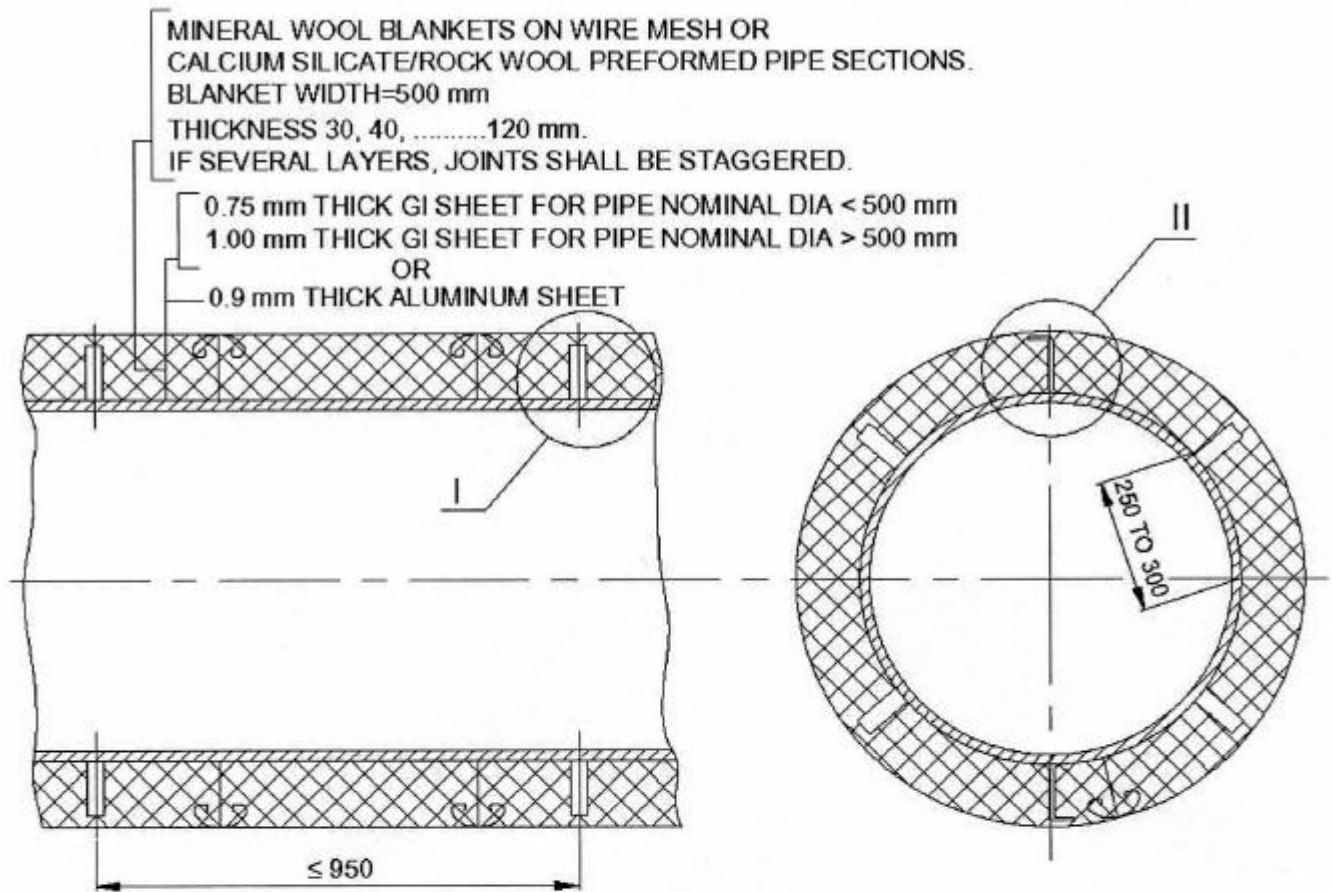


FIG.-5 STANDARD PIPE INSULATION

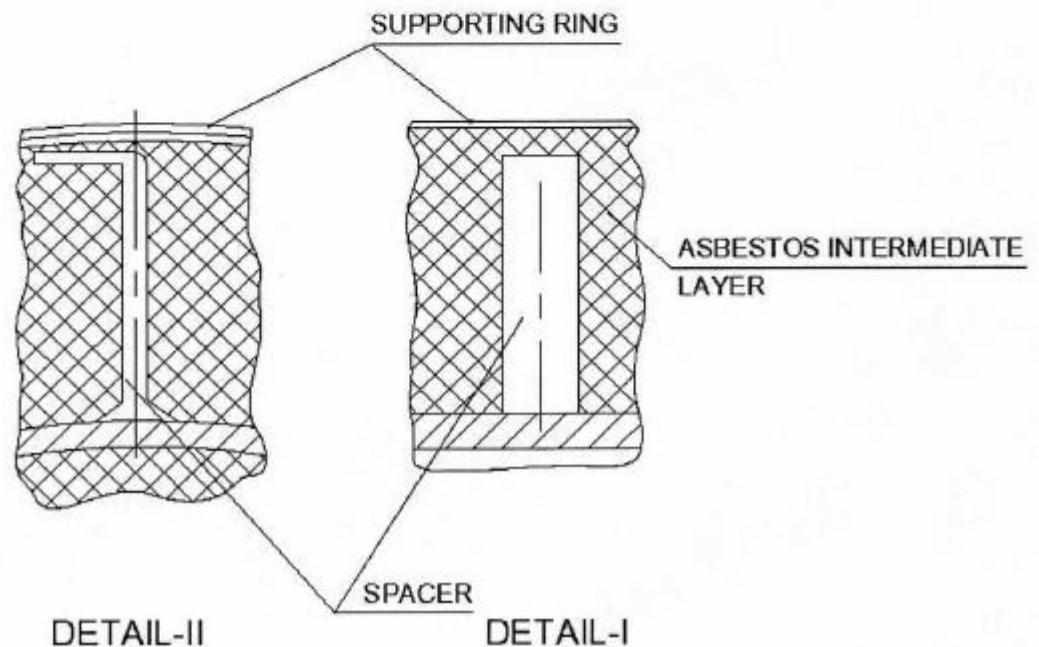


FIGURE-2: PIPING INSULATION

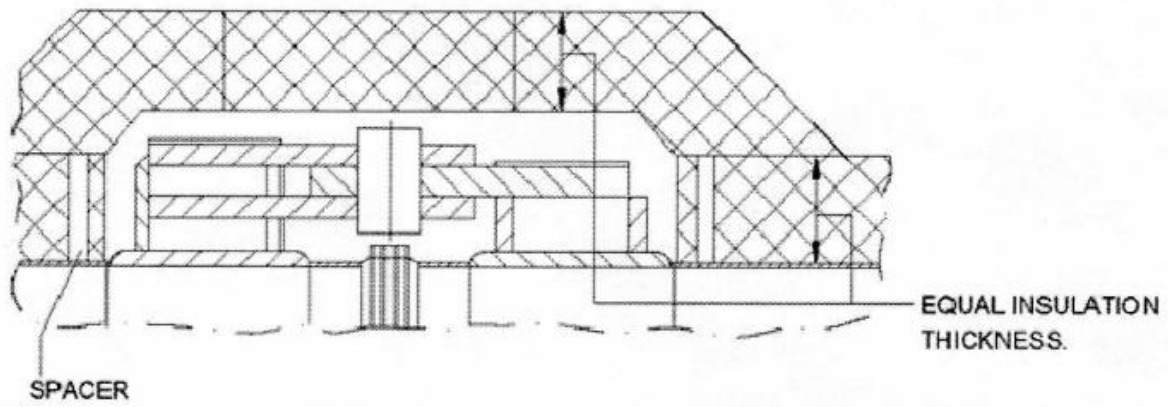


FIGURE-3: THERMAL INSULATION AT EXPANSION JOINTS OF CROSS OVER PIPES

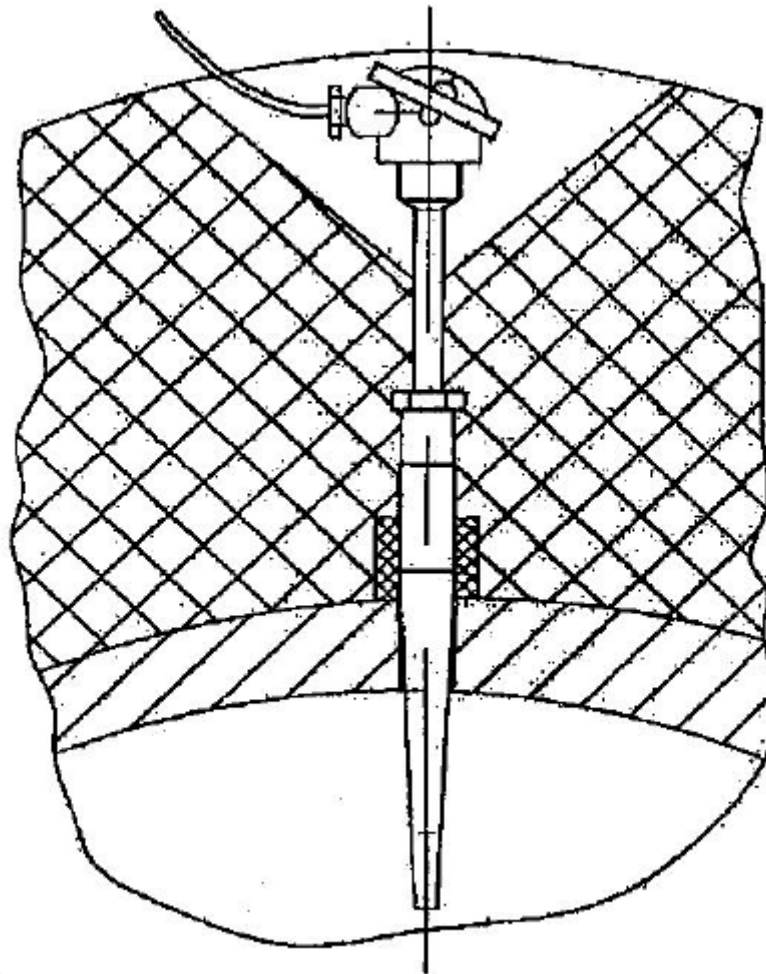


FIGURE-4- ARRANGEMENT FOR THERMOCOUPLE HEAD DURING INSULATION



21201-41121-3 FOR TENDER PURPOSE ONLY ( 195 MW TO 210 MW)

DATA FOR THERMAL INSULATION

QTY.	EQUIPMENT TO BE INSULATED	DRAWING NO.	MAX.TEMP.°C	OUTER DIA	TYPE OF INSULATION SEE NOTE-1	EQUIPMENT CATEGORY
			AT NO LOAD RUN	OF PIPE IN mm		
1	HP OUTER CASING (INLET)	0 10501 12500	535		A	HP TURBINE
1	HP OUTER CASING (EXHAUST)	0 10501 12500	539	434	A	
1	HP SHAFT SEALING (FRONT)	0 10505 12000	480		C	
1	HP SHAFT SEALING (REAR)	0 10506 12000	350	400	C	
1	HP INLET ASSY.	1 10514 10008	535		A	
1	HP EXHAUST ASSEMBLY	1 10515 10016	359	434	B	IP TURBINE
1	IP OUTER CASING	0 10601 12000	325	360	A	
1	IP CASING, FRONT (TS) & IP CASING REAR (GS)	0 10601 12000	292		C	
1	IP INLET INSERT	0 10612 12000	535	500	B	
1	IP EXTRACTION CONN.	0 10613 12000	439	443	A	
2	CROSS AROUND PIPE & ITS SUPPORT	0 10713 12000	325	360	B	A
2	ESV & CV CASING	0 11222 01000	535		A	
2	IV & CV CASING	0 11321 01000	535		A	
2	LP BYPASS VALVE CASING	0 12301 01210	535		A	

BOUNDARY CONDITIONS :

AMBIENT TEMP. : 40°C  
DESIRED COLD FACE TEMP. : 60°C  
WIND VELOCITY : 0.5 m/sec  
EMMISSIVITY OF ALUMINIUM CLADDING : 0.09

210MW MEJIA  
PAD TYPE INSULATION  
Ref.Drawing No>

Sign & Date

Inventory No

NOTES :

1. TYPE OF INSULATION :
- A. DRY TYPE INSULATION (CERAMIC LAYERS) FOR TURBINE & VALVES AS PER ST35011.  
B. ROCK WOOL MATTRESSES (IS : 8183) LAGGED WITH ALUMINIUM SHEET(FOR PIPING).  
C. MICROPOROUS INSULATION (EQUIVALENT TO SILACOPER ULTRA950) LAYER OF EXTREMELY LOW THERMAL CONDUCTIVITY IN THE RANGE OF .018W/mk TO .04 W/mk FOR THE CORRESPONDING TEMPERATURE RANGE OF 50°C TO 800°C. MICROPOROUS INSULATION LAYER SHOULD BE SUPPORTED WITH STAINLESS STEEL SHEET METAL COVER. PROPER INSULATION SHEET SHALL BE PROVIDED IN SUPPORTING STRUCTURES OF STAINLESS STEEL SHEET TO AVOID THE HEAT TRANSFER IN SHEET.

2. TECHNICAL REQUIREMENTS :-

1. THE VENDOR SHALL BE RESPONSIBLE FOR ACHIEVING SPECIFIED COLD FACE TEMPERATURE.
2. BHEL'S SPECIFIC REQUIREMENTS ARE HEAT LOSS & COLD FACE TEMPERATURE TO BE RESTRICTED TO 180Kcal/m²h & 60°C RESPECTIVELY AND THESE REQUIREMENTS ARE TO BE MET BY THE VENDOR BY APPLYING AN OPTIMUM THICKNESS OF INSULATION WHICH IS SOLELY VENDOR'S RESPONSIBILITY.
3. CALCULATION OF THICKNESS OF THERMAL INSULATION IS IN VENDOR'S SCOPE & CORRECTNESS OF THE SAME SHALL BE VENDOR'S SOLE RESPONSIBILITY.BHEL WILL NOT BE RESPONSIBLE FOR ANY DISCREPANCY IN CALCULATION OF THICKNESS OF THERMAL INSULATION FURNISHED COMPLETELY .
4. IT IS TO BE NOTED THAT IF INSPECTION REVELS THAT INSULATION HAS NOT BEEN CARRIED OUT AS PER THE SPECIFICATION OR HEAT LOSS & COLD FACE TEMPERATURE IS COMING MORE THAN 180KCAL/㎡h & 60°C RESPECTIVELY THE SUPPLIERS SHALL EITHER REPLACE THE INSULATION WITH A SUPERIOR MATERIAL OR PROVIDE ADDITIONAL THICKNESS AT HIS COST AT THE DISCRETION OF THE PURCHASER TO MEET THE SPECIFICATION REQUIREMENT
5. THE VENDOR HAS TO SUBMIT THE "K" VALUE TEST CERTIFICATE (NOT MORE THAN 24 MONTHS OLD) FROM A RECOGNIZED TEST HOUSE ALONG WITH INSULATION THICKNESS CALCULATIONS.
6. THE INSULATION THICKNESS ON THE BOTTOM HALVES OF HP TURBINE & IP TURBINE SHALL BE 20% EXTRA AS COMPARED TO TOP HALVES OF THESE TURBINES.
7. INSULATING MATERIAL SHOULD CONFORM TO FOLLOWING STANDARDS -  
CERAMIC INSULATION : IS : 15402 (ST35011)  
MATTRESSES TYPE INSULATION : IS : 8183 CLASS IV  
DENSITY OF MATTRESSES : FOR 400°C AND ABOVE-128 kg/m³  
: FOR BELOW 400°C-100 kg/m
8. VALVE SUPPORTS CLAMPED WITH VALVES SHALL ALSO BE PARTIALLY INSULATED UP TO THE VALVE INSULATION REQUIREMENTS.
9. FOR ADDITIONAL DETAILS REFER "SPECIFICATION FOR THERMAL INSULATION (DRY YPE) OF STEAM TURBINE COMPONENTS FOR ADDITIONAL DETAILS- ST35011"

3. DOCUMENT TO BE SUBMITTED BEFORE ERECTION AT SITE

1. O & M MANUAL WHICH INCLUDES BOM, THICKNESS TABLE, APPLICATION AND REMOVAL PROCEDURE SAFETY AND HAZARDS INSTRUCTIONS ETC.
2. CHECK LIST & RECORD DOCUMENTS INCLUDING THICKNESS, MEASURED TEMPERATURE & VISUAL INSPECTION REPORT IN THE FORM OF LOGSHEET AT VARIOUS LOCATIONS OF DIFFERENT COMPONENTS.

(FOR SAMPLE CHECK LIST & RECORD DATA SHEET REFER ANNEXURE A & B.)

—GMS No.—

C B O M

STATUS OF DRG

AGREED DEPT

NAME

SIGN

DATE

TYPE OF PRODUCT

OR

NAME OF CUSTOMER/PROJECT

STEAM TURBINE

DRN

DINESH GOND

Sd/-

20.11.18

NO. OF VAR

CHD

ALOK K. SINGH

Sd/-

21.11.18

—

APPD

D.K. RAY

Sd/-

21.11.18

73 74

भारत भारती

BHARAT HEAVY ELECTRICALS LTD.

RANIPUR, HARDWAR

DEPT

STE

SCALE

WEIGHT (KG)

REF. TO ASSY. DRG.

ITEM No.

NO. OF ITEMS

CODE

4011

--

—

—

—

75 77

TITLE :

CARD CODE

DRAWING NO.

SHEET No.

No. OF SHEETS

THERMAL INSULATION

3-12114-10212

7

22 23 24

(DRY TYPE-PAD TYPE)

1

1

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FIRST ANGLE PROJECTION

( ALL DIMENSIONS ARE IN mm )

FORM DG 38(B)

3-12114-10249  
DRAWING No.

FOR TENDER PURPOSE ONLY (250 MW/ 270 MW)

## DATA FOR THERMAL INSULATION

QTY.	EQUIPMENT TO BE INSULATED	DRAWING NO.	MAX.TEMP.°C		OUTER DIA OF PIPE IN mm	TYPE OF INSULATION <b>SEE NOTE-1</b>	INSULATION THICKNESS <b>SEE NOTE-2</b>
			MAX.	AT NO LOAD RUN			
1	HP OUTER CASING (INLET)	01050124500	537			A	315
	HP OUTER CASING(EXHAUST)		422	500			315
1	HP SHAFT SEALING COVER (FRONT)	01050524000	490			A	265
1	HP SHAFT SEALING COVER (REAR)	01050624000	360			A	175
2	HP INLET ASSLY.	01051424000	537	537	ø420/ø760	A	315
1	HP EXHAUST ASSLY.	11051546000	422	500	ø725/ø1085	B	250
1	IP OUTER CASING	01060157000	435	463		A	315
2	CROSS AROUND PIPE	01071357000	351		ø926/ø955	B	170
4	CAP SUPPORT	01071357000	325			B	170
2	ESV & CV CASING	01122224901	537			A	315
2	IV & CV CASING (REF.)	01132157000	535			A	315
2	LP BYPASS VALVE CASING	PR ITEM(REF. 103.231.531	535			A	315

AMBIENT TEMP. : 50°C  
DESIRED COLD FACE TEMP. : 60°C  
WIND VELOCITY : 1.0 m/sec  
EMISSION OF ALUMINIUM CLADDING : 0.11  
(DATA PROVIDED BY CUSTOMER IS 0.11)

GRADE OF UNTOL. DIM  
M/CG. AA0230208 m  
WELDING CLASS 'B' OF AA0621104  
GAS CUTTING TABLE 3 OF AA0621101

GMS No. / C B O M			STATUS OF DRG U
AGREED DEPT	NAME	SIGN	DATE
REV 01	DATE 29.1.08	ALTERED RPS	
		CHECKED	
CAP DRG. NO. CHANGED TO 0-10713-57000 ESV & CV/ IV & CV CASING AND LP BYPASS DRG CHANGED.			

### NOTES :

#### 1. TYPE OF INSULATION :

- A. DRY TYPE INSULATION (CERAMIC LAYERS) FOR TURBINE AND VALVES AS PER IS 15402.  
B. ROCK WOOL MATTRESSES (IS:8183) LAGGED WITH ALUMINIUM SHEET (FOR PIPING).

#### 2. INSULATION THICKNESS :

- A. THE VENDOR SHALL BE RESPONSIBLE FOR ACHIEVING SPECIFIED COLD FACE TEMPERATURE.  
B. DESIGN OF INSULATION THICKNESS TO ACHIEVE SPECIFIED COLD FACE TEMPERATURE AND TO RESTRICT HEAT LOSS TO 180 kCal/m<sup>2</sup>h IS IN THE SCOPE OF VENDOR. INSULATION THICKNESS GIVEN IN THE TABLE ARE SUGGESTIVE. VENDOR IS FREE TO INCREASE THE INSULATION THICKNESS, IF REQUIRED. THE VENDOR HAS TO SUBMIT THE "k" VALUE TEST CERTIFICATE (NOT MORE THAN 24 MONTHS OLD) FROM A RECOGNIZED TEST HOUSE ALONG WITH INSULATION THICKNESS CALCULATIONS.  
C. THE INSULATION THICKNESS ON THE BOTTOM HALVES OF HP TURBINE & IP TURBINE SHALL BE 20% EXTRA AS COMPARED TO TOP HALVES OF THESE TURBINES.  
3. INSULATING MATERIAL SHOULD CONFORM TO IS:14164 AND FOLLOWING STANDARDS –  
DRY TYPE INSULATION : IS : 15402  
MATTRESSES TYPE INSULATION : IS : 8183 CLASS IV  
DENSITY OF MATTRESSES : FOR 400°C AND ABOVE–128 kg/m<sup>3</sup>  
: FOR BELOW 400°C–100 kg/m<sup>3</sup>  
ALUMINIUM SHEET : IS : 737; GR. 19000, ANNEALED.  
4. VALVE SUPPORTS CLAMPED WITH VALVES SHALL ALSO BE PARTIALLY INSULATED UP TO THE VALVE INSULATION REQUIREMENTS.  
6. FOR ADDITIONAL DETAILS REFER "SPECIFICATION FOR THERMAL INSULATION OF STEAM TURBINE COMPONENTS–"TDC-12114-10249"

TYPE OF PRODUCT

OR

NAME OF CUSTOMER/PROJECT

STEAM TURBINE

FOR TENDER PURPOSE ONLY (250 MW/270 MW)



**BHARAT HEAVY ELECTRICALS LTD.**  
**RANIPUR, HARDWAR**

	NAME	SIGN	DATE	NO. OF VAR
DRN	MANOJ	sd/-	8.10.07	
CHD	RPS	sd/-	8.10.07	
APPD	A.SHAH	sd/-	8.10.07	

DEPT STE	SCALE	WEIGHT (KG)	REF. TO ASSY. DRG.	ITEM No.	NO. OF ITEMS
CODE 4011	---	---	-----	---	75 77
TITLE : <b>THERMAL INSULATION</b>			CARD CODE	DRAWING NO. <b>3-12114-10249</b>	
				7 22 23 24	
			SHEET No.	1	No. OF SHEETS 1

SIZE A3



**FOR TENDER PURPOSE ONLY ( 500 MW/525 MW )**

### DATA FOR THERMAL INSULATION

QTY.	EQUIPMENT TO BE INSULATED	DRAWING NO.	MAX.TEMP.*C		OUTER DIA OF PIPE IN mm	TYPE OF INSULATION SEE NOTE-1	EQUIPMENT CATEGORY
			MAX.	AT NO LOAD RUN			
1	HP OUTER CASING (INLET)	01050109500	538			A	HP TURBINE
	HP OUTER CASING (EXHAUST)		360	500			
	HP OUTER END (REAR)		360			C	
1	HP SHAFT SEALING COVER (FRONT)	01050509000	455			C	
2	HP INLET ASSLY.	11051409000	537	537		A	
1	HP EXHAUST ASSLY.	21051541000	340	500		B	
1	IP OUTER CASING	01060136000	324			A	IP TURBINE
2	IP OUTER CASING (INLET AREA)		565			A	
4	IP OUTER CASING (EXTRACTIONS)		442			A	
1	CASING FRONT (TS) & REAR END (GS)		324			C	
2	IP INLET ASSLY.	01061236000	565			B	COP
2	CROSS AROUND PIPE	11071345000	325		ø850 ø1300	B	
4	CAP SUPPORT	11071345000	325			B	VALVES
2	ESV & CV CASING	01122205000	538			A	
2	IV & CV CASING	01132127000	565			A	
2	LP BYPASS VALVE CASING	01230325000	565			A	

AMBIENT TEMPERATURE : 45°C  
 DESIRED COLD FACE TEMPERATURE : 60°C  
 WIND VELOCITY : 0.25 m/sec  
 EMISSIVITY OF CLADDING : 0.2  
 MATERIAL CODE : W90312114672

—GMS No./— C B O M— STATUS OF DRG U

AGREED DEPT	NAME	SIGN	DATE

GRADE OF UNTOL. DIM

M/CG.— AA0230208 m

WELDING—CLASS 'B' OF AA0621104

GAS CUTTING—TABLE 3 OF AA0621101

REV	DATE	ALTERED	REV	DATE	ALTERED	REV	DATE	ALTERED
		CHECKED			CHECKED			CHECKED

#### NOTES :

#### 1. TYPE OF INSULATION :

- A. DRY TYPE INSULATION (CERAMIC LAYERS) FOR TURBINE & VALVES AS PER ST35011.  
 B. ROCK WOOL MATTRESSES (IS : 8183) LAGGED WITH ALUMINIUM SHEET (FOR PIPING).  
 C. MICROPOROUS INSULATION (EQUIVALENT TO SILACOPER ULTRA950) LAYER OF EXTREMELY LOW THERMAL CONDUCTIVITY IN THE RANGE OF .018W/mK TO .04 W/mK FOR THE CORRESPONDING TEMPERATURE RANGE OF 50°C TO 800°C. MICROPOROUS INSULATION LAYER SHOULD BE SUPPORTED WITH STAINLESS STEEL SHEET METAL COVER. PROPER INSULATION SHEET SHALL BE PROVIDED IN SUPPORTING STRUCTURES OF STAINLESS STEEL SHEET TO AVOID THE HEAT TRANSFER IN SHEET.

#### TECHNICAL REQUIREMENTS :-

- THE VENDOR SHALL BE RESPONSIBLE FOR ACHIEVING SPECIFIED COLD FACE TEMPERATURE.
- BHEL'S SPECIFIC REQUIREMENTS ARE HEAT LOSS & COLD FACE TEMPERATURE TO BE RESTRICTED TO 180 KCal/m<sup>2</sup>h & 60°C RESPECTIVELY AND THESE REQUIREMENTS ARE TO BE MET BY THE VENDOR BY APPLYING AN OPTIMUM THICKNESS OF INSULATION WHICH IS SOLELY VENDOR'S RESPONSIBILITY.
- CALCULATION OF THICKNESS OF THERMAL INSULATION IS IN VENDOR'S SCOPE & CORRECTNESS OF THE SAME SHALL BE VENDOR'S SOLE RESPONSIBILITY. BHEL WILL NOT BE RESPONSIBLE FOR ANY DISCREPANCY IN CALCULATION OF THICKNESS OF THERMAL INSULATION FURNISHED BY VENDOR.
- IT IS TO BE NOTED THAT IF INSPECTION REVEALS THAT INSULATION HAS NOT BEEN CARRIED OUT AS PER THE SPECIFICATION OR HEAT LOSS & COLD FACE TEMPERATURE IS COMING MORE THAN 180KCAL/m<sup>2</sup>h & 60°C RESPECTIVELY THE SUPPLIERS SHALL EITHER REPLACE THE INSULATION WITH A SUPERIOR MATERIAL OR PROVIDE ADDITIONAL THICKNESS AT HIS COST AT THE DISCRETION OF THE PURCHASER TO MEET THE SPECIFICATION REQUIREMENT COMPLETELY.
- THE VENDOR HAS TO SUBMIT THE "K" VALUE TEST CERTIFICATE (NOT MORE THAN 24 MONTHS OLD) FROM A RECOGNIZED TEST HOUSE ALONG WITH INSULATION THICKNESS CALCULATIONS.
- THE INSULATION THICKNESS ON THE BOTTOM HALVES OF HP TURBINE & IP TURBINE SHALL BE 20% EXTRA AS COMPARED TO TOP HALVES OF THESE TURBINES.
- INSULATING MATERIAL SHOULD CONFORM TO FOLLOWING STANDARDS –  
 CERAMIC INSULATION : IS : 15402 (ST35011)  
 MATTRESSES TYPE INSULATION : IS : 8183 CLASS IV  
 DENSITY OF MATTRESSES : FOR 400°C AND ABOVE—128 kg/m<sup>3</sup>  
 : FOR BELOW 400°C—100 kg/m<sup>3</sup>  
 ALUMINIUM SHEET : IS : 737; GR. 19000, ANNEALED.
- VALVE SUPPORTS CLAMPED WITH VALVES SHALL ALSO BE PARTIALLY INSULATED UP TO THE VALVE INSULATION REQUIREMENTS.
- FOR ADDITIONAL DETAILS REFER "SPECIFICATION FOR THERMAL INSULATION (DRY TYPE) OF STEAM TURBINE COMPONENTS FOR ADDITIONAL DETAILS— ST35011

#### 3. DOCUMENT TO BE SUBMITTED BEFORE ERECTION AT SITE

- O & M MANUAL WHICH INCLUDES BOM, THICKNESS TABLE, APPLICATION AND REMOVAL PROCEDURE SAFETY AND HAZARDS INSTRUCTIONS ETC.

- CHECK LIST & RECORD DOCUMENTS INCLUDING THICKNESS, MEASURED TEMPERATURE & VISUAL INSPECTION REPORT IN THE FORM OF LOGSHEET AT VARIOUS LOCATIONS OF DIFFERENT COMPONENTS.  
(FOR SAMPLE CHECK LIST & RECORD DATA SHEET REFER ANNEXURE A & B.)

TYPE OF PRODUCT **STEAM TURBINE**

OR **FOR TENDER PURPOSE ( 500 MW/525 MW )**

NAME	SIGN	DATE	NO. OF VAR
DRN ANOOP	Sd/-	17.06.14	
CHD PRADEEP	Sd/-	17.06.14	
APPD D.K.RAY	Sd/-	17.06.14	73 74

DEPT	STE	SCALE	WEIGHT (KG)	REF. TO ASSY. DRG.	ITEM No.	NO. OF ITEMS
CODE 4011		--				75 77

TITLE :	CARD CODE	DRAWING NO.	SHEET No.	No. OF SHEETS
<b>THERMAL INSULATION</b>	7	<b>3-12114-10604</b>	1	1

Annexure –BOCWSpecific clause wrt BOCW Act & Cess Act

1. It shall be the sole responsibility of the contractor as employer to ensure compliance of all the statutory obligations under the Building and other Construction Workers' (Regulation of Employment and Conditions of Service) Act, 1996 and the Building and other Construction Workers' Welfare Cess Act, 1996 and the rules made thereunder.
2. It shall be sole responsibility of the contractor engaging Building Workers in connection with the building or other construction works in the capacity of employer to apply and obtain registration certificate specifying the scope of work under the relevant provisions of the Building and Other Construction Workers' (Regulation of Employment and Conditions of Service) Act, 1996 from the appropriate Authorities.
3. It shall be responsibility of the contractor to furnish a copy of such Registration Certificate within a period of one month from the date of commencement of Work.
4. It is responsibility of the contractor to register under the Building and other Construction Workers' Welfare Cess Act, 1996 and deposit the required Cess for the purposes of the Building and other Construction Workers' (Regulation of Employment and Conditions of Service) Act, 1996 at such rate as the Central Government may , by notification in the Official Gazette, from time to time specify. However, before registering and deposit of Cess under the Building and other Construction Workers' Welfare Cess Act, 1996, the contractor will seek written prior approval from the Construction Manager.
5. In case where the contractor has been accorded written approval by the Construction Manager and the contractor is required to furnish information in Form I and deposit the Cess under the Building and other Construction Workers' Welfare Cess Act, 1996, fails to do so, BHEL reserves right to impose penalty at the rate of 30% of Cess Amount.
6. It shall be sole responsibility of the contractor as employer to get registered every Building Worker, who is between the age of 18 to 60 years of age and who has been engaged in any building or other construction work for not less than ninety days during the preceding twelve months as Beneficiary under the Building and other Construction Workers' (Regulation of Employment and Conditions of Service) Act, 1996.
7. It shall be sole responsibility of the contractor as employer to maintain all the registers, records, notices and submit returns under the Building and other Construction Workers' (Regulation of Employment and Conditions of Service) Act, 1996 and the Building and other Construction Workers' Welfare Cess Act, 1996 and the rules made thereunder.
8. It shall be sole responsibility of the contractor as employer to provide notice of poisoning or occupation notifiable diseases, to report of accident and dangerous occurrences to the concerned authorities under the Building and other Construction Workers' (Regulation of Employment and Conditions of Service) Act, 1996 and the rules made thereunder and to make payment of all statutory payments & compensation under the Employees' Compensation Act, 1923.

9. It shall be responsibility of the Contractor to furnish BHEL on monthly basis, Receipts/ Challans towards Deposit of the Cess under the Building and other Construction Workers' Welfare Cess Act, 1996 and the rules made thereunder along with following statistics :
  - (i) Number of Building Workers employed during preceding one month.
  - (ii) Number of Building workers registered as Beneficiary during preceding one month.
  - (iii) Disbursement of Wages made to the Building Workers for preceding wage month.
  - (iv) Remittance of Contribution of Beneficiaries made during the preceding month
10. BHEL shall reimburse the contractor the Cess amount deposited for the purposes of the Building and other Construction Workers' (Regulation of Employment and Conditions of Service) Act, 1996 under the Building and other Construction Workers' Welfare Cess Act, 1996 and the rules made thereunder. However, BHEL shall not reimburse the Fee paid towards the registration of establishment, fees paid towards registration of Beneficiaries and Contribution of Beneficiaries remitted.
11. It shall be responsibility of the Building Worker engaged by the Contractor and registered as a beneficiary under the Building and other Construction Workers' (Regulation of Employment and Conditions of Service) Act, 1996 to contribute to the Fund at such rate per mensem as may be specified by the State government by notification in the Official Gazette. Where such beneficiary authorizes the contractor being his employer to deduct his contribution from his monthly wages and to remit the same, the contractor shall remit such contribution to the Building and other construction Workers' Welfare Board in such manner as may be directed by the Board , within the fifteen days from such deduction.
12. If any point of time during the contract period, non-compliance of the provisions of the Building and other Construction Workers' (Regulation of Employment and Conditions of Service) Act, 1996 and the Building and other Construction Workers' Welfare Cess Act, 1996 and the rules made thereunder is observed, BHEL reserves the right to withhold a reasonable amount from the payables to discharge any obligations on behalf of Contractors. The reasonable amount shall be decided by the Construction Manager in consultation with Resident Accounts Officer & Head HR and shall be final.
13. The contractor shall declare to undertake any liability or claim arising out of employment of building workers and shall indemnify BHEL from all consequences / liabilities / penalties in case of non compliance of the provisions of the Building and other Construction Workers' (Regulation of Employment and Conditions of Service) Act, 1996 and the Building and other Construction Workers' Welfare Cess Act, 1996 and the rules made thereunder.

**Annexure-II**

**LIST OF T&P AND CONSUMABLES TO BE PROVIDED / ARRANGED BY THE SUBCONTRACTOR:-**

- 1) DRILLING MACHINE
- 2) SHEET ROLLING UNIT AS REQUIRED
- 3) OTHER CONSUMABLES AS MAY BE REQUIRED TO COMPLETE THE INSULATION WORK IN ALL RESPECT AS MENTIONED IN THE SCOPE SPECIFICATION.
- 4) BIDDER HAS TO ARRANGE THE ROAD PERMIT AT THEIR OWN FOR TRANSPORTATION OF THEIR INSULATING MAERIALS AND MACHINE.

THE ABOVE LIST OF T&P'S AND CONSUMABLES ARE NOT EXHAUSTIVE BUT INDICATIVE ONLY .ANY SHORTAGE MAY BE MADE UP BY THE VENDOR AS MAY BE REQUIRED FOR SUCCESSFUL COMPLETION OF THE JOB.

Annexure-III

Bidder will have to comply all the safety Aspects as mentioned below:-

Clause no	Requirement
1.0	The contractor/ agency shall comply with all the requirements of the rules framed by End Customer relating to Safety, provisions of Factories Act, 1948 State Factories Rules as amended time to time, and all other statutory requirements as applicable to his work, like Indian Electricity Act, ESI Act (Wherever the facility is available), PF Act, Workmen's Compensation Act, Motor Vehicles Act etc. He shall ensure compliance of all the responsibilities of the Occupier and Factory Manager as mentioned in the Factories Act in his place of work.
2.0	Additionally, the contractor shall comply with all the Rules framed by End Customer relating to Safety of all working in the work place, and ensure compliance with all types of permit to work. He shall also comply with all directions given by the Engineer In-charge or Head of Project Safety Dept. or their nominated representative with specific regard to Safety and Health of the workers.
2.1	The Contractor/ Agency shall frame and implement it's Safety and Health Policy which shall contain all the provisions relating to compliance of Customer Safety/ Health and Safety Policy.
2.2	The Contractor shall appoint a full time Engineer with either Degree in Engg. With not less than 1 years of experience or Diploma in Engg. With not less than 2 years of experience to supervise the work for each 50 workers/ staff or a part thereof.
2.3	Where the work is of hazardous in nature the supervisor shall be appointed for first 20 workers also. If at any time the contractor employs more than 150 workers including staff, he shall appoint from the start of work itself a Safety Officer, with the qualification as mentioned in the Factories Act/ State Factories Rules applicable to the state, in which the work is carried out. The Safety Officer of the Contractor shall discharge only those responsibilities as mentioned in statutory rules for the Safety Officers.
2.4	<p>Before Start of work by the Contractor, The Contractor shall sign an MOU with Head of Project Safety Deptt. and Engineer In charge of the contract, wherein he shall submit following documents also:</p> <ol style="list-style-type: none"> <li>1) Safety Plan of the Contractor for his own as well as his sub- contractors;</li> <li>2) Methodology (Including responsibility) of accident reporting to Customer authorities and Statutory authorities, conduct of enquiries, and implementation of corrective measures.</li> <li>3) The Contractor shall get all his Lifting equipment and tackles thoroughly examined / tested through a Competent Persons, approved by the local state government, where the work is being undertaken.</li> <li>4) Before Start of work by the Contractor, the Contractor shall present his Personal Protective equipment to Head of Safety Dept, and Engineer In charge, for inspection, who will inspect these equipment for necessary legal compliance. Only after this inspection and clearance in writing, above referred items shall be used or issued by the Contractor.</li> <li>5) Before using the lifting equipment and other safety related items, the contractor shall present these to Head of Safety Dept, and Engineer In charge, for inspection, who will inspect these equipment for its safety. Only after their clearance in writing, these items shall be used by the Contractor. However, all liabilities for statutory violations for these equipment shall be of the Contractor.</li> <li>f) Before Start of the contract, the Contractor shall provide appropriate Safety Training to all his workers of at least one full day duration, through an external agency, with faculty having the qualification as mentioned in the Factories Act/State Rules for the Safety Officer, and having minimum 5 years of power plant site exposure, with regard to implementing safety provisions.. <i>Only those who are trained, as above, shall be allowed for issue of Gate Pass.</i></li> <li>1. Before Start of work by the Contractor, the Contractor shall get occupational health examination of his workers, working/ to work in hazardous activities through a Medical Practitioner, approved by the State Government, and subsequently as mentioned in the state factories rules.</li> <li>2. In case any accident occurs and Customer Officials investigate it, the Contractor shall provide full cooperation in conduct of inquiry, conducted by the Customer officials, in case of any accident at his workplace or to his worker.</li> <li>j) Wherever there is probability of fall of worker/ material from more than 8 Ft, to prevent his fall, the contractor shall provide Safety Harness to all his workers and ensure its use. He shall also provide safety net below such work place.</li> </ol>

	<p>k) He shall ensure compliance of all provisions of Permit for working at height devised by Customer. If the fall arrester is provided by Customer, the Contractor shall ensure its right use.</p> <p>The contractor shall use only double insulated power tools shall be used at the construction place. He shall only use 3 Core cable for Single phase Supply and 4 Core Cable for 3 Phase supply. For all electrical connections appropriate ELCB shall be used by the Contractor.</p> <p>l) In no case any electric supply shall be taken through loose wire like supply without Plug Top. m) No electrical repair work shall be carried out on any live equipment. It shall be done only by the Electrician having either ITI qualification or Wireman's certificate issued by the State Government.</p>
3.0	<p>In case any accident occurs during the construction or erection work or other associated activities undertaken by the Contractor In-charge, it shall be the responsibility of the Contractor to promptly inform the same to the Engineer In charge, Head of Safety Dept. in the prescribed form (Which can be collected by the Contractor/ Agency from the Project Safety Dept.), and also to all the statutory authorities envisaged under the applicable laws.</p> <p>The Engineer In-charge as well as Head of Safety Dept. or their nominated representative shall have the right at his sole discretion to stop the work, if in his opinion the work is being carried out in such a way that it may cause accidents and endanger the safety of the persons and / or property, and / or equipment. In such cases, the contractor shall be informed in writing, and the contractor shall immediately stop the work, and comply to remove shortcomings promptly.</p>
4.0	<p>If the Contractor does not provide safety equipment to his workers or fails to discharge of his other responsibilities, statutory or otherwise, as mentioned above, Customer may provide the same and recover the expenditure along with overhead cost etc. However, this does not absolve the contractor from his responsibility as mentioned in the contract.</p>
5.0	<p>If the Contractor fails complying with the provisions as mentioned above, the Contractor shall pay at the rate of Rs. 2,000/- per day or part thereof for contract value exceeding Rupees Twenty Lakhs, and, at the rate of Rs 500/- per day for the contract value less than Rs. 20 Lakhs till the instructions are complied with and so certified by the Engineer In-charge and Head of Project Safety Dept.</p> <p>If it is not paid by the Contractor, it shall be deducted from his next bill.</p>
6.0	<p>In case of injury, the compensation as calculated/ directed by the State Government Authorities shall be paid by the Contractor to the Victim/ his heir, in accordance with the statutory provisions.</p>
7.0	<p>Job safety analysis is to be carried out before start of any work.</p>



## SPECIAL NOTE TO BIDDERS

01. LUMPSUM PRICE:

The bidders should quote lump sum price for the total scope for each job of work mentioned in ANNEXURE – I.

02. Successful bidder has to submit the following documents on and during execution of each job:

- a) Labour license for the subject work.
- b) Insurance coverage of the total workers engaged for the job.
- c) Monthly wage certificate of the total work force.
- d) EPF for the workers engaged.
- e) Submit safety plan.
- f) Submit bar chart / job completion schedule as & when asked for.
- g) No due certificate from customer personnel dept.

Successful bidder has to obtain “No Objection Certificates” from concerned depts. and P&A dept. of customer.

The scope under the specification (as per Annexure –I of scope of work) is not exhaustive but indicative only. However, any activity covered under the normal course of insulation works at proposed site shall be deemed to be within the scope.

Transportation of machine, materials, T & Ps including Special T & Ps, lifting tackles etc from customer stores to work spot as per requirement along with material reconciliation and also transportation of the T&P's / Instruments etc. from BHEL-KOL HQ / OTHER Eastern Region Sites to site & back, is included in the scope of the vendor at their own cost. In case any part of the job is not carried out, a deduction will be effected as per percentage shown against those items.

03. Any related work not detailed under the above schedule of work but found essential for completion of each job has to be executed by vendor free of cost.

04. The vendor has to strictly comply with the SAFETY RULES & procedures of the customer. It is suggested that the prospective bidders may visit & contact customer to know further details of their safety rules before quoting their price.

05. Disposal of scrap/ waste/ insulation generated while overhauling work to be disposed off at predetermined place as indicated by customer including transportation of the waste.

06. Defect liability period (for individual job) against bad workmanship shall be 6 (six) months from the date of commissioning/synchronization of the unit. During this period if any re work are required to be carried out, then the same are to be done by the successful bidder. The successful bidder shall be responsible for timely execution and quality of overhauling job and stand guarantee against any defect due to bad workmanship. Once defect is registered within defect liability period, the successful bidder has to rectify the same free of cost during next available opportunity.

07. **Security Deposit:**

**7.1 Security Deposit may be deducted @ 5% of Gross Billing amount for individual job and shall be collected/adjusted prior to passing bill for such individual job.**

7.2 If the value of the work done at any time exceeds the accepted agreement value, the Security Deposit shall be correspondingly enhanced and the extra Security Deposit shall immediately be deposited by the contractor or recovered from payments due to him.

7.3 BHEL reserves the right of forfeiture of Security Deposit in addition to other claim and penalties in the event of the contractor's failure to fulfil any of the contractual obligations including statutory or in the event of termination of contract as per terms and conditions of contract.

#### 7.4 Return of Security Deposit:

If the contractor duly performs and completes the contract in all respects to the entire satisfaction of BHEL and presents an absolute "No Demand Certificate" in the prescribed form and return properties belonging to BHEL, lent or hired by him for carrying out the said works, The security deposit (for the particular job) will be released to the contractor after deducting all costs or expenses or other contracts entered into with the contractor, only after release of final payment of individual job and after successful completion of defect liability period of six (06) months for the particular job and this shall be read in conjunction with clause no. 1.8.9 of GENERAL & SPECIAL CONDITION OF CONTRACT (FOR SERVICE JOB). In no case Security Deposit can be released before settling all claims of BHEL on contractor under this contract.

#### 08. Terms of Payment (EACH JOB):

- a) 80% of the contract value plus BOCW cess (as applicable for each job) but excluding the amount of GST shall be payable against submission of three progressive running bills.
  - i) 30% shall be payable after supply of material & mobilization of manpower at site.
  - ii) 20% shall be payable on progressive preparatory works.
  - iii) 30 % shall be payable after completion of application works.
- Each of the billed amount shall correspond to the quantum of job actually completed and to that effect the claim can be preferred based on percentage allotments (to be given in the work order) made. This, however, has to be certified by the resident manager / engineer of the site.
- b) 10% of contract value plus BOCW cess (as applicable) but excluding the amount of GST shall be payable on submission of statutory documents & 'no due certificate from customer's personnel department'.
  - c) Balance 10% of contract value plus BOCW cess (as applicable) but excluding the amount of GST shall be payable after synchronization of the unit and on receipt of final payment by BHEL from Customer & after confirmation of full GST Credit to BHEL. Any Interest if levied thereon for reasons elaborated in Tax clause of the tender which is not attributable to BHEL will be recovered for the Final Payment / Retention.  
BHEL at its discretion may further split up the percentage break up given in billing schedule and effect payment to suit site condition, cash flow requirement etc. according to progress of work.
  - d) Applicable GST shall be released to the vendor upon compliance of following: -
    - i. Vendor declaring such Invoice in his GSTR-1
    - ii. Material Receipt Certificate (MRC)/ Engineering Protocol
    - iii. Confirmation of payment of GST thereon by vendor on GSTN Portal
    - iv. Above is subject to receipt of goods / service and tax invoice thereof along with vendor declaring invoice in his return and paying GST within timeline prescribed for availing ITC by BHEL.

#### 09. **EXTRA WORK RATES CURRENTLY BEING ADMITTED BY BHEL, PS-ER [Page-10, SPECIFIC TERMS AND CONDITIONS FOR SERVICES JOBS, clause no. A (a) & A (b)] shall be read as below:-**

- a) Average single man hour rate including overtime if any, supervision, T&P, other site expenses and incidentals including consumables as certified by site-in-charge of BHEL.  
Rs 60/- per man hour (Rupees sixty per man hour only)
- b) Same as above (a) but excluding supply of consumables by vendor. Rs 40/- per man hour (Rupees forty per man hour only)

## PREAMBLE

### FOR PRICE SCHEDULE

SL. NO.	ITEM DESCRIPTION
01	<b>ITEM-1 [250 MW / 270 MW RATING (TYPE-1)]:</b> “SUPPLY & APPLICATION OF THERMAL DRY TYPE INSULATION OF TURBINE, VALVES, STRAINERS, ASSOCIATED PIPELINES ETC. AS PER ANNEXURE-I OF UNIT RATING 250 MW/ 270 MW (KWU) SETS ”.
02	<b>ITEM-2 [195 MW / 200 MW / 210 MW RATING (TYPE-2)]:</b> “SUPPLY & APPLICATION OF THERMAL DRY TYPE INSULATION OF TURBINE, VALVES, STRAINERS, ASSOCIATED PIPELINES ETC. AS PER ANNEXURE-I OF UNIT RATING 195 MW / 200 MW /210 MW (KWU) SETS”.
03	<b>ITEM-3 [500 MW / 525 MW RATING]:</b> “SUPPLY & APPLICATION OF THERMAL DRY TYPE INSULATION OF TURBINE, VALVES, STRAINERS, ASSOCIATED PIPELINES ETC. AS PER ANNEXURE-I OF UNIT RATING 500 MW / 525 MW (KWU) SETS”.

Bidders to note that price to be quoted in separate price schedule format for “250 MW / 270 MW rating” and “500 MW / 525 MW rating”. However, bidder may quote for either “250 MW / 270 MW rating” or “500 MW / 525 MW rating” or for both “250 MW / 270 MW rating” and “500 MW / 525 MW rating”.

**Note for item 1 & 2:** bidder has to quote unit lump sum and firm price (in INR) including all taxes & duties, but excluding GST & BOCW Cess (in figure) for item 1 [250 MW / 270 MW rating (type-1)] only.

**L1 bidder for item 1 [250 MW / 270 MW rating (type-1)] will automatically stand L1 for item 2 [195 MW / 200 MW / 210 MW rating (type-2)].**

Unit lump sum and firm price (in INR) including all taxes & duties, but excluding GST & BOCW Cess (in figure) for item 2 [195 MW / 200 MW / 210 MW rating (type-2)] shall be considered as [0.90 x unit lump sum and firm price (in INR) including all taxes & duties, but excluding GST & BOCW Cess (in figure) for item 1 [250 MW / 270 MW rating (type-1)]].

Evaluation shall be done separately for “250 MW / 270 MW rating” and “500 MW / 525 MW rating”.

PRICE SCHEDULE (UNPRICED)

PLEASE REFER

E-PROCUREMENT PORTAL <https://bhel.abcprocure.com>

**PRICE SCHEDULE**

**PLEASE REFER**

**E-PROCUREMENT PORTAL <https://bhel.abcprocure.com>**

**ANNEXURE-A**

<b>1.0</b>	<b><u>Suspension of Business dealings with Suppliers/ Contractors</u></b>
<b>1.1</b>	BHEL reserves the right to take action against Suppliers/ Contractors who fail to perform or indulge in malpractices, by suspending business dealings with them.
<b>1.2</b>	<p>Suspension of business dealings with Suppliers/ Contractors could be in the form of following: --</p> <p><b>a) Hold within the unit for specific item(s)/ material category(ies)/ type of work(s) for one year.</b></p> <p><b>b) Hold within the unit for all item(s)/ material category(ies)/ type of work(s) for two years</b></p> <p><b>c) Banning across BHEL for all items/ material category(ies)/ type of work(s) for three years.</b></p> <p>The Supplier may be either put on hold or banned, as detailed hereinafter on the basis of one or more of the category wise reasons as enumerated hereunder.</p>
<b>1.3</b>	<p><b>1.3.1 Hold within the unit for a specific item(s)/ material category(ies)/ type of work(s) shall be imposed in the following cases, if</b></p> <p>i) In the last three consecutive supplies of a specific material category, average quality rating, as provided in the supplier performance rating (SPR) as per SEARP, falls below 80% of the quality weightage. This is irrespective of supplies against PO(s) having single/ multiple delivery schedules.</p> <p>Note: Not applicable in cases for erection works of Power Sector Regions, where separate guidelines for evaluation of capacity of bidders is being followed.</p> <p>ii) Two consecutive delays, for reasons of delay attributed to the Supplier, in execution of the contracts where delay occurred is such that</p> <p>a) prescribed maximum LD time limits of the contracts is exceeded or</p> <p>b) delay period has equaled/ exceeded half the original delivery period specified in the contracts whichever among the above is earlier.</p> <p>iii)</p> <p>a) Overall SPR (Supplier Performance Rating) in that particular Unit in line with SEARP falls below 60% of the specific material category.</p> <p>b) Bids of contractors (in PS-MSX portal) shall not be considered (if average score of last six months falls 60% or below as per guidelines for evaluation of capacity of bidders formula).</p> <p>Note: – for (b), No specific period of hold shall be applicable.</p> <p>iv) Supplier works are under strike/ lockout for a period of more than three months.</p>
<b>1.3.1</b>	



1.3.2	<p><b>Hold within the unit for all item(s)/material category(ies)/ type of work(s) shall be put in the following cases, if</b></p> <ul style="list-style-type: none"> <li>i) Supplier tampers with tendering procedure affecting ordering process.</li> <li>ii) Supplier has misused BHEL documents/ drawings/ technical information or has breached the confidentiality agreement with BHEL.</li> <li>iii) after placement of order, Supplier fails to execute the contract.</li> <li>iv) within warranty period as per contract, Supplier continues to supply low/ less/ non-performing equipment/ services, repetitive failures, remains non-responsive.</li> <li>v) Wherever risk purchase clause (amounting to more than 5% of contract value) has been invoked.</li> </ul>
1.4	<b>Banning across BHEL shall be imposed in following cases, if</b>
1.4.1	<ul style="list-style-type: none"> <li>i) After price bid opening but before placement of order, Supplier withdraws his offer or varies it in any manner within the validity period.</li> <li>ii) "Supplier is found to be responsible for submitting fake/ false/ forged documents, certificates, or information or misrepresentation/ wilful suppression of facts, or has resorted to unethical, illegal means or has forged BHEL documents, certificates etc. for securing business, meeting PQR or for enlistment in BHEL or with customers other than BHEL."</li> <li>iii) In spite of warnings, the Supplier persistently violates or circumvents the provisions of labour laws/ regulations/ rules or other statutory requirements.</li> <li>iv) Supplier is found to be involved in cartel formation or in any other act so as to influence the bidding process or influence the price.</li> <li>v) The Supplier has indulged in malpractices or misconduct such as bribery, corruption and fraud, pilferage, coercion etc.</li> <li>vi) The Supplier is found guilty by any court of law for criminal activity/ offences involving moral turpitude in relation to business dealings.</li> <li>vii) Supplier is found to have obtained any internal information/ documentation of BHEL by unauthorized means.</li> <li>viii) The foreign Principals along with the representing Agent shall be banned together if information submitted by them about their precise relationship, commission/ remuneration etc. payable/ receivable and other particulars as asked by BHEL, as per the extant guidelines regarding dealing with Agents of Foreign Suppliers is found false/ incorrect, at any stage.</li> <li>ix) Supplier has substituted, damaged, failed to return, or unauthorizedly disposed-off free issue materials/ tools etc. of BHEL.</li> </ul>
1.4.2	A Supplier can also be banned with the approval of Director (E, R&D) provided a direction to this effect has been received from the administrative ministry of the Government.

**Note:** Above shall be applicable along with **Guidelines for "Suspension of Business dealings with Suppliers/ Contractors"** available in BHEL website <http://www.bhel.com>. These shall form part of tender documents.

**ANNEXURE-B****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-II) .....  
 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 is ..... (dd/mm/yyyy) which is within the period of 3 years from the date of graduation of such enterprise from its original category as notified vide 5.0. No. 3322(E) dated 01.11.2013 published in the gazette notification dated 04.11.2013 by Ministry of MSME.

Date:

(Signature)

Name-

Membership number -

Seal of Chartered Accountant

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**DECLARATION FOR RELATION IN BHEL**

(To be typed and submitted in the Letter Head of the Company/Firm of Bidder failing which the offer of Bidder is liable to be summarily rejected)

---

To,

(Write Name & Address of Officer of BHEL inviting the Tender)

Dear Sir,

Sub: **Declaration for relation in BHEL**

Ref: 1) NIT/Tender Specification No: .....,

I/We hereby submit the following information pertaining to relation/relatives of Proprieter/Partner(s)/Director(s) employed in BHEL.

Tick (✓) any one as applicable:

1. The Proprietor, Partner(s), Director(s) of our Company/Firm DO NOT have any relation or relatives employed in BHEL

OR

2. The Proprietor, Partner(s), or Director(s) of our Company/Firm HAVE relation/relatives employed in BHEL and their particulars are as below:

(i)

(ii)

Signature of the Authorized Signatory

Note:

1. Attach separate sheet, if necessary.
2. If BHEL Management comes to know at a later date that the information furnished by the Bidder is false, BHEL reserves the right to take suitable action against the Bidder/Contractor.

**FORMAT FOR SEEKING CLARIFICATION**(To be typed and submitted in the Letter Head of the Company/Firm of Bidder)  
-----

To,

(Write Name &amp; Address of Officer of BHEL inviting the Tender)

Dear Sir,

Sub: **Request for Clarification**Ref: 1) NIT/Tender Specification No: .....  
2) All other pertinent issues till date

Sl no	Reference clause of Tender Document	Existing provision	Bidder's query	BHEL's clarification
1				
2				
3				

Yours faithfully,

(Signature, date &amp; seal of Authorized Representative of the Bidder)

**FORMAT FOR DETAILS OF BIDDER**

<b>NAME OF BIDDER:</b>				
<b>FAX NO.</b>				
Registration Number*				
Name of Partners / Directors				
Bidder Type Indian/ Foreign*				
City*				
State*				
Country*				
Postal Code*				
PAN/TAN Number*				
Company's Establishment Year				
Company's Nature of Business*				
Company's Legal Status* {limited company/undertaking/joint venture/partnership/other}				
Company Category* {micro unit as per MSME/small unit as per MSME/medium unit as per MSME/Ancillary unit/project affected person of this company/SSI/ other}				
Enter Company's Contact Person Details Title(Mr. / Mrs. / Ms. / Dr. / Shri)*				
Contact Name*				
Date Of Birth*				
Correspondence Email* (Correspondence Email ID can be same as your Login ID. All the mail correspondence will be sent only to the Correspondence Email ID.)				
Designation				
Phone*				
Mobile*				
<b>Additional Mandatory information for Vendor with Registered GSTN</b>				
		<b>GSTN wise</b>		
		<b>For 1st GSTN</b>	<b>For 2nd GSTN</b>	<b>For Nth GSTN</b>
1	<b>GSTIN Code {with copy of GSTN Certificate (Provisional/Original)}*</b>			
2	<b>Address*-</b>			
3	<b>City*</b>			
4	<b>State *</b>			
5	<b>PIN code*</b>			
6	<b>Mobile no.*</b>			
7	<b>Phone no.</b>			
8	<b>Fax no.</b>			
9	<b>Contact person*</b>			
10	<b>Email id*</b>			

1.0	<b>OCCUPATIONAL HEALTH, SAFETY &amp; ENVIRONMENT MANAGEMENT/ QUALITY ASSURANCE PROGRAMME :</b> BHEL, Power Sector Regions (PSNR/ER/WR/SR) are each certified for ISO 9001. Quality of work to customer's satisfaction and fulfillment of system requirements are the essence of ISO 9001 certification. BHEL, PS Region have HSE certification (ISO 14001 & OHSAS 18001) and therefore Contractor also shall organize / plan/ perform all their activities to meet with the applicable requirements of these standards.
1.1	<b>HSE (Health, safety &amp; Environment):</b> Contractor will comply with HSE (Health, safety & Environment) requirements of BHEL. HSE requirements in brief, are given below :-
1.1.1	Contractor will nominate one of their qualified and experienced employees as Safety Officer, who will be responsible for all HSE related issues of contractors work area. Safety Officer will have authority to stop any activity, in case he observes that the activity is not being carried out in safe manner. He will conduct surprise inspection as well as periodic inspection/drill (at least once in a Week) and submit such reports to BHEL. He will conduct periodic meetings with working groups and explain HSE issues and use of PPEs to them. Reports of such meetings will be submitted to BHEL. Contractor will develop suitable work procedures based upon HSE guidelines and OCPs and implement it. Such work procedures will consist of Area of work, T&P Details, Work Procedure, PPE requirements etc.  Contractor should highlight the requirement of safety to staff and labour through daily tool box meeting before start of the days job
1.1.2	The contractor shall ensure that proper job specific health check-up is done by medical professional for their employees during initial mobilization and thereafter if there is any change of job.
1.1.3	Following personnel protective equipments (PPEs), in adequate numbers, will be made available at site & their regular use by all concerned will be ensured :- - HELMET - SAFETY GOGGLES & WELDING FACE SHIELDS - SAFETY BELTS AND PROTECTIVE NET FOR WORKING AT HEIGHT - SAFETY SHOES - EAR PLUG - ANY OTHER SAFETY EQUIPMENT REQUIRED FOR SAFE COMPLETION OF THE WORK



1.1.4	Providing appropriate First Aid facilities for prompt treatment of injuries and illness at work place. Arranging training to contractor workmen/ employees for giving first aid.
1.1.5	Arranging ambulance in case of any emergency situation .
1.1.6	Identification of nearest hospital and health check-up of workmen/employees
1.1.7	Providing filtered drinking water at work place in cool container.
1.1.8	Providing appropriate fire fighting equipment at designated work place and nominate a fire officer/warden adequately trained for his job.
1.1.9	Identification of nearest fire station and display contact telephone nos. / person's name around work places for cases of emergencies .
1.1.10	Providing adequate no. of 24 V sources and ensure that no hand lamps are operating at voltage level above 24 Volts.
1.1.11	Fulfilling safety requirements at all power tapping points.
1.1.12	Red & White caution tape of proper width(1.5 to 2 inch) to be used for cordoning unsafe area such as open trench, excavation area etc.
1.1.13	Providing contractors company logo on cloths /uniform/ proper identity cards with photographs, for correct identification of people working at project site .
1.1.14	High/ Low pressure welders to be identified with separate colour clothings. No welders will be deployed without passing appropriate tests and holding valid welding certificates. Approved welding procedure should be displayed at work place.
1.1.15	Displaying safe handling procedures for all chemicals such as lube oil, acid, alkali, sealing compounds etc , at work place .
1.1.16	All scaffolding/ platforms should be made from materials of appropriate quality/grade so that these are safe for use. It should be certified/declared safe for use by an experienced contractor person, before any scaffolding/platform is used.
1.1.17	All T&Ps/ MMEs should be of reputed brand/appropriate quality & must have valid test/calibration certificates bearing endorsement from competent authority of BHEL.
1.1.18	Ensure that the regulatory requirement of excessive weight limit (to carry/lift/ move weights beyond prescribed limits) for male and female workers are complied with.
1.1.19	Safety slogan, Safety/ Caution boards , wherever required to be displayed in consultation with BHEL.

1.1.20	Take suitable measures for waste management and environment related laws/legislation as a part of normal construction activities. Compliance with the legal requirements on storage/ disposal of paint drums (including the empty ones), Lubricant containers, Chemical Containers, and transportation and storage of hazardous chemicals will be strictly maintained. Ensure proper cleanliness of work place, housekeeping and waste management (including proper waste disposal ) on daily basis.																				
1.1.21	The Contractor is required to provide proper safety net systems where ever the hazard of fall from height is present as per instruction of BHEL Engineer. The safety nets shall be fire resistant, duly tested and shall be of ISI Mark and the nets shall be located as per site requirements to arrest or to reduce the consequences of a possible fall of persons working at different heights.																				
1.1.22	<p>All applicable OCPs (Operational control procedures) will be followed by contractor as per BHEL instructions. This will be done as part of normal scope of work. List of such OCPs is given below . In case any other OCP is found to be applicable during the execution of work at site, then contractor will follow this as well, within quoted rate. These OCPs (applicable ones) will be made available to contractor during work execution at site. However for reference purpose, these are kept with Safety Officer of BHEL at the Power Sector Regional HQ, or available in downloadable format in the website, which may be refereed by contractor, if they so desire.</p> <table border="1"> <tr><td><input type="checkbox"/></td><td>OCP for safe handling of chemicals</td></tr> <tr><td><input type="checkbox"/></td><td>OCP for Electrical safety</td></tr> <tr><td><input type="checkbox"/></td><td>OCP for energy conservation</td></tr> <tr><td><input type="checkbox"/></td><td>OCP for safe welding and gas cutting operation</td></tr> <tr><td><input type="checkbox"/></td><td>OCP for fire safety</td></tr> <tr><td><input type="checkbox"/></td><td>OCP for safety in use of hand tools</td></tr> <tr><td><input type="checkbox"/></td><td>OCP for first aid</td></tr> <tr><td><input type="checkbox"/></td><td>OCP for food safety at canteen</td></tr> <tr><td><input type="checkbox"/></td><td>OCP for safety in use of cranes</td></tr> <tr><td><input type="checkbox"/></td><td>OCP for storage and handing of gas cylinders</td></tr> </table>	<input type="checkbox"/>	OCP for safe handling of chemicals	<input type="checkbox"/>	OCP for Electrical safety	<input type="checkbox"/>	OCP for energy conservation	<input type="checkbox"/>	OCP for safe welding and gas cutting operation	<input type="checkbox"/>	OCP for fire safety	<input type="checkbox"/>	OCP for safety in use of hand tools	<input type="checkbox"/>	OCP for first aid	<input type="checkbox"/>	OCP for food safety at canteen	<input type="checkbox"/>	OCP for safety in use of cranes	<input type="checkbox"/>	OCP for storage and handing of gas cylinders
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<input type="checkbox"/>	OCP for manual arc welding
<input type="checkbox"/>	OCP for safe use of helmets
<input type="checkbox"/>	OCP for good house keeping
<input type="checkbox"/>	OCP for working at height
<input type="checkbox"/>	OCP for safe excavation
<input type="checkbox"/>	OCP for safe filling of Hydrogen in cylinder
<input type="checkbox"/>	OCP for illumination
<input type="checkbox"/>	OCP for handling and erection of heavy metals
<input type="checkbox"/>	OCP for safe acid cleaning
<input type="checkbox"/>	OCP for safe alkali boil out
<input type="checkbox"/>	OCP for safe oil flushing
<input type="checkbox"/>	OCP for steam blowing
<input type="checkbox"/>	OCP for safe working in confined area
<input type="checkbox"/>	OCP for safe operation of passenger lift, material hoists & cages
<input type="checkbox"/>	OCP for Vehicle maintenance
<input type="checkbox"/>	OCP for safe radiography
<input type="checkbox"/>	OCP for waste disposal
<input type="checkbox"/>	OCP for working at night
<input type="checkbox"/>	OCP for blasting
<input type="checkbox"/>	OCP for DG Set
<input type="checkbox"/>	OCP for handling & storage of mineral wool
<input type="checkbox"/>	OCP for drilling, reaming and grinding(machining) etc.
<input type="checkbox"/>	OCP for hydraulic test
<input type="checkbox"/>	OCP for spray insulation
<input type="checkbox"/>	OCP for trial run of rotary equipment
<input type="checkbox"/>	OCP for stress relieving
<input type="checkbox"/>	OCP for material preservation
<input type="checkbox"/>	OCP for cable laying/tray work
<input type="checkbox"/>	OCP for electrical maintenance
<input type="checkbox"/>	OCP for transformer charging
<input type="checkbox"/>	OCP for safe handling of battery system
<input type="checkbox"/>	OCP for computer operation
<input type="checkbox"/>	OCP for storage in open yard
<input type="checkbox"/>	OCP for sanitary maintenance
<input type="checkbox"/>	OCP for batching
<input type="checkbox"/>	OCP for piling rig operation
<input type="checkbox"/>	OCP for gas distribution test

	<input type="checkbox"/> OCP for cleaning of hotwell / deaerator <input type="checkbox"/> OCP for electro-resistance heating <input type="checkbox"/> OCP for compressor operation <input type="checkbox"/> OCP for O&M of control of AC plant & system <input type="checkbox"/> OCP for air compressor <input type="checkbox"/> OCP for passivation <input type="checkbox"/> OCP for Safe EDTA Cleaning <input type="checkbox"/> OCP for Safe Chemical cleaning of Pre boiler system <input type="checkbox"/> OCP for Safe Boiler Light up <input type="checkbox"/> OCP for Safe Rolling and Synchronisation
1.2	<input type="checkbox"/> OCP for Safe Loading of Unit <b>SAFETY AND CLEANLINESS :</b> The contractor shall take all necessary safety precautions and arrange for appropriate appliances as per discretion of BHEL or its authorised officials (Site Construction Manager) to prevent loss of human lives, injuries, to personnel engaged and damage to property. Before commencing the work, the contractor shall submit a "Safety Plan" to the above authorised BHEL official and obtain approval on the same. The safety plan shall indicate in detail the measures that would be taken by the contractor to ensure safety of men, equipment, materials and environment during execution of the work. This will also include an organization structure, role and responsibilities of the concerned key personnel, the safety practices that will be followed, PPEs deployed, plan for
1.3	handling critical activities and emergencies. If the contractor fails to take appropriate safety precautions or to provide necessary safety devices and equipment or to carry out instructions issued by the authorised BHEL official, BHEL shall have the right to take corrective steps at the risk and cost of the contractor.
1.4	During the course of construction, alternation or repairs, scrap with protruding nail, sharp edge etc and all other debris shall be kept clean from working areas, passage, ways and stairs in and around site.
1.5	Combustible scrap and debris shall be removed at regular intervals during the course of execution. Safe means shall be provided to facilitate such removal. The combustible scrap should be stored in safe place away from the plant materials to avoid fire accidents. The area shall be chosen in consultation with the Engineer and to be cordoned off.
1.6	Rigging equipment for materials handling shall be inspected prior to use in each shift and as necessary during its use to ensure that it is safe. Defective

	rigging equipment will be removed from service.
1.7	Rigging equipment shall not be loaded in excess of its recommended safe working load. Rigging equipment, when not in use, shall be removed from the original work area so as not to present a hazard to employees.
1.8	Contractor shall notify the engineer, of his intention to bring on to site any equipment or any container, with liquid or gaseous fuel or other substance which may create a hazard. The Engineer shall have the right to prescribe the condition under which such equipment or container may be handled and used during the performance of the works and the contractor shall strictly adhere to such instructions. The Engineer shall have the right to inspect any construction tool and to forbid its use, if in his opinion it is unsafe. No claim due to such prohibition will be entertained.
1.9	Where it is necessary to provide and/or store petroleum products or petroleum mixture & explosives, the contractor shall be responsible for carrying out such provision / storage in accordance with the rules & regulations laid down in the relevant petroleum act, explosive act and petroleum and carbide of calcium manual, published by the chief inspector of explosives of India. All such storage shall have prior approval if necessary from the chief inspector of explosives or any other statutory authority. The contractor shall be responsible for obtaining the same.
1.10	Cylinders shall be moved by tilting and rolling them on their bottom edges. They shall not be intentionally dragged, struck or permitted to strike each other violently.
1.11	When cylinders are transported by powered vehicle they shall be secured in a vertical position.
1.12	All workmen of the contractor working on construction area shall wear safety shoes, hand gloves, safety helmets and safety belt as applicable. The contractor shall provide to its workforce and ensure the use of following personnel protective equipment as found necessary and as directed by BHEL.
1.12.1	Safety Helmets conforming to IS-2965 : 1984
1.12.2	Safety Belts conforming to IS-3521:1983
1.12.3	Safety Shoes conforming to IS-1989 : 1978
1.12.4	Eye and face protection devices conforming to IS – 8620 : 1977 & IS – 8950 : 1978.

1.12.5	Hand and body protection devices conforming to IS – 2575 : 1975 and IS – 6994 : 1973, IS – 8907 : 1970 & 8619 : 1977
1.13	The contractor shall insure his workmen against all accidents and the policy shall be presented to BHEL Engineer on demand. Other wise, BHEL will arrange the same and the expenditure towards this will be debited to the contractor. In case of a fatal or disabling injury accident to any person at construction site due to lapses by the contractor, the victim and/or his/her dependants shall be compensated by the contractor as per statutory requirements. However, if considered necessary BHEL shall have the right to impose appropriate financial penalty on contractor and recover the same from payments due to the contractor for suitably compensating the victim and/or his/her dependence before imposing any such penalty. Appropriate enquiry shall be held by BHEL giving opportunity to the contractor for presenting his case. Above safety conditions are not exhaustive but gives an idea for the contractor and contractor shall adhere to all safety precaution given by the Engineer at site.
1.14	The contractor shall arrange at his cost adequate lighting facilities e.g. flood lighting, hand lamps, area lighting etc. at various levels for safe and proper working operations during night hours at the work spot as well as at the pre-assembly area.
1.15	The contractor shall be responsible for provision of all the safety notices and safety equipment as enjoined on him by the application of relevant statutory regulation / provisions and/or as called upon by BHEL from time to time. He shall be held responsible for any violation of statutory regulations (local, state or central) and BHEL instruction that may endanger safety of men, equipment and material.
1.16	The contractor shall provide temporary fencing wherever required as a safety measure against accident and damage to properties. Suitable caution notices shall be displayed where access to any part is found to be unsafe and hazardous.
1.17	Contractor shall ensure safety of all the workmen, material and equipment either belonging to him or to others working at site. He shall observe safety rules and codes applied by BHEL without exception.
1.18	It will be the responsibility of the contractor to ensure safe lifting of the equipment, taking due precaution to avoid any accident and damage to other equipment and personnel. All requisite tests and inspection of handling



	equipment, tools & tackle shall be periodically done by the contractor. Defective equipment shall be removed from service. Any equipment shall not be loaded in excess of its recommended safe working load.
1.19	The contractor shall provide necessary first aid facilities for all his employees, representatives and workmen at site and BHEL shall have no obligation in this regard. The first aid boxes should be placed at various elevations so as to make them available within the reach and at the quickest possible time. The contractor should conduct periodical first –aid classes to keep his supervisor and Engineers properly trained for attending to any emergency.
1.20	All the contractor's supervisory personnel and sufficient number of workers shall be trained for fire protection systems. Enough number of such trained personnel must be available during the tenure of contract. Contractor should nominate his supervisor to coordinate and implement the safety measures.
1.21	Contractor shall provide enough fire protecting equipment of the types and numbers at his office, stores, temporary structure in labour colony etc. Such fire protection equipment shall be easy and kept open at all times. The fire extinguishers shall be properly refilled and kept ready which should be certified at periodic intervals. The date of changing should be marked on the Cylinders. All other fire safety measures as laid down in the "codes for fire safety at construction site" issued by safety coordinator of BHEL shall be followed. Non-compliance of the above requirement under fire protection shall in no way relieve the contractor of any of his responsibility and liabilities to fire accident occurring either to his materials or equipment or those of others.
1.22	The contractor shall at his cost, remove from vicinity of work at least once each day all combustible waste, scrap, painting materials, rubbish, unused or other materials and deposit them in places specified by BHEL to keep the work site clear and tidy. Use of undercoated canvas paper, corrugated paper, fabricated carton, plastic or other flammable materials shall be restricted to the minimum and promptly removed.
1.23	The contractor shall not use any hand lamp energized by Electric power with supply voltage of more than 24 volts in confined spaces like inside water boxes, turbine casings, condensers etc.
1.24	All portable electric tools used by the contractor shall have safe plugging system to source of power and be appropriately earthed. Only electricians licensed by appropriate statutory authority shall be employed by the contractor to carry out all types of electrical works.

1.25	In case of any delay in completion of a job due to mishaps attributable to lapses by the contractor, BHEL shall have the right to recover cost of such delay from the payments due to the contractor, after notifying the contractor suitably.
1.26	Valve protection caps shall be kept in place and secured.
1.27	The contractor shall be responsible for the safe storage and handling of his radio-active sources as per BARC rules and regulations.
1.28	Tarpaulin being inflammable should not be used (instead, only non infusible covering materials shall be used) as protective cover while preheating, welding, stress relieving etc. at site.
1.29	If the contractor fails to improve the standards of safety in its operation to the satisfaction of BHEL after being given reasonable opportunity to do so and/or if the contractor fails to take appropriate safety precautions or to provide necessary safety devices and equipment or to carry out instruction regarding safety issued by BHEL, BHEL shall have the right to take corrective steps at the risk and cost of the contractor after giving a notice of not less than 7 days indicating the steps that would be taken by BHEL.
1.30	If the contractor succeeds in carrying out its job in time with out any fatal or disabling injury accident and without any damage to property BHEL may, at its sole discretion, favorably consider to reward the contractor suitably for the performance.
1.31	The contractor shall carefully follow the safety requirement of BHEL/ the purchaser with the regard to voltages used in critical areas.
1.32	The contractor shall use only properly insulated and armored cables which conform to the requirement of Indian Electricity Act and Rules for all wiring, electrical applications at site. BHEL reserves the right to replace any unsafe electrical installations, wiring, cabling etc. at the cost of the contractor. All electrical appliances used in the work shall be in good working condition and shall be properly earthed. No maintenance work shall be carried out on live equipment. The contractor shall maintain adequate number of qualified electricians to maintain his temporary electrical installations.
1.33	The contractor shall arrange adequate number of persons specifically for clearing any debris and for house keeping of the erection area including restacking of components in the erection areas.

1.34	In case of any damage to property due to lapses by the contractor, BHEL shall have the right to recover the cost of such damages from the contractor after holding an appropriate enquiry.
1.35	The contractor shall submit report of all accidents, fires and property damage etc to the Engineer immediately after such occurrence, but in any case not later than 24 hours of the occurrence. Such reports shall be furnished in the manner prescribed by BHEL. In addition periodic reports on safety shall also be submitted by the contractor to BHEL from time to time as prescribed by the Engineer.
1.36	Before commencing the work, the contractor shall appoint/nominate a responsible person to supervise implementation of all safety measures and liaison with his counterpart of BHEL.
1.37	Suitable scaffolds shall be provided for workman for all works that cannot safely be done from the ground, or from solid construction except in the case of short duration of work which can be done safely from ladders. When a ladder is used, it shall be of rigid construction made of steel. The steps shall have a minimum width of 45 cm and a maximum rise of 30 cm. Suitable handholds of good quality wood or steel shall be provided and the ladder shall be given an inclination not steeper than $\frac{1}{4}$ horizontal and 1 vertical.
1.38	Scaffolding or staging more than 3.6 m above the ground floor, swung or suspended from an overhead support or erected with stationery support shall have a guard rail properly bolted, braced or otherwise secured, at least 90 cm above the floor or platform of such scaffolding or staging and extending along the entire length of the out side and ends thereof with only such openings as may be necessary for the delivery of materials. Such scaffolding or staging shall be so fastened as to prevent it from swaying, from the building or structure.
1.39	Working platforms, gangways and stairways shall be so constructed that they do not sag unduly or unequally and if the height of the platform gangways provided is more than 3.6 m above ground level or floor level, they shall be closely boarded and shall have adequate width which shall not be less than 750 mm and be suitably fenced as described above.
1.40	Every opening in the floor or a building or in a working platform shall be provided with suitable means to prevent the fall of persons or materials by providing suitable fencing or railing whose minimum height shall be 90 cm.

1.41	Wherever there are open excavation in ground, they shall be fenced off by suitable railing and danger signals installed at night so as to prevent persons slipping into the excavations.
1.42	Safe means of access shall be provided to all working places. Every ladder shall be securely fixed. No portable single ladder shall be over 9 m in the length while the width between side rails in rung ladder shall in no case be less than app. 29.2 cm for ladder upto and including 3 m in length. For longer ladders this width shall be increased at least ¼" for each additional foot of length.
1.43	A sketch of the ladders and scaffolds proposed to be used shall be prepared and approval of the Engineer obtained prior to Construction.
1.44	All personnel of the Contactor working within the plant site shall be provided with safety helmets. All welders shall wear welding goggles while doing welding work and all metal worker shall be provided with safety gloves. Persons employed on metal cutting and grinding shall wear safety glasses.
1.45	Adequate precautions shall be taken to prevent danger for electrical equipment. No materials on any of the sites of work shall be so stacked or placed as to cause danger or inconvenience to any person or the public.
1.46	All trenches, four feet or more in depth, shall at all times be supplied with at least one ladder for each 30 m in length or fraction thereof. The ladder shall be extended from bottom of the trench to at least 90 cm above the surface of the ground. Sides of the trenches which are 1.50 m or more in depth shall be stepped back to give suitable slope or securely held by timer bracing, so as to avoid the danger of sides collapsing. The excavated materials shall not be placed within 1.5 m of the edges of the trench or half of the depth of the trench whichever is more. Cutting shall be done from top to bottom. Under no circumstances undermining or undercutting shall be done.
1.47	The Contactor shall take all measures at the sites of the work to protect all persons from accidents and shall be bound to bear the expenses of defense of every suit, action or other proceeding at law that may be brought by any persons for injury sustained or death owing to neglect of the above precautions and to pay any such persons such compensation or which may with the consent of the Contractor be paid to compromise any claim by any such person should such claim proceeding be filed against BHEL, the Contractor hereby agrees to indemnify BHEL against the same.
1.48	Before any demolition work is commenced and also during the process of the

	work the following shall be ensured:
1.48.1	All roads and open areas adjacent to the work site shall either be closed or suitably protected.
1.48.2	No electric cable or apparatus which is liable to be a source of danger nor a cable or an apparatus used by the operator shall remain electrically charged.
1.48.3	All practical steps shall be taken to prevent danger to persons employed from the risks of fire or explosion or flooding. No floor, roof or other part of the building shall be so overloaded with debris or materials as to render them unsafe.
1.49	All necessary personnel safety equipment as considered adequate by the Engineer should be kept available for the use of the persons employed in the Site and maintained in a condition suitable for immediate use and the Contractor should take adequate steps to ensure proper use of equipment by those concerned.
1.49.1	Workers employed on mixing asphalted materials, cement and lime mortars shall be provided with protective foot wear and protective goggles.
1.49.2	Those engaged in white washing and mixing or stacking of cement bags or any materials which is injurious to the eyes shall be provided with protective goggles.
1.49.3	Those engaged in welding works shall be provided with welder's protective eyesight lids.
1.49.4	Stone breakers shall be provided with protective goggles and protective clothing and seated sufficient to safe intervals.
1.49.5	Where workers are employed in sewers and manholes, which are in use, the Contractor shall ensure that the manhole covers are opened and ventilated at least for an hour before the workers are allowed to get into manhole, and the manholes so opened shall be cordoned off with suitable railing and provided with warning signals or boards to prevent accident to the public.
1.49.6	The Contractor shall not employ men below the age of 18 years and women on the work of painting with products containing lead in any form. Wherever men above the age of 18 are employed on the work of lead painting, the following precautions should be taken.
1.49.6.1	No paint containing lead or lead products shall be used except in the form of paste or ready made paint.

1.49.6.2	Suitably face masks should be supplied for use by the workers where paints are applied in the form of spray or a surface having lead paint dry rubbed and scrapped.
1.49.6.3	Overalls shall be supplied by the Contractor to the workmen and adequate facilities shall be provided to enable the working painters to wash during the cessation of work.
1.50	When the work is being done near any place where there is risk of drowning all necessary equipment should be provided and kept ready for use and all necessary steps taken for prompt rescue of any person in danger and adequate provision should be made for prompt first aid treatment of all injuries likely to be sustained during the course of the work.
1.51	Motors, gearing, transmission, electric wiring and other dangerous parts of hoisting appliances should be provided with efficient safe guards. Hoisting appliance should be provided with such means as will reduce to the minimum the risk of any part of a suspended load becoming accidentally displaced. When workers employed on electrical installations which are already energized, insulting mats, wearing apparel, such as gloves, sleeves and boots as may be necessary should be provided. The worker should not wear any rings, watches and carry keys or other materials which are good conductor of electricity.
1.52	All scaffolds, ladders and other safety devices mentioned or described herein shall be maintained in safe condition and no scaffold, ladder or equipment shall be altered or removed while it is in use. Adequate washing facilities should be provided at or near the places of work.
1.53	The contractor shall maintain and ensure necessary safety measures as required for inspection and tests HV test, Pneumatic test, Hydraulic test, Spring test, Bend test etc as applicable, to enable. inspection Agency for performing Inspection. If any test equipment is found not complying with proper safety requirements then the Inspection Agency may withhold inspection, till such time the desired safety requirements are met.
1.54	The Contractor shall notify BHEL of his intention to bring to site any equipment or material which may create hazard. BHEL shall have the right to prescribe the conditions under which such equipment or materials may be handled and the contractor shall adhere to such instructions. BHEL may prohibit the use of any construction machinery, which according to him is unsafe. No claim for compensation due to such prohibition will be entertained by BHEL.



1.55	All safety precautions shall be taken for welding and cutting operations as per IS-818. All safety precautions shall be taken for foundation and other excavation marks as per IS-3764.																						
1.56	These safety provisions should be brought to the notice of all concerned by display on a notice board at a prominent, place at work spot. The persons responsible for compliance of the safety code shall be named therein by the Contractor.																						
1.57	To ensure effective enforcement of the rules and regulations relating to safety precautions the arrangement made by the contract shall be open to inspection by the Engineer of the Engineer's Representative.																						
1.58	Keeping the work area clean/ free from debris, removed scaffoldings, scraps insulation/sheeting wastage /cut pieces, temporary structures, packing woods etc. will be in the scope of the contractor. Such cleanings has to be done by contractor within quoted rate, on daily basis by an identified group. If such activity is not carried out by contractor / BHEL is not satisfied, then BHEL may get it done by other agency and actual cost alongwith BHEL overheads will be deducted from contractor's bill. Such decisions of BHEL shall be binding on the contractor.																						
1.59	Notwithstanding the above clauses there is nothing to exit the Contractor from the operations of any other Act or Rule in force in area of work in this respect.  Provided always that all safety measures apart from those specifically provided in this agreement which are brought to the notice of the Contractor from time to time by the Engineer shall be complied by the Contractor. Provided further that all consequences, damages, or losses arising by reason of any safety code shall be met with by the Contractor.																						
1.60	<p><b><u>NON COMPLIANCE:-</u></b>  NONCONFORMITY OF SAFETY RULES AND SAFETY APPLIANCES WILL BE VIEWED SERIOUSLY AND BHEL HAS RIGHT TO IMPOSE FINES ON THE CONTRACTOR AS UNDER <b><u>for every instance of violation noticed:</u></b></p> <table border="1"> <thead> <tr> <th>SN</th><th>Violation of Safety Norms</th><th>Fine (in Rs)</th><th></th></tr> </thead> <tbody> <tr> <td>01</td><td>Not Wearing Safety Helmet</td><td>50/-</td><td></td></tr> <tr> <td>02.</td><td>Not wearing Safety Belt</td><td>100/-</td><td></td></tr> <tr> <td>03.</td><td>Grinding Without Goggles</td><td>50/-</td><td></td></tr> <tr> <td>04.</td><td>Not using 24 V Supply For Internal Work</td><td>500/-</td><td></td></tr> </tbody> </table>			SN	Violation of Safety Norms	Fine (in Rs)		01	Not Wearing Safety Helmet	50/-		02.	Not wearing Safety Belt	100/-		03.	Grinding Without Goggles	50/-		04.	Not using 24 V Supply For Internal Work	500/-	
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	05.	Electrical Plugs Not used for hand Machine	100/-
	06.	Not Slings property	200/-
	07.	Using Damaged Sling	200/-
	08.	Lifting Cylinders Without Cage	500/-
	09.	Not Using Proper Welding Cable With Lot of Joints And Not Insulated Property.	200/-
	10.	Not Removing Small Scrap From Platforms	200/-
	11.	Gas Cutting Without Taking Proper Precaution or Not Using Sheet Below Gas Cutting	200/-
	12.	Not Maintaining Electric Winches Which are Operated Dangerously	500/-
	13.	Improper Earthing Of Electrical T&P	500/-
	14.	Accident Resulting in Partial Loss in Earning Capacity	25,000/- per victim
	15.	Fatal Accident/Accidents Resulting in total loss in Earning Capacity	1,00,000/- - per victim
	Any other non-conformity noticed not listed above will also be fined as deemed fit by BHEL. The decision of BHEL engineer is final on the above. The amount will be deducted from running bills of the contractor. The amount collected above will be utilized for giving award to the employees who could avoid accident by following safety rules. Also the amount will be spent for purchasing the safety appliances and supporting the safety activity at site.		
1.61	<b><u>CITATION:-</u></b> If safety record of the contractor in execution of the awarded job is to the satisfaction of safety department of BHEL, issue of an appropriate certificate to recognize the safety performance of the contractor may be considered by BHEL after completion of the job		
1.62	<b><u>MEMORANDUM OF UNDERSTANDING</u></b> After Award Of Work, Contractors Are Required To Enter Into A Memorandum Of Understanding As Given Below:  <p style="text-align: center;"><b><u>Memorandum of Understanding</u></b></p> $\frac{3}{4}$ BHEL, Power Sector _____Region is committed to Health, Safety and Environment Policy (EHS Policy). $\frac{3}{4}$ M/s _____do hereby also commit to the same		

	<p>EHS Policy while executing the Contract Number _____</p> <p><math>\frac{3}{4}</math> M/s _____ shall ensure that safe work practices not limited to the above are followed by all construction workers and supervisors. Spirit and content therein shall be reached to all workers and supervisors for compliance.</p> <p><math>\frac{3}{4}</math> BHEL will be carrying out EHS audits twice a year and M/s _____ shall ensure to close any non-conformity observed/reported within fifteen days.</p> <p>Signed by authorized representative of M/s -----</p> <p>Name :</p> <p>Place &amp; Date:</p>
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A) TENDERING

1. Each and every page of tender documents from declaration of bidders to Annexure VI enclosed should be signed by the tenderer providing his / their seal and date as taken of their full acceptance of the scope of work, terms and conditions etc., and should be returned along with the tender offers.
2. The tenders should be quoted in English language and international numbers.
3. All entries in the tender shall be typed in ink legibly written without ambiguity.
4. Qualifications of Tenderers : for open tenders only, the tenderers who have previous experience in the similar nature of work as detailed in this tender specifications are expected to quote duly detailing their relevant experience / credentials along with the offer. Offers of other than the above are not likely to be considered. (List of similar jobs done)  
- Enclosure – 1
5. Financial Status : A current / valid certificate from a scheduled bank to provide the financial soundness / capability of the bidder to undertake the work, is required to be submitted along with offer.  
- Enclosure – 2
6. Income Tax / Sales Tax certificates : A certificate of income tax / sales tax clearance from the appropriate authority, is to be submitted in the form prescribed therefor, valid for the period of contract.  
- Enclosure - 3
7. Organization Chart : The organization pattern and that will be deployed by the tenderer for this work duly indicating the number of supervisors, their qualifications and experience in the line, the number of skilled and unskilled persons / etc. is required to be indicated in the offer.  
- Enclosure – 4
8. THE FOLLOWING DOCUMENTS SHOULD ALSO BE ENCLOSED.
  - a) An attested copy of the power of attorney in case the tender is signed by an individual other than the sole proprietor.
  - b) In case of an individual his full name, address, nature of business and valid trade licence.
  - c) In case of partnership firm, the names of all partners and their addresses. (A copy of the partnership deed / instrument of partnership, duly attested by the Notary public shall be enclosed.)
  - d) In case of companies, date and place of incorporation / registration including date of commencement certificate (for public companies). (Certified copies of Memorandum and articles of association are also to be furnished).

B) EARNEST MONEY DEPOSIT :

For this, please refer article 1.4 (page 4 of 23) of the General and special conditions of contract – 1991 (GSCC) enclosed / supplied with the form issued for empanelment.

C) VALIDITY OF OFFER :

The rates in the tender shall be kept open for acceptance for a minimum period of six months from the due date of opening of tenders. For details, please refer article 1.6 (page 7) of GSCC enclosed.

D) SECURITY DEPOSIT:

As per clause no. 1.8 of GENERAL & SPECIAL CONDITIONS OF CONTRACT [FOR SERVICES JOB].

Return of Security Deposit:

If the contractor duly fulfils the contractual obligations as per contract in all respects to the entire satisfaction of BHEL, and presents an absolute “No Demand Certificate” in the prescribed form and return properties belonging to BHEL handed over, lent or hired by him for carrying out the said works the security deposit will be released to the contractor after deducting all costs or expenses or other contracts entered into with the contractor, only after the satisfactory completion of guarantee period irrespective of release of last 10% payment. In no case Security Deposit can be released before settling all claims of BHEL on contractor under this contract.

No interest shall be payable by BHEL on Earnest Money / Security Deposit or any money due to the contractor from BHEL.

E) ACCEPTANCE / REJECTION OF TENDERS :

For this, please refer article 1.9 (pages 6 to 10) of GSCC enclosed. Also acceptance of customer is pre-requisite for consideration of bid, wherever applicable.

F) ADDITIONAL SPECIFIC TERMS AND CONDITIONS :

01. EXECUTION.

- i) If the site in question is subjected to industrial relations unrest / disturbances / problems, then the successful bidder should take adequate precautionary measures against dislocation of the job on account short problems. Any liability on this account, lies entirely with the contractor.

- ii) The contractor shall commence the work at site with full manpower, T&P etc. and complete as specified in the particulars of the tender. In case of any delay on the completion of work attributable to the contractor BHEL reserves full rights to cancel the contract fully or partly and to award the job in full or part to an alternate agency and recover the costs towards the same including BHEL's overheads from the contractor.
- iii) In the event of termination of contract or restriction of quantum of job by our client, before or during the execution of contract, BHEL reserves the right to terminate the contract or restrict the quantum of work of sub-contractors accordingly without paying any compensation.
- iv) Manpower: For various category of manpower and their numbers recommended, please refer to the Annexure IV of the tender enquiry. The contractor shall engage proper skilled / qualified personnel and ensure the expected quality of work. If any of their personnel has been found to be unsuitable, by BHEL / or their client, the contractor shall withdraw them and provide suitable replacement immediately, failing which BHEL reserves full rights to get the job done by alternate suitable persons at risk and cost of the contractor. The delay on this account is attributable to the contractor.
- v) TOOLS (TACKLES & PLANTS) : All tools, tackles and plants including precision measuring instruments, lifting devices shall have to be arranged by the contractor. (List of recommended T&P, for guidance, is provided in Annexure II of the tender enquiry). All lifting tackles and pulling devices to be used must bear valid / latest test certificates for their suitability, and the sales tax furnished along with the offer itself.

Also certificates of test / calibration with date of validity for various measuring / test instruments have to be submitted by the tenderer preferably along with the offer itself, or else the same is required to be produced at site before start of job failing which the LOI / W.O. is liable to be cancelled without any compensation.

Successful bidder shall provide valid calibration certificates for IMTEs, fitness certificates for T&Ps and Construction Equipment ( e.g. wire ropes, hand operated chain pulley blocks, pulling and lifting machines, electric welding generators, arc welding transformers etc.). Calibration of IMTEs is to be arranged from the accredited agencies. Calibration certificates should have the traceability as per national/international standards. At work site the IMTEs, T&Ps and Construction Equipment shall be checked/tested/inspected by BHEL engineers. The procedure for fitness testing and storage preservation and maintenance of Construction Equipment and T&Ps shall be as per Doc. Nos. PSER:FEX:001:94, PSER:SAS(CAL):016:95 and PSER:FEX:002:94 available with BHEL site engineers.

- vi) CONSUMABLES: All consumables required ( list for guidance is given in Annexure III of the tender enquiry) for the job shall be arranged by the contractor



at his cost. However, any spares / components / consumables / materials going permanently into the clients equipment shall be provided to the contractor.

- vii) Successful bidder has to arrange proper storing facilities at site with traceabilities for IMTEs, T&Ps, construction equipments and consumables used during job execution.
- viii) All the T&Ps, consumables etc. must be mobilized at site at least three days prior to actual start of the job. They must be in accordance with those recommended in the Annexure – II and III respectively of the Tender Enquiry and must be got verified to that effect. Formal clearance in writing must be obtained from BHEL's resident engineer before the contractor starts the job.

T&P found defective / improper / insufficient or not having valid test / calibration certificate should be made good immediately.

If the contractor fails to mobilize at least 90% of the recommended T&P and manpower within the stipulated period, the order on the contractor is liable to be cancelled without paying any compensation on to him.

- viii) Storage : The contractor shall be responsible for proper storing of all dismantled components, spares, T&P etc., identify them properly and preserve them throughout the execution of the job. Any loss or damage of the components caused due to the lapses attributable to the contractor or his personnel, shall be chargeable to the contractor.

- ix) Transportation of Spares / materials / consumables :

Any material / components / spares required for the work must be collected by the vendor and carried safely to the work site from the point of issue in our clients premises, through his own resources and cost.

Similarly, excess materials / spares etc. must be returned to the client's stores /  
any other place, within the client's premises, indicated by site-in-charge of BHEL.

Any debris, rubbish at the work spot must be cleared very day by the contractor using his own resources and cost, and disposed off at a placement for, as to be informed to him.

- x) Space / Accommodation :

The contractor will be allowed to have his site office, stores etc. by erecting temporary partitions / chambers / sheds etc. at the work spot according to the availability of space, which will have to be vacated and dismantled at the end of the jobs to restore the space to the client. The contractor should make his own arrangements for the security / watch and ward.

No residential accommodation / spare can be provided by BHEL to the contractor for any residential accommodation of his personnel. Contractor has to make arrangements/accommodation at site at his cost.

xi) The contractor shall ensure responsible execution of the job and proper behavior of their personnel and observance of all the rules and regulations of our clients.

xii) Safety :

a) Standard safety norms/ regulations shall be conserved by the contractor during the execution of the job. The contractor should provide the necessary / stipulated safety devices to his personnel deputed to the site, such as grinding / welding goggles, masks, safety belts, helmets etc. No worker will be permitted to work without necessary safety appliances. Delay of work due to work without necessary safety appliances. Delay of work due to these lapses are attributable to the contractor.

b) All norms related to Health, Safety & Environmental (HSE) norms conforming to ISO-14001 & OHSAS-18001 shall be followed by successful bidder. Bidders may contact SAS-PSER office for getting detailed norms to be followed by bidder at Site

c) The contractor shall comprehensively insure all his site personnel against any hazard / accident and submit a copy of the insurance certificate covering all his site personnel to our resident engineer before commencement of work.

d) In case of any accident / hazard, the contractor shall arrange for medical attendance immediately shall compensate the personnel concerned in accordance with the workmen's compensations act in force and shall keep BHEL indemnified against any provisions of the act.

e) The successful bidder is to arrange a full set of First Aid kit for attending to manpower deployed by him at site as per requirement.

f) Successful bidder should follow all safety norms at work site. The Doc. No. PSER:PMX:004:94 in this regard is available with BHEL engineer at site.

02. STATUTORY COMPLIANCE :

i) The contractor shall comply with all state and central laws, statutory rules regulations etc. such as :

The payment of wages act, maximum wages act, workmen's compensation act., industrial disputes act, employees provident funds act / scheme, Employees' state insurance scheme, contract labour (Regulation & abolition) act, 1970 etc. and all other acts, rules & regulations for employment of labour as may have been and as may be enacted by the Government during the tenure of the contract and having force or jurisdiction at site. The contractor shall give to the local government body, police, labour authorities and other relevant authorities and all such intimation and notices as may be required by law and appraise BHEL site-in-charge of such compliance.

- ii) The contractor shall pay all taxes, fees, licence charges, deposits, duties, fines, royalty commissions or other charges which may be leviable on account of any of his operations in executing the contract. In case, BHEL is forced to pay any of such taxes, BHEL shall have the right to recover the same from the contractor either from his bills or other issue as deemed fit.
- iii) The contractor shall obtain requisite licence from appropriate authority of the ministry of labour under the provision of the contract labour (Regulation and abolition) Act as soon as the work is awarded to him and indemnify BHEL against the application of any provisions of the act.
- iv) The contractor shall be responsible for provision of welfare and health of his employees / workmen, more particularly described in the contract labour (Regulation & abolition ) act / rules, and safety precautions etc., as may be required for satisfactory execution of the contract.
- v) The contractor shall fulfil all his obligations in respect of canteens, rest rooms, accommodation including proper medical facilities etc. for the personnel employed by him, more particularly described in the contract labour (regulation & abolition) act / rules.
- vi) The contractor will be directly responsible for payment of wages to his workmen more specifically described in the contract labour (regulation and abolition ) act / rules. A pay roll sheet showing all the wage payments representative should be furnished to BHEL site office for record purpose. BHEL site in-charge may be intimated the date of disbursement of wages to the workmen engaged for the work; so that his representative can witness the same. The contractor shall indemnify BHEL against any statutory liability on account of dues to his workmen.
- vii) The bidders should be having appropriate licence from the local Boiler Inspectorate if the job involves welding of pressure parts. Also they should be having alloy steel / carbon steel high pressure welders (for PIG and submerged arc welding approved by the local Boiler Inspectorate for welding the pressure parts. The bidders should clearly indicate the same in the offer.

03. TERMS OF PAYMENT:

- i) No advance shall be payable to the contractor unless specifically spelt out in the tender enquiry.
- ii) A minimum time of fifteen days will be required for the processing of bills presented and for their payment.
- iii)
  - a) **80% of the contract value shall be payable against submission of three progressive running bills. Each of the billed amount shall correspond to the quantum of job actually completed and to that effect the claim can be preferred based on percentage allotments (to be given in the work order) made. This, however, has to be certified by the resident manager / engineer of the site.**
  - b) **10% of contract value shall be payable after submission of statutory documents & 'no due certificate from customer's personal department'.**
  - c) **Balance 10% of contract value shall be paid after successful synchronization / commissioning and on receipt of final payment by BHEL from Customer.**

BHEL at its discretion may further split up the percentage break up given in billing schedule and effect payment to suit site condition, cash flow requirement etc. according to progress of work.
- iv) The bidder should be financially sound to maintain the site establishment with regard to timely payment of wages to his workmen, arrangements of other inputs viz. T&P consumables etc.  
Non-receipt of progressive payment from BHEL due to any reasons should not be a constraint for the smooth execution of the job at site.
- v) The bidder should make all out efforts to provide all inputs in consultation with BHEL engineers at site for completing the job in the specified time frame.
- vi) No over run/escalation / idle charges are payable against any services job under any circumstances. (in exceptional cases such claims may be considered provided BHEL's customer admits of such payment).
- vii) Extra work rate being admitted off by BHEL for other similar contracts have been stated on the page no.10 of this annexure.  
  
For any additional work not envisaged in the scope of work or quantities exceeding the stated quantities, these rates shall be applicable.
- viii) All claims for extra works should be settled before claiming the final (10%) bill. The contractor should prefer the final claim with the certificate that 'no other claim is due from BHEL against this contract', without which final bill cannot be processed for payment.
- ix) For reduction / deletion / withdrawal in the scope of work proportionate deduction in contract value will be made.

4. PERFORMANCE:

- i) As soon as job is awarded, the contractor has to submit a barchart to the resident engineer nominated showing the detailed schedule for all activities.

This schedule will be reviewed by the resident engineer from time to time to enable the contractor to recast the barchart matching the planned completion of the job.

- ii) It shall be the responsibility of the contractor's supervisor to distribute the work among his workmen deployed at site and get day to day activities executed as per BHEL's requirement.

BHEL's engineers / supervisors will check the correctness of the job done and will also give the daily programme of work to the contractors supervisor. The contractor has to ensure completion of daily programme and if there is any spill over, the same has to be completed by putting in same additional resources. (Technical guidance wherever required will be provided by BHEL).

- iii) The scope of work mentioned in this tender enquiry gives the broad outline of the actual work involved and it not is possible to mention all minute details of the work. For proper evaluation, the bidders may seek clarifications from this office. Or else, they may visit site and study the job content before submitting offers and be well informed and acquainted with the actual working and other prevalent conditions of the site, facilities available etc.

No claim will be entertained later on the ground of lack of knowledge. iv)

The bidders have to furnish the bio-data and experience details of the site-in-charge, other key workmen, supervisors, senior technicians etc. to be deployed. In case of award of contract, the key members of the contractor's team may be interviewed at site by BHEL's resident engineer to ascertain their suitability. Replacement of non-acceptable personnel will have to be arranged by the contractor immediately at his own cost.

- v) Penalty for the delay in job completion will be 0.5% per day of delay, limiting to maximum 10% of the contract value, to be imposed on the contractor in case the delay in work completion is attributable to the lapses on the part of the contractor.

**In case of LD recovery, the applicable GST shall also be recovered from vendor.**

- vi) Performance Guarantee: Even though the work will be carried out under supervision of BHEL Engineers, the contractor shall guarantee against defects attributable to faulty workmanship or procedure

adopted in the overhaul for items covered in the contract for a period of Six months from the date of re-commissioning of the set after the overhaul. The guarantee should cover all defects notified during this period and shall have to be attended free of cost immediately or at the time our clients are able to give shutdown of the set for the required period, when necessary. In case of failure of contractor to attend to the defect as and when required in time, BHEL shall arrange to attend the defects and the charges shall be levied to the contractor's account and shall be recoverable from the security deposit / progressive payments.

5. MISCELLANEOUS:

- i) The bidders shall submit a list of jobs being carried out by them or expected to be taken up by them during the period as called for in the participation of the tender.

Enclosure – 6.

- ii) The contractor has to engage a cleaning gang at site to ensure continuous cleaning of the floor at work site to protect the parts and to give safe access at the work site.
- iii) Obtaining licenses / permits / road permits in connection with the fulfillment of the contractual obligations is entirely the contractors responsibility. However, wherever applicable BHEL can only offer support to the extent possible.
- iv) For all matters bearing on the execution of the job at site, the decisions of the resident engineer are final and binding upon the contractor.
- v) The contractor has to retain suitable minimum work force at site for a period of one month from the date of completion or work / commissioning, to attend any small / miscellaneous problems, as leakage etc.
- vi) The contractor has to mobilize on a short notice (within 4 days) to attend any troubles encountered in the equipment worked on, during warranty period of six months.
- vii) After dismantling and during execution of the job, successful bidder has to suitably tag the components and sub-assemblies for traceability and store properly before final assembly. This is as per Doc. Nos. PSER:PMX:002:94 & PSER:PMX:001:94.
- viii) Process control of Special Processes like Welding and Heat Treatment shall be carried by successful bidder as per Doc. Nos. PSER:QLY:001:99, PSER:QLY:001:94 (3 VOL) and PSER:QLY: 003:99.
- ix) Proper segregation, identification, tagging and up-keep of all dismantled items at work site during job execution have to be done by successful bidder.



- x) Successful bidder is to obtain necessary "No Dues" certificates before de-mobilisation from site.
- xi) Any NDT within the scope shall be as per Non-Destructive Examination manual (Doc. No. PSER:QLY:002:99 available with BHEL site engineer).
- xii) Unless otherwise mentioned specifically in this tender elsewhere, the storage & preservation of components, sub-assemblies, IMTEs, T&Ps, Construction Equipments etc, maintenance of stores, watch and ward of stores and BHEL site office is in the scope of the successful bidder.
- xiii) The successful bidder is to arrange extra illumination at work site to augment the existing site illumination if required to enable round-the-clock safe working.

Note: Any of the documents mentioned above can be referred before submission of tender at the office of PSER:SAS(CAL).

**EXTRA WORK RATES CURRENTLY BEING ADMITTED BY BHEL, PS-ER**

- A. The following all inclusive manhour rates will be applicable for modification, rectification work and services work.

(For all categories)

- a) Average single manhour rate including overtime if any, supervision, T&P, other site expenses and incidentals including consumables as certified by site-in-charge of BHEL.

**Rs 60/- per man hour (Rupees sixty per man hour only)**

- b) Same as above (a) but excluding supply of consumables by vendor.

**Rs 40/- per man hour (Rupees forty per man hour only)**

- B. The following all inclusive rates will be applicable for modification work involving welding of high pressure butt joints only. Extra work involving other types of joints will be done on the above manpower basis.

Unit rate per equivalent joint of size OD 63.5 mm x 6.3 mm thick

Average unit rate per equivalent joint,  
including NDT and stress relieving.

Carbon Steel

Rs.200/- (Rs. Two hundred only)

Alloy Steel

Rs.250/- (Rs. Two hundred fifty only)

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List of enclosure to be furnished by the bidder along with tender documents.

- |    |   |                |
|----|---|----------------|
| a) | Experience certificate  | Enclosure 1 *  |
| b) | Banker's certificate of financial soundness as per BHEL' format | Enclosure 2 *  |
| c) | IT / ST clearance certificate                                   | Enclosure 3.   |
| d) | Organisation Chart  | Enclosure 4. * |
| e) | List of concurrent jobs held by the contractor / bidder.        | Enclosure 5.   |
- ( \* Vendors registered with BHEL should submit documents in support of sl. no. c only.)

List of documents to be furnished by the contractor to the resident engineer before commencement of the jobs / during the execution.

- i) Barchart (if not furnished in the offer)
- ii) List of T&P being mobilized. Test / Calibration certificate with date of validity for lifting / pulling devices and measuring / test instrument (if not furnished in the offer).
- iii) Category wise list of manpower being mobilized.
- iv) List of consumables being mobilized.
- v) Licence from the department of Labour under contract Labour (Regulation & Abolition) Act / Proof of Application for Lincence.
- vi) ESI coverage, if applicable.
- vii) Insurance certificate covering the site personnel.
- viii) Proof of remittance of provident fund to the concerned authorities, for all workmen employed for this job.
- ix) Third party insurance coverage.

ANNEXURE - VI

QUESTIONNAIRE TO BE FILLED IN BY THE BIDDER, SIGNED WITH DATE AND SEAL, AND TO BE RETURNED ALONG WITH TECHNICAL TENDER.

BIDDER'S NON-ACCEPTANCE OF TENDER REQUIREMENTS CAN DISQUALIFY HIS BID FOR OPENING OF "PRICE BID"

TENDER NO: PSER:PUR:

DATE: ...../...../20.....

- 01 NAME OF THE ORGANISATION.  
ADDRESS, TELEPHONE / FAX NO. :  
.....  
.....  
.....  
.....
- 02 MODE AND PARTICULARS OF EMD  
ENCLOSED
- 03 BANKER'S CERTIFICATE FOR FINANCIAL SOUNDNESS / CAPABILITY TO UNDERTAKE WORK. : Enclosed / Not enclosed.
04. IS THE FIRM HAVING VALID TESTED / : YES / NO.  
CALIBRATED TOOLS AND MEASURING  
INSTRUMENT REQUIRED FOR THIS TYPE  
OF JOB AND EQUIPMENT.
05. ORGANISATION CHART / MANPOWER : Enclosed / Not enclosed.
06. STATUTORY REQUIREMENTS AS PER :  
RELEVANT ACTS WITH LATEST  
AMENDMENT (Pl. tick out)
- i) LICENCE FOR EMPLOYING : Will be complied with  
CONTRACT LABOUR
- ii) MINIMUM WAGES ACT : - do -
- iii) INSURANCE OF SITE PERSONNEL : - do -  
EMPLOYED.
- iv) WORKMEN'S COMPENSATION ACT : - do -
- v) THIRD PARTY INSURANCE : Will be complied with
- vi) EMPLOYEE'S LIABILITY ACT
- vii) INDUSTRIAL DISPUTES ACT : - do -
- viii) EMPLOYEE'S PROVIDENT FUNDS : - do -  
ACT

- ix) CONTRACT LABOUR : - do -  
(REGULATION AND ABOLITION)  
ACT / RULES
  - x) SAFETY APPLIANCES / DEVICES : - do -  
FOR WORKMEN
  - xi) BOILER INSPECTORATE : - do -
  - xii) ARBITRATION ACT : - do -
07. **AGREEABILITY TO “NO OVERRUN : Agreeable  
CHARGES” CLAUSE**
08. **AGREEABILITY TO “NO IDLE TIME : Agreeable  
CHARGES” CLAUSE**
09. AGREEABILITY TO EXECUTE FULL : Agreeable  
SCOPE OF WORK OF TENDER ENQUIRY  
(INCLUDING RELATED MINOR  
ACTIVITIES).

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Signature of the bidder :

Date :

Name of the person signing :

Designation :

SEAL

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**SECTION – I**  
**Instructions to Tenderers**  
**GENERAL INSTRUCTION TO TENDERERS**

1.1 Submission of Tender in “Three Parts”.

- (1) Technical Tender: All particulars asked for from the Vendor except the Price Bid & E.M.D in an envelope.
- (2) EMD in a sealed envelope clearly superscribing on the envelope “E.M.D”, the Tender Number, Name of Work, addresses of Vendor and addressee. One time EMD holders needn’t enclose this provided that proof of EMD remittance is enclosed in the technical tender.
- (3) Price Bid in the price schedule enclosed in the tender, in sealed envelope, clearly superscribing “Price Bid”, Tender Number, Name of Work, Name of the Vendor and addressee.

All the above “Parts” can be placed in an sufficiently large outer envelope for submission.

- 1.1.1a This Tender specification as a whole, duly furnishing the following details shall be duly signed and sent in a sealed cover superscribing :

TENDER		FOR
TENDER	SPECIFICATION	NO.
DUE ON	_____	

1.1.1b DURATION OF JOB

1.1.1.1 Earnest Money Deposit.

1.1.1.2 Income Tax & Sales Tax Clearance Certificate.

1.1.1.3 Detailed organisation chart for manpower resources available with the tenderer and to be employed for the present jobs.

1.1.1.4 Time to be taken for commencement and completion of Work.

1.1.1.5 A list of experience as mentioned in the tender document.

1.1.1.6 The details of the present jobs being handled.

1.1.1.7 Certificate from the BHEL’s scheduled Banks to establish financial capability of the tenderer as per format enclosed at Annexure-I.

1.1.1.8 Attested copies of partnership deed, power of attorney and tender specifications duly signed as mentioned in the tender documents.

1.1.1.9 Price schedule and other relevant information.

NOTE: All Xerox copies enclosed by the Vendor should be attested and sealed for authenticity.

- 1.1.2 The tender shall be addressed to:

**HEAD, PURCHASE DEPARTMENT  
BHARAT HEAVY ELECTRICALS LIMITED,  
POWER SECTOR, EASTERN REGION, (2<sup>ND</sup> FLOOR),  
PLOT-9/1, BLOCK-DJ, SECTOR-II, SALT LAKE,  
KOLKATA – 700091.**

- 1.1.3 Tenders submitted by post shall be sent “REGISTERED POST ACKNOWLEDGEMENT DUE” and shall be posted with the due allowance for any postal delay. The tenders received after the due date and time of opening are liable to be rejected. Telegraphic offers and offers received by telex may not be considered unless confirmed in writing by a detailed offer.
- 1.1.4 Tenders shall be opened by the authorised officer of BHEL at his office at the time and date as specified in the tender notice in the presence of such of those tenderers or their authorised representatives who may be present.
- 1.1.5 The Tenderer shall closely peruse all the clauses, specifications and drawings indicated in the Tender Documents before quoting. Should the tenderer have any doubt about the meaning of any portion of the Tender Specifications or find discrepancies or omission in the drawings or the tender documents issued are incomplete or shall require clarification on any of the technical aspect, scope of work etc., he shall at once contact the authority inviting the tender for clarification before the submission of the offer.
- 1.1.6 Before tendering, the tenderer is advised to inspect the site of work and the environments and be well acquainted with the actual working and other prevalent conditions, facilities available, position of material and labour. No claim will be entertained later on the ground of lack of knowledge.
- 1.1.7 Tenderers must fill up all the schedules and furnish all the required information as per the instructions given in various sections of the tender specification. Each and every page of the Tender Specification & deceleration must be signed bearing seal and submitted along with the offers by the Tender in token of complete acceptance thereof. The information furnished shall be complete by itself. The booklet of G.S.C.C may be retained by the bidder if deceleration is enclosed along with the bid duly filled in and signed and sealed.
- 1.1.8 The tender shall quote the rates in English language and international numerals. The rates shall be in whole rupees. These rates shall be entered in figures as well as in words. For the purpose of the tender, the metric system of units shall be used.
- 1.1.9 All entries in the tender shall either be typed or be in ink. Erasures and overwriting are not permitted and may render such tenders liable to summary rejection. All cancellations and insertions shall be duly attested by the tenderer.
- 1.2 Qualifications of Tenderers:  
Only tenderers who have previous experience in work of this nature and description detailed in this tender specification and/or registered with BHEL, PS-ER-SAS for such works are expected to quote for this work duly detailing their experience along with the offer. Offers from tenderers who do not have established experience in the field are not likely to be considered.



1.3 Data to be enclosed:

Full information shall be given by the tender in respect of following. Non-submission of this information may lead to rejection of the offer/tender.

1.3.1 Financial Status:

- a) A certificate from BHEL's scheduled Bank to prove his financial capacity/capability to undertakes the work of solvency certificate from the concerned Government Authority.
- b) Contractors other than those who are registered in ER, should submit their audited annual accounts for three years preceding the financial year in which tenders are called for.

1.3.2 Income Tax / Sales Tax Certificate :

A certificate of Income Tax / Sales Tax verification from the appropriate authority in the forms prescribed therefor duly indicating annual turnover. The certificates shall be valid for one year from the date of issue or for the period prescribed therein for all tenders submitted during the period.

1.3.3 Previous Experience:

A statement giving particulars duly supported by documentary evidence of the various services rendered for each similar work by the tenderer indicating the particulars and value of each work, the site location and the duration and date of completion and also a list of site locations and particulars and value of various services that are under progress.

1.3.4 Organisation Chart:

The organisation pattern that is totally available with the tenderer and that will be employed by the tenderer for this work duly indicating the number of Engineers and Supervisors, their qualification and experience in the line, the number of skilled and unskilled workmen etc.

1.3.5 An attested copy of the Power of Attorney, in case the tender is signed by an individual other than the sole proprietor, shall also be attached.

1.3.6 In case of an individual:

His full name, address and place and nature of business.

1.3.7 In case of Partnership firms:

The name of all the partners and their addresses. A copy of the Partnership Deed (Instrument of partnership) duly certified by the Notary Public shall be enclosed.

1.3.8 In case of Companies:

Date and place of registration including Date of Commencement Certificate in case of public companies (certified copies of Memorandum and Articles of Associations are also to be furnished).

- 1.3.9 Nature of business carried on by the Company and the provision of the Memorandum relating thereof.
- 1.3.10 Names and particulars including addresses of all the Directors and their previous experience.
- 1.3.11 A list of tools and tackles that the tenderer is having and those that will be earmarked for this job.
- 1.3.12 In addition to the above, the particulars required in various annexures.

**1.4 EARNEST MONEY DEPOSIT (EMD):**

- 1.4.1 Every tender Must be accompanied by the prescribed amount of Earnest Money Deposit in any one of the following forms:
  - 1.4.1.1 **Cash deposit as permissible under the extant Income Tax Act** (Before tender opening) - The amount should be remitted by the party to the Cashier of Bharat Heavy Electricals Limited, PS-ER, Kolkata between 14.00 hours and 16.00 hours on working days and cash receipt issued by him shall be enclosed along with the tender.
  - 1.4.1.2 **Electronic Fund Transfer** credited in Bharat Heavy Electricals Limited, PS-ER' account (before tender opening). RTGS details of BHEL-PSER is available in tender.
  - 1.4.1.3 **Banker's Cheque/Pay Order/Demand Draft** payable at Kolkata duly pledged in Favour of Bharat Heavy Electricals Limited, Kolkata (along with offer).
  - 1.4.1.3(a) **Any other mode as per latest guidelines issued by Govt. of India.**
  - 1.4.1.4 Parties/bidders who have submitted/submits **One Time EMD (OEMD) in this Power Sector Region (i.e. BHEL-PSER) for Service After Sales (SAS) a sum of amount Rs. 5,00,000/- (Rupees Five Lakh only)** are exempted from payment of E.M.D. on each such tender in that unit on case to case basis.
- 1.4.2 Tenders received without Earnest Money in full in the manner prescribed above are liable to be rejected. EMD shall not carry any interest.
- 1.4.3 The Earnest Money Deposit of the successful tenderer will be retained as part of Security Deposit.
- 1.4.4 EMD given by all unsuccessful tenderers shall be refunded normally within 15 days of award of work.
- 1.4.5 BHEL reserves the right of forfeiture of Earnest Money Deposit submitted by the tenderer if :-
  - a) After opening the tender and within the offer validity period, the tenderer revokes his tender or makes any modification in his tender which is not acceptable to BHEL.
  - b) The Contractor fails to deposit the required Security Deposit or commence the work within the period as per LOI/Contract.

EMD by the tenderer shall be withheld in case any action on the tenderer is envisaged under the provisions of extant "Guidelines on Suspension of business dealings with suppliers/contractors" and forfeited/released based on the action as determined under these guidelines"

1.5 Authorisation and Attestation:

- 1.5.1 Tenders shall be signed by persons duly authorised/empowered to do so. Certified copies of such authority and relevant documents shall be submitted along with the tenders.

1.6 Validity of Offer:

The rates in the tender shall be kept open for acceptance for a minimum period of six months from the due date of opening of tenders. If a tenderer withdraws or revokes his tender or increases the tender rates and/or conditions for any item within the aforesaid period, his Earnest Money Deposit is liable to be forfeited. In case the Bharat Heavy Electricals Limited calls for negotiations, such negotiation shall not amount to cancellation or withdrawal of the original offer which shall be binding on the tenderers.

1.7 Execution of Contract:

The successful tender's responsibility under this contract commences from the date of issue of the Letter of Intent by Bharat Heavy Electricals Limited. The successful tenderer may be required to execute an agreement in the prescribed form with the BHEL within a reasonable time after the acceptance of his tender and in any case before submitting first RA bill for payment. The expenses for completing and stamping the agreement shall be borne by the tenderer.

1.8 **Security Deposit (SD):**

- 1.8.1 Security Deposit means the security provided by the contractor towards fulfilment of any obligations in terms of the provisions of the contract. Upon acceptance of tender, the successful tenderer within the time specified in the Letter of Intent must deposit the required amount towards Security Deposit before start of the work. The Security Deposit shall not carry any interest.

- 1.8.2 The total amount of **Security Deposit will be 5% (Five percent) of the contract value.** EMD of the successful tenderer shall be converted and adjusted towards the required amount of Security Deposit.

- 1.8.3 If the value of the work done at any time exceeds the accepted agreement value, the Security Deposit shall be correspondingly enhanced and the additional Security Deposit shall immediately be deposited by the contractor or recovered from payments due to the contractor.

- 1.8.4 Regarding adjustment of Earnest Money Deposit towards part of Security Deposit, refer clause 1.8.2 above, the successful tenderer shall not commence any work under the contract before remitting the Security Deposit except as directed by BHEL.

- 1.8.5 Failure to deposit the Security within the stipulated time may lead to forfeiture of Earnest Money and cancellation of the award of work.

- 1.8.6 The balance amount to make up the required Security Deposit of 5% of the contract value may be furnished in any one of the following forms:

- i) Cash (as permissible under the Income Tax Act)
- ii) Local cheques of scheduled banks (subject to realization)/Pay Order/Demand Draft/Electronic Fund Transfer credited in Bharat Heavy Electricals Limited, PS-ER' account.

iii) Bank Guarantee from Scheduled Banks / Public Financial Institutions as defined in the Companies Act. The Bank Guarantee format should have the approval of BHEL. Bank Guarantee for S.D. must be posted by the Bank by registered post directly to us, and it should not be submitted by the bidder directly to us.

iv) Fixed Deposit Receipt issued by Scheduled Banks / Public Financial Institutions as defined in the Companies Act (FDR should be in the name of the contractor, A/C BHEL).

v) Securities available from Indian Post Offices such as National Savings Certificates, Kisan Vikas Patras etc. (held in the name of Contractor furnishing the security and duly endorsed/hypothecated/ pledged, as applicable, in favour of BHEL).

vi) Any other mode as per latest guidelines issued by Govt. of India.

Note: BHEL will not be liable or responsible in any manner for the collection of interest or renewal of the documents or in any other matter connected therewith.

**1.8.7 Collection of Security Deposit:**

1.8.7.1 At least 50% of the required Security Deposit, including EMD, should be collected before start of work. Balance of the Security Deposit can be collected by deducting 10% of the gross amount progressively from each of the running bills of the contractor till the amount of the required Security Deposit is collected.

1.8.7.2 If the value of the work done at any time exceeds the accepted agreement value, the Security Deposit shall be correspondingly enhanced and the additional Security Deposit shall immediately be deposited by the contractor or recovered from payments due to the contractor.

1.8.7.3 The recoveries made from running bills (cash deduction towards balance SD amount) can be released against submission of equivalent Bank Guarantee in acceptable form, but only once, before completion of work, subject to approval of BHEL.

1.8.7.4 Security Deposit should cover up to the period of guarantee also.

**(Note: In case of SAS jobs, work can be started before the required Security Deposit is collected. However, payment can be released only after collection/recovery of initial 50% Security Deposit).**

1.8.8 BHEL reserves the right of forfeiture of Security Deposit in addition to other claim and penalties in the event of the contractor's failure to fulfil any of the contractual obligations including statutory or in the event of termination of contract as per terms and conditions of contract.

**1.8.9 Return of Security Deposit:**

If the contractor duly performs and completes the contract in all respects to the entire satisfaction of BHEL, and presents an absolute "No Demand Certificate" in the prescribed form and return properties belonging to BHEL handed over, lent or hired by him for carrying out the said works the security deposit will be released to the contractor after deducting all costs or expenses or other contracts entered into with the contractor, only after the satisfactory completion or guarantee period as per clause 2.13.

1.8.10 No interest shall be payable by BHEL on Earnest Money / Security Deposit or any money due to the contractor from BHEL.

1.8.11 In no case Security Deposit can be released before settling all claims under this contract.

1.9 Rejection of Tender and other conditions:

1.9.1 The acceptance of tender will rest with BHEL which does not bind itself to accept the lowest tender or any tender and reserves to itself full rights for the following without assigning any reasons whatsoever:

- a) to reject any or all of the tenders.
- b) To split up the work amongst two or more tenderers.
- c) To award the work in part.
- d) Either of the contingencies stated in (b) and (c) to modify the time for completion suitably.
- e) To modify the scope of work after mutual agreement.

1.9.2 Conditional and unwitnessed tenders:

Tenders containing absurd or unworkable rates and amounts and tenders which are incomplete and otherwise considered defective and tenders not in accordance with the tender conditions, specifications etc. are liable to be rejected.

1.9.3 If a tenderer expires after his submission of the tender or after the acceptance of his tender, BHEL may at their discretion, cancel such tender. If a partner of a firm expires after the submission of the tender or after the acceptance of the tender, BHEL may cancel such tender at their discretion unless the firm retains its character.

1.9.4 BHEL will not be bound by any Power of Attorney granted by the tenderer or by changes in the compositions of the firm made subsequent to the execution of the contract. They may, however, recognise such power of Attorney and changes after obtaining proper legal advice, the cost of which will be chargeable to the contractor concerned.

1.9.5 If the tenderer deliberately gives wrong information in his tender, BHEL reserves the right to reject such tender at any stage or to cancel the contract, if awarded and forfeit the Earnest Money/Security Deposit.

1.9.6 Canvassing in any form in connection with the tenders is strictly prohibited and the tenders submitted by the contractor who resort to canvassing are liable to rejection.

1.9.7 Should a tenderer or contractor or in the case of a firm or Company of Contractors one or more of its Partners/shareholders/Directors have a relation or relations employed in the capacity of an officer of BHEL, the authority inviting tender shall be informed of the fact along with the offer, failing this, BHEL may at its sole discretion, reject the tender or cancel the contract and forfeit the Earnest Money/Security Deposit.

1.9.8 The successful tenderer should not sub-contract the part or complete work detailed in this tender specification undertaken by him without permission of BHEL. The tenderer is solely responsible to BHEL for the work awarded to him. Any deviation in this regard will entail termination of such contract by BHEL at the risk and responsibility of contractor.

1.9.9 The successful tenderer shall inform/keep BHEL informed if he has already undertaken any work/is likely to be awarded any job with the same customer with whom BHEL is entering into contract.

## SECTION – II

### GENERAL TERMS & CONDITIONS OF THE CONTRACT

#### 2.1 Definition:

The following terms and expressions shall have the meaning hereby assigned to them except where they context otherwise requires:

- 2.1.1 'BHEL' (or B.H.E. Ltd.) shall mean Bharat Heavy Electricals Limited, a company registered under Indian Companies Act., 1956, with its Registered Office at BHEL House, SIRI FORT, NEW DELHI-110049, Power Sector, Eastern Region, Service After Sales – Services, DJ-9/1, Salt Lake, Kolkata – 700091 or its Administrative officers or its site Engineer or the employees authorised to deal with any matters with which these persons are concerned on its behalf.
- 2.1.2 "GENERAL MANAGER"/DEPUTY IN CHARGE" shall mean the Officer in Administrative charge of BHEL, PS-ER, SAS – Services, Kolkata or their other regional offices.
- 2.1.3 "ENGINEER" or "ENGINEER IN CHARGE" shall mean Engineer deputed by BHEL. The terms include "SITE ENGINEER", "RESIDENT ENGINEER" and "ASSISTANT SITE ENGINEER" of BHEL at the site as well as the officers in-charge at Kolkata office.
- 2.1.4 "SITE" shall mean the place or places at which the plants/equipment are to be overhauled and services are to be performed as per the specification of this contract.
- 2.1.5 "CLIENTS OF BHEL" or "CUSTOMER" shall mean the Project authorities to whom BHEL is supplying the equipment/services.
- 2.1.6 "CONTRACTOR" shall mean the individual, firm or company who enters into this contract with BHEL and shall include their executors, administrators, successors and permitted assigns.
- 2.1.7 "CONTRACT" or "CONTRACT DOCUMENT" shall mean and include the agreement or work order, the accepted appendices of rates, schedule of quantities, if any and general condition of contract, the special conditioning of contract instructions of the tenderers, the drawings, the specifications, the special specification, if any, the tender specifications, the special specification, if any, the tender documents and the Letter of Intent/Accepting Letter issued by BHEL. Any conditions or terms stipulated by the contractor in the tender documents or supporting letters shall not form part of the contract unless specifically accepted in writing by BHEL and incorporated in the agreement.
- 2.1.8 "GENERAL CONDITIONS OF CONTRACT" shall mean the instructions to tenderers and general conditions of contract pertaining to the work detailed.
- 2.1.9 "TENDER SPECIFICATION" shall mean the "Specific Conditions, technical specifications, appendices, site information and drawings, "pertaining to the work for which the tenderers are required to submit their offer. Also this will include the specifications detailed in NIT of client of BHEL for overhauling, erection, testing and commissioning of plant. Individual specification no. will be assigned to each tender specification.



- 2.1.10 "TENDER DOCUMENTS" shall mean the General conditions of contract (2.1.8) and tender specification (2.1.9)
- 2.1.11 "LETTER OF INTENT" shall mean the intimation by a letter to the tenderer that the tender has been accepted in accordance with provisions contained in that letters. The responsibility of the contractor commences from the date of issue of this letter and all the terms and conditions of contract are applicable from this date.
- 2.1.12 "COMPLETION TIME" shall mean the period by date specified in the acceptance of tender for handing over the overhauled equipment/plant which are found acceptable by the engineer being of required standard and conforming to the specification of the contract or recommissioning of the machine successfully whichever is later. Completion time will be reckoned from the date of LOI with the period for mobilisation as prided with LOI, added to the same.
- 2.1.13 "PLANT" shall mean and cannot the entire assembly of the plant and equipments covered by the contract.
- 2.1.14 "EQUIPMENT" shall mean all equipments, machineries, materials, structurals, electricals and other components of the plant covered by the contract.
- 2.1.15 "TESTS" shall mean and include such test or tests to be carried out on the part of the contractor as are prescribed in the contract or considered necessary by BHEL, in order to ascertain the quality workmanship, performance and efficiency of the contract work or part thereof.
- 2.1.16 "APPROVED" "DIRECTED" or "INSTRUCTED" shall mean approved, directed or instructed by BHEL.
- 2.1.17 "WORK OR CONTRACT WORK" shall mean and include supply of all categories of labour, specified consumables, tools and tackles required for complete and satisfactory site transportation, handling, stacking, storing, overhauling erection, testing and commissioning of the equipment to the entire satisfaction of BHEL.
- 2.1.18 "SINGULAR AND PLURAL ETC" words carrying singular number shall also include plural and vice versa, where the context so requires, words importing the masculine gender shall be taken to include any company or Association or body of individuals, whether incorporated or not.
- 2.1.19 "HEADINGS" The Leadings in these general conditions are solely for the purpose of facilitating reference and shall not be deemed to be part thereof or be taken into consideration in interpretation or construction thereof or of the contract.
- 2.1.20 "MONTH" shall mean calendar month.
- 2.1.21 "WRITING" shall include any manuscript, type written or printed statement under the signature or seal as the case may be.

2.2 Law governing the contract and Court Jurisdiction:

The contract shall be governing by the Law for the time being in force in the Republic of India. The Civil Court having ordinary original civil jurisdiction, Kolkata shall alone have exclusive Jurisdiction in regard to all claims in respective of this contract.



2.3 Issue of Notice:

The contractor shall furnish to the BHEL Engineer the name, designation and address of his authorised agent and all complaints, notices, communications and reference shall be deemed to have been duly given to the contractor if delivered to the contractor or his authorised agent or left at or posted to the address either of the contractor or of his representative and shall be deemed to have been so given in the case of posting on the day on which they would have reached such address in the ordinary course of past or on which they were so delivered or/or left.

2.4 Use of Land:

No land belonging to BHEL or their customer, under temporary possession of BHEL shall be occupied by the contractor without the written permission of BHEL.

2.5 Commencement of Work:

2.5.1 The contractor shall commence the work within the time indicated in the Letter of Intent from BHEL and shall proceed with the same with due expedition without delay. For computing the scheduled completion date, commencement, of work will be reckoned from the date of complete mobilisation as per LOI, unless specifically amended by Head (Services), BHEL, Kolkata.

2.5.2 If the successful tenderer fails to start the work within the stipulated time, BHEL as its discretion will have the right to cancel the contract. His Earnest Money and / or Security Deposit with BHEL will stand forfeited without any further reference to him, without prejudice to any and all of BHEL's other rights and remedies in this regard.

2.5.3 All the works shall be carried out under the direction and to the satisfaction of BHEL.

2.5.4 The erected overhauled plant or work performed under the contract shall be taken over when it has been completed in all respects and or satisfactorily put into operation at site.

2.6 Mode of payment and measurement of the work completed.

2.6.1 "All payment due to the contractor shall be paid only by Account payee Cheques"

2.6.2 The contractor shall present his bill on the format prescribed by BHEL for every payment. After verification of such bills by BHEL, all items having financial value shall be entered and certified in BHEL Measurement Book by BHEL Engineer and the bills prepared based on the same and connected technical documents which form part of this tender specification.

2.6.3 Lump sum omission will be entered for deduction. Measurement shall be restricted to that for which it is required to ascertain the financial liability of BHEL under this Contract.

2.6.4 Work which is to be measured in details shall be measured as per standard procedure without reference to any local procedures without reference to any local procedures excepting where it is otherwise stated in the tender documents. The measurement shall be taken jointly by person duly authorised on the part of BHEL and by the contractor.

- 2.6.5 If, at any time due to reason whatsoever, it becomes necessary to remeasure the work done in full or in part, the expenses towards such remeasurement shall be borne by the contractor.
- 2.6.6.1 The contractor shall bear the expenditure involved, if any, in making the measurement. The Contractor shall, without extra charges, provide all the assistance with appliances with appliance and other things necessary for measurement.
- 2.6.7 The measurement entered in the Measurement Books and the bills prepared shall be signed and dated by both the contracting parties.
- 2.6.8 The Contractor will be intimated in writing by the site Engineer, the proposed date of measurement. If the contractor, representative fails to participate in the joint measurement, the BHEL engineer shall have the power to proceed by himself to take measurement in which case the measurement shall be accepted by the contractor as final.
- 2.6.9 Passing of measurement as per bills does not amount to acceptance of the completion of work mentioned. Any left out work has to be completed if pointed out at a later date by BHEL.

**2.7 Rights of BHEL:**

- 2.7.1 To withdraw any portion of work and/or to restrict / alter the quantum of work as indicated in the contract during the progress of work and get it done through other agency and/or by departmental labour to suit BHEL's commitment to its customer or in case BHEL decides to advance the date of completion due to other emergency reasons / BHEL's obligation to its customer.
- 2.7.2 To terminate the contract or withdraw portion of work and get it done through other agency, at the risk and cost of the contractor after due notice of a period of 14 days' by BHEL in any of the following cases:
- i) Contractor's poor progress of the work vis-à-vis execution timeline as stipulated in the Contract, backlog attributable to contractor including unexecuted portion of work does not appear to be executable within balance available (#) period considering its performance of execution.
  - ii) Withdrawal from or abandonment of the work by contractor before completion of the work as per contract.
  - iii) Non-completion of work by the Contractor within scheduled completion period as per Contract or as extended from time to time, for the reasons attributable to the contractor.
  - iv) Termination of Contract on account of any other reason (s) attributable to Contractor.
  - v) Assignment, transfer, subletting of Contract without BHEL's written permission.
  - vi) Non-compliance to any contractual condition or any other default attributable to Contractor.
- (#) In-case inputs from BHEL/Customer are likely to be delayed or are actually delayed, this delay may also be taken into account while considering balance period available for execution of Contract.

**Risk & Cost Amount against Balance Work:**

Risk & Cost amount against balance work shall be calculated as follows:

Risk & Cost Amount=  $[(A-B) + (A \times H/100)]$

Where,

A= Value of Balance scope of Work (\*) as per rates of new contract

B= Value of Balance scope of Work (\*) as per rates of old contract being paid to the contractor at the time of termination of contract i.e. inclusive of PVC & ORC, if any.

H = Overhead Factor to be taken as 5

In case (A-B) is less than 0 (zero), value of (A-B) shall be taken as 0 (zero).

(\*) Balance scope of work (in case of termination of contract):

Difference of Contract Quantities and Executed Quantities as on the date of issue of Letter for 'Termination of Contract', shall be taken as balance scope of Work for calculating risk & cost amount. Contract quantities are the quantities as per original contract. If, Contract has been amended, quantities as per amended Contract shall be considered as Contract Quantities.

Items for which total quantities to be executed have exceeded the Contract Quantities based on drawings issued to contractor from time to time till issue of Termination letter, then for these items total Quantities as per issued drawings would be deemed to be contract quantities.

Substitute/ extra items whose rates have already been approved would form part of contract quantities for this purpose. Substitute/ extra items which have been executed but rates have not been approved, would also form part of contract quantities for this purpose and rates of such items shall be determined in line with contractual provisions.

However, increase in quantities on account of additional scope in new tender shall not be considered for this purpose.

NOTE: In-case portion of work is being withdrawn at risk & cost of contractor instead of termination of contract, contract quantities pertaining to portion of work withdrawn shall be considered as 'Balance scope of work' for calculating Risk & Cost amount.

**LD against delay in executed work in case of Termination of Contract:**

LD against delay in executed work shall be calculated in line with LD clause as per GCC/SCC/TCC/Special note/any other annexure of tender document (in compliance with order of precedence), for the delay attributable to contractor. For limiting the maximum value of LD, contract value shall be taken as Executed Value of work till termination of contract.

**Method for calculation of "LD against delay in executed work in case of termination of contract" is given below.**

- i) Let the time period from scheduled date of start of work till termination of contract excluding the period of Hold (if any) not attributable to contractor = T1
- ii) Let the value of executed work till the time of termination of contract = X
- iii) Let the Total Executable Value of work for which inputs/fronts were made available to contractor and were planned for execution till termination of contract = Y
- iv) Delay in executed work attributable to contractor i.e.  $T2 = [1 - (X/Y)] \times T1$
- v) LD shall be calculated in line with LD clause [as per GCC/SCC/TCC/Special note/any other annexure of tender document (in compliance with order of precedence)] of the Contract for the delay attributable to contractor taking "X" as Contract Value and "T2" as period of delay attributable to contractor.

**2.7.3 Recoveries arising out of Risk & Cost and LD or any other recoveries due from Contractor**

Following sequence shall be applicable for recoveries from contractor:

- a) Dues available in the form of Bills payable to contractor, SD, BGs against the same contract.
- b) Demand notice for deposit of balance recovery amount shall be sent to contractor, if funds are insufficient to effect complete recovery against dues indicated in (a) above.
- c) If contractor fails to deposit the balance amount to be recovered within the period as prescribed in demand notice, following action shall be taken for balance recovery:
  - i) Dues payable to contractor against other contracts in the same Region shall be considered for recovery.
  - ii) If recovery cannot be made out of dues payable to the contractor as above, balance amount to be recovered, shall be informed to other Regions/Units for making recovery from the Unpaid Bills/Running Bills/SD/BGs/Final Bills of contractor.
  - iii) In-case recoveries are not possible with any of the above available options, Legal action shall be initiated for recovery against contractor.

2.7.4 To terminate the contract or to restrict the quantum of work and pay for the portion of work executed in case BHEL's contract with their customers are terminated for any reason.

- 2.7.5 While every endeavour will be made by BHEL they cannot guarantee uninterrupted work due to conditions beyond their control. Contractor will not be entitled to any compensation / extra payment on this account.

2.8 Responsibilities of the Contractor:

The following are the responsibilities of the contractor in respect of observation of local laws, employment of personnel, payment of taxes and execution of job etc.

- 2.8.1 As far as possible, unskilled workers shall be engaged from the local areas in which the work is being executed.
- 2.8.2 The Contractor at all times during the continuance of this contract, shall in all his dealing with local labour for the time being employed on or in connection with the work, have due regard to all local festivals and religious and other customs.
- 2.8.3 The contractor shall comply with all state and central Laws, Statutory Rules, Regulations etc., such as:  
The payment of wages Act, Minimum Wage Act, Workmen compensation Act, Employers Liability Act, Industrial Disputes Act, Employees Provident Fund Scheme, Employees Insurance Scheme, Contract Labour (Regulation & Abolition) Act 1970 and other Acts, Rules & Regulations for labour as may be enacted by the Government during the tenure of the Contract and having force or jurisdiction at site. The Contractor shall give to the local Governing Body, Police and other relevant authorities all such notices as may be required by law.
- 2.8.4 The Contractor shall pay all taxes, fees, licence charges, deposits duties, tools, royalty, commission or other charges which may be leviable on account of any of his operations in executing the contract. In case, BHEL is forced to pay any of such taxes, BHEL shall have the right to recover the same from the contractor either from his bills or otherwise as deemed fit.
- 2.8.5 The Contractor shall be responsible for provision of health and sanitary arrangements, more particularly described in contract Labour (Regulation & Abolition Act) safety precautions etc., as may be required of same and satisfactory execution of the contract.
- 2.8.6 The contractor shall fulfil all his obligation in respect of accommodation including proper medical facilities for the personnel employed by him.
- 2.8.7 The contractor shall be responsible for the proper behaviour at site and observance of all regulations by the staff employed by him.
- 2.8.8 The Contractor shall ensure that no damage is caused to any person / property of other parties working at site. If any such damages is caused, it is the responsibility of the contractor to make the losses or compensate for the same.
- 2.8.9 All the properties / equipments / components of BHEL / their client loaned with or without deposit to the contractor in connection with the contract shall remain the properties of BHEL / their client. The Contractor shall use such properties for the purpose of execution of this contract. All such properties / equipment / components shall be deemed to be in good condition when received by the contractor unless he notified within 48 hours to the contrary. The Contractor shall return them in good conditions as and when required by BHEL / their client. In case of non-return, loss damage, repairs, etc. the cost thereof, as may be fixed by the site Engineer, will be recovered from the contractor.

- 2.8.10 It is not obligatory on the part of BHEL to supply any tools and tackles or other materials other than those specifically agreed to do so by BHEL. However, depending upon the availability / possibility BHEL's customers' handling equipment and other plants may be made available to the contractor on payment of the hire charges / free of charges as fixed, subject to the condition laid down by BHEL. Customer from time to time, Unless paid in advance, such hire charges if applicable shall be recovered from contractor's bill / security Deposit in one instalment.
- 2.8.11 The contractor shall not claim any compensation of the scope of the work, due to changes in design which curtails quantum.
- 2.8.12 The Contractor shall fully indemnify BHEL against all claims of whatsoever nature arising during the course of erection / overhauling / performing work under the contract.
- 2.8.13 In case the contractor is required to undertake any major work outside the scope of this contract the rates payable shall be decided by BHEL Resident Engineer.
- 2.8.14 The contractor shall keep the area of work clean and shall remove debris etc., while executing day to day work. Upon completion of work, the contractor shall remove from the vicinity of work, all scrap, packing materials, rubbish, unused and other materials and deposit them in places to be specified by the BHEL Engineer. The contractor will also demolish all hutments, sheds, partitions, offices, constructed and used by him and shall clean the debris. In the event of his failure to do so, the same will be arranged to be removed by the BHEL. The expenses thereof will be recovered from contractor.
- 2.8.15 The contractor shall arrange and co-ordinate his work in such a manner as to cause no inconvenience to other agencies working in the area.
- 2.8.16 All safety rules and codes applied by the client / BHEL at site shall be observed by the contractor without exception. The contractor shall be responsible for the safety of the equipment / material and work to be performed by him and shall maintain all light, fencing guards, signs etc. or other protection necessary for the purpose. Contractor shall also take such additional precautions as may be indicated from time to time by the Engineer with a view to prevent pilferage, accidents, fire hazards and atmospheric conditions. Suitable number of electrical staff, watch and ward, store keepers to take care of the equipment, materials and construction tools and tackles, shall be posted at site by the contractor till completion of the work under this contract. The contractor shall arrange for such safety devices as are necessary for such type of work and carry out the requisite tests of handling equipment, lifting tools, tackles etc, as per prescribed standards and practices.
- 2.8.17 The contractor will be directly responsible for payment of wages to his workmen. A pay roll sheet giving all the payments given to workers and duly signed by the contractor's representative should be furnished to BHEL site office for record purpose. BHEL site In-charge may be intimated the date of disbursement of wages to the workmen engaged for the work, so that his representative can witness the same.
- 2.8.18 The intent of specification, is to provide services according to most modern and proven techniques and codes. The omission of specific reference to any method, requirement or material necessary for the proper and efficient performance of work shall not relieve the contractor of the responsibility of providing such facilities to complete the work.

- 2.8.19 In case of any clause of the work for which there is no such specification as laid down in the contract, such work shall be carried out in accordance with the instructions and requirements of the BHEL Engineer.
- 2.8.20 No levy or payment or charge made or imposed shall be impeached by reason of any clerical error or by reason of any mistake in the amount levied or demanded or charged.
- 2.8.21 The details drawings, specifications, instructions manual, if any available with the BHEL Engineer will form part of tender specification. These documents will be made available for reference only to the contractor during execution of work.
- 2.8.22 Should any error or ambiguity be discovered in the specification or information, the contractor shall forthwith bring the same to the notice of BHEL before commencement of work. BHEL's interpretation in such cases shall be final and binding on the contractor.
- 2.8.23 No idle labour charges will be admissible in the event of any stoppage caused in the work resulting in contractor's labour being rendered idle due to any cause of any type.
- 2.8.24 **No over run charges shall be paid in the event of the completion period being extended for any reason whatsoever.**
- 2.8.25 It is possible that some repair/rectification, modification may be needed on the equipments to be overhauled / work to be performed under this specification, for reasons not attributions to the contractor. All such repair / rectification / modification work which can be done, with the available facilities at site shall be carried out by the contractor free of cost and no extra charges shall be paid to contractor.
- 2.8.26 The quality and progress of work will be regularly reviewed. The schedule and progress of work will be given to the contractor in advance and it will be the obligation / responsibility of the contractor to achieve the desired quality and progress of work by suitably reinforcing their labour force and/or by working extra hours or in more than one shift without any extra cost. Workmen found unsuitable for the work will be replaced immediately by the contractor on being informed by BHEL.
- 2.8.27 During the overhauling work under the contract it is very essential that proper and adequate inspection should be made constantly to maintain the quality or workmanship so that any deviation from design dimension does not exceed permissible limits. The proper functioning of the unit, while in operation, depends to a great extent on the above factors. The fact that effective supervision and inspection at the execution stage is less costly than any down time of running unit even for a short period need not be over emphasized. For the details regarding alignment and permissible dimensional deviations in the sub-assemblies BHEL Engineer may be consulted.
- 2.8.28 The contractor shall be furnish fortnightly labour report showing by classification of number of employees engaged in various categories or work date wise and submit a progress report of work as required by BHEL Engineer.
- 2.8.29 The contractor shall execute the work in the most substantial and workmen-like manner in stipulated time. Accuracy of work and timely execution are the essence of this contract. The contractor shall be responsible to ensure that the assembly and workmanship conform to the dimensions and clearances given in the drawings and/or as per instructions of BHEL Engineers.
- 2.8.30 The contractor shall take all responsible care to protect the materials and work till such time the plant/equipment has been taken over by BHEL / their client. Where necessary, suitable temporary fencing and lighting shall have to be provided by the contractor as a safety measure against accident and damage of property of BHEL. Suitable caution notice shall be displayed where access to any part may be deemed to be unsafe and hazardous.
- 2.8.31 It will be the responsibility of the contractor to ensure safe lifting of the equipments taking due precautions to avoid any accidents and damage to other equipments and personnel.
- 2.9 **Void**



2.10 Insurance:

2.10.1 BHEL / their customer shall arrange for insuring the materials / properties of BHEL/customer covering risks during transit, storage, overhauling, erection and commissioning.

2.10.2 It is the sole responsibility of the contractor to insure his workman against accident and injury while at work as required by relevant rules and to pay compensation, if any, to workmen as per workmen's compensation Act. Contractor shall insure his staff against accidents. The work will be carried out in a protected area and all the rules and regulations of the client / BHEL in the area of project which are in force from time to time, will have to be followed by the contractor.

2.10.3 If due to negligence and /or non-observations of safety and other precautions, any accident / injury occurs to any other person/public, the Contractor shall have to pay necessary compensation and other expenses, if so decided by the appropriate authorities. Third party insurance coverage is to be made by the contractor.

2.10.4 If due to contractor's carelessness, negligence or non-observance of safety precautions damage to BHEL's /Customer's property and personnel should occur, and if BHEL is unable to recover, in full, cost from the Insurance Company, the balance will be recovered from the Contractor.

2.11 Strikes & Lockouts :

The contractor will be fully responsible for all the disputes and other issues connected with his labour. In the event of the contractor's labour resorting to strike or the lockout declared is not settled within a period of one week BHEL shall have the right to get the work executed employing the own labour or through any other agencies or both and the cost so incurred by BHEL, shall be deducted from the contractor's bills as per clause 2.7. For all purposes whatsoever, the employees of the contractor shall not be deemed to be in the employment of BHEL.

2.12. Force Majeure :

2.12.1 The following shall amount to Force Majeure :

Acts of God, Acts of any Government, war, sabotage, riots, civil commotion, police action, revolution, flood, fire, cyclones, earthquake and epidemic and other similar causes over which the contractor has no control.

2.12.2 If the contractor suffers delay in the due execution of the contractual obligation due to delays caused by Force Majeure as defined above, the agreed time of completion of the job covered by this contract or the obligations of the Contractor shall be extended by a period of time equal to the period of delay provided that on the occurrence of any such contingency the Contractor immediately reports to BHEL in writing the causes of delay and the contractor shall not be eligible for any compensation.

2.13 Performance Guarantee:

Even though the work will be carried out under supervision of BHEL Engineers. The contractor shall guarantee against defects attributable to faulty workmanship or procedure adopted in the overhaul for items covered in the contract for a period of six months from the date of re-commissioning of the set after the capital overhaul. The guarantee should cover all defects notified during this period and shall have to be attended to free of cost immediately or at the time our clients are able to give shut down of the set for the required period. when necessary. In case of failure of contractor to attend to such defects as and when required in time, BHEL shall arrange to attend the defects and the charges shall be levied to contractor's account and shall be recoverable from the security deposit / progressive payments.



2.14. **ARBITRATION & CONCILIATION:**

2.14.1 **ARBITRATION:**

2.14.1.1 Except as provided elsewhere in this Contract, in case Parties are unable to reach amicable settlement (whether by Conciliation to be conducted as provided in Clause 2.14.2 herein below or otherwise) in respect of any dispute or difference; arising out of the formation, breach, termination, validity or execution of the Contract; or, the respective rights and liabilities of the Parties; or, in relation to interpretation of any provision of the Contract; or, in any manner touching upon the Contract (hereinafter referred to as the 'Dispute'), then, either Party may, commence arbitration in respect of such Dispute by issuance of a notice in terms of section 21 of the Arbitration & Conciliation Act, 1996 (hereinafter referred to as the 'Notice'). The Notice shall contain the particulars of all claims to be referred to arbitration in sufficient detail and shall also indicate the monetary amount of such claim. The arbitration shall be conducted by a sole arbitrator to be appointed by the Head of the BHEL Power Sector Region issuing the Contract within 60 days of receipt of the complete Notice. The language of arbitration shall be English.

The Arbitrator shall pass a reasoned award.

Subject as aforesaid, the provisions of Arbitration and Conciliation Act 1996 (India) or statutory modifications or re-enactments thereof and the rules made thereunder as in force from time to time shall apply to the arbitration proceedings under this clause. The seat of arbitration shall be Kolkata (the place from where the contract is Issued). The Contract shall be governed by and be construed as per provisions of the laws of India. Subject to this provision 2.14.1.1 regarding ARBITRATION, the principal civil court exercising ordinary civil jurisdiction over the area where the seat of arbitration is located shall have exclusive jurisdiction over any DISPUTE to the exclusion of any other court.

2.14.1.2 In case of Contract with Public Sector Enterprise (PSE) or a Government Department, the following shall be applicable:

In the event of any dispute or difference relating to the interpretation and application of the provisions of commercial contract(s) between Central Public Sector Enterprises (CPSEs)/ Port Trusts inter se and also between CPSEs and Government Departments/Organizations (excluding disputes concerning Railways, Income Tax, Customs & Excise Departments), such dispute or difference shall be taken up by either party for resolution through AMRCD (Administrative Mechanism for Resolution of CPSEs Disputes) as mentioned in DPE OM No. 4(1)/2013-DPE(GM)/FTS-1835 dated 22-05-2018 as amended from time to time.

2.14.1.3 The cost of arbitration shall initially be borne equally by the Parties subject to the final allocation thereof as per the award/order passed by the Arbitrator.

2.14.1.4 Notwithstanding the existence of any dispute or differences and/or reference for the arbitration, the Contractor shall proceed with and continue without hindrance the performance of its obligations under this Contract with due diligence and expedition in a professional manner unless the dispute inter-alia relates to cancellation, termination or short-closure of the Contract by BHEL.

**2.14.2 CONCILIATION:**

If at any time (whether before, during or after the arbitral or judicial proceedings), any Disputes (which term shall mean and include any dispute, difference, question or disagreement arising in connection with construction, meaning, operation effect, interpretation or breach of the agreement, contract), which the Parties are unable to settle mutually, arise inter-se the Parties, the same may, be referred by either party to Conciliation to be conducted through Independent Experts Committee (IEC) to be appointed by competent authority of BHEL from the BHEL Panel of Conciliators.

Notes:

1. No serving or a retired employee of BHEL/Administrative Ministry of BHEL shall be included in the BHEL Panel of Conciliators.
2. Any other person(s) can be appointed as Conciliator(s) who is/are mutually agreeable to both the parties from outside the BHEL Panel of Conciliators.

The proceedings of Conciliation shall broadly be governed by Part-III of the Arbitration and Conciliation Act 1996 or any statutory modification thereof and as provided in Procedure 2.3 : "Procedure for conduct of conciliation proceedings" (as available in [www.bhel.com](http://www.bhel.com)). The Procedure 2.3: "Procedure for conduct of conciliation proceedings" (as available in [www.bhel.com](http://www.bhel.com)) together with its Formats (as available in [www.bhel.com](http://www.bhel.com)) will be treated as if the same is part and parcel hereof and shall be as effectual as if set out herein in this GCC.

The Contractor hereby agrees that BHEL may make any amendments or modifications to the provisions stipulated in the Procedure 2.3 : "Procedure for conduct of conciliation proceedings" (as available in [www.bhel.com](http://www.bhel.com)) from time to time and confirms that it shall be bound by such amended or modified provisions of the Procedure 2.3 : "Procedure for conduct of conciliation proceedings" (as available in [www.bhel.com](http://www.bhel.com)) with effect from the date as intimated by BHEL to it.

**2.14.3 NO INTEREST PAYABLE TO CONTRACTOR:**

Notwithstanding anything to the contrary contained in any other document comprising in the Contract, no interest shall be payable by BHEL to Contractor on any moneys or balances including but not limited to the Security Deposit, EMD, Retention Money, RA Bills or the Final Bill, or any amount withheld and/or appropriated by BHEL etc., which becomes or as the case may be, is adjudged to be due from BHEL to Contractor whether under the Contract or otherwise.

SECTION – III  
SPECIAL CONDITIONS OR CONTRACT

3.1 Quantum of Work:

3.1.1 The scope of work given in the tender specification is only approximate and is liable to variation and alternation at the discretion of BHEL Resident Engineer. No compensation on this account shall be payable to the contractor unless specifically recommended by BHEL Resident Engineer as the variation forming major additions to the original scope of work. All repair / rectification work arising out of normal wear and tear, seizure of parts etc. have to be done by the contractor and the same will be covered by the scope of work of the contract.

3.1.2 The scope of work details out the major activities only. However, as per the general maintenance requirement and site condition, certain related activities may have to be carried out without any extra cost.

3.2 Commencement and completion of work :

3.2.1 The starting time and completion time is the essence of the of the tender. As the time bound programme is firmly committed to customer, the starting time and completion time should be strictly adhered to. It will be not be possible to grant extension in completion time except in extraordinary circumstance, which will be decided entirely at the discretion of BHEL Resident Engineer. Work should normally be carried out in two shifts and sometimes also in three shifts in consultation with BHEL Resident Engineer.

A detailed programme of the various activities covered under this contract with specific time period to fall in the overall frame work of the above dates should be prepared and got approved by BHEL Resident Engineer. The progress against this programme shall be reviewed with BHEL Resident Engineer at the end of each day and critical areas identified and suitable steps taken in time.

If during the review, at any stage of overhauling, BHEL Resident Engineer feels that the delays are not likely to be made up, BHEL reserves the right to take corrective steps as considered necessary by BHEL Resident Engineer to complete work in scheduled time and debit the cost incurred thereon to the contractor. This does not however absolve the contractor of his own efforts in consultation with BHEL Resident Engineer. Every endeavour will be made to see that work proceeds uninterruptedly.

3.2.2 The tenderers should indicate the time required for starting the work once the letter of intent is issued and the time required for completion. The work may have to commence immediately after opening of the tenders. Hence, preference may be given to those tenderers who can commence the work earlier, and also ensure early completion.

3.2.3 The Contractor shall ensure completion of the job in all respects within the day from the date of commencement of work as given in contract.

3.3 Penalty for delay:

3.3.1 In the event of failure to complete the work in given time, an amount equal to ½% [half percent] of the contract value per day subject to a maximum of 10% [ten percent] of the contract value will be levied as penalty, in case the balance work is allowed to be completed by the contractor beyond the scheduled time of completion, which is at the discretion of BHEL. In case of delays on contractor's part, at any stage during the scheduled period or after, BHEL shall have the option of ensuring completion of the job by any other means at its disposal and the charges on this account shall be levied on the contractor. These shall be adjusted against contractor's bills or Security Deposit.

**In case of LD recovery, the applicable GST shall also be recovered from vendor.**

3.4 Terms of Payment:

A minimum time of 15 days will be required for processing the bills and release of payment after the bills are presented to BHEL.

3.4.1 **As per STC**

All payments are subjects to income tax deductions @1% of the bill amount at source or as per Central Government Laws. No request for advance payment will be entertained by BHEL.

3.5 Inspection and Completion:

The work being carried out by the contractor will be supervised and inspected by our Site Engineers under the overall supervision of BHEL Resident Engineer.

3.6 The work will be deemed as complete when it is finally accepted by BHEL Resident Engineer and job completion certificate is issued. No extra payment will be made for any rework carried out by the contractor to rectify any defective work.

3.6 The contractor shall not be entitled for labour idling charges under any circumstances.

3.6 Tools, Tackles, Test Equipments & Consumables:

3.6.1 All tools and tackles and consumables required for day-to-day work like gas and gas cutting sets with accessories, AC/DC welding sets, TIG welding kits, welding cables, electrodes, all necessary power connection at his own cost. However, in case of emergency, BHEL may supply certain items if available, to contractor at actual cost plus handling charges, these will be deducted from contractors' running bills, testing equipment for conducting various tests, during the progress of overhauling / re- commissioning shall have to be provided by the contractor. Spare parts going into permanent installation shall only be provided by BHEL.

3.7 Accommodation for site staff and store space:

3.7.1 Contractor has to arrange for the stores and office at site; space for the same shall be made available as per the availability at site. The contractor shall be responsible to provide all necessary facilities like residential accommodation with sanitary facilities, transport, electricity, water, medical bonus etc. as required under various labour laws and statutory rules and regulations framed thereunder to the personnel employed by him.

3.8 Responsibilities of the contractor:

3.9 Supervisory staff and labour:

The contractor shall employ, specially skilled labour, supervisor and engineers thoroughly conversant with particular type of work to ensure quality work. BHEL reserves the right to decide on the suitability of the workers and other staff employed by the contractor. BHEL reserves the right to insist on removal of any employees of the contractor at any time if they find him unsuitable and the contractor should forthwith remove him.

3.9 Planning and Execution:

Contractor shall submit a job planning in form of Bar Chart or PERT Chart. A List of manpower category wise, indicating individuals responsibility job activity wise, shall have to be submitted. Daily programme of job shall be displayed on board near work site on day in advance. A daily progress report along with Manpower utilities has to be submitted and backlog of the work, if any, shall be covered up in consultation with BHEL Resident Engineer.

### 3.9 Safety and Accident Coverage

Contractor shall ensure safety of all his employees at site of work. All employees shall be covered by insurance (workmen compensation) against accident, failing which proper action will be taken against the contractor.

Contractor shall ensure proper safety of the equipments under overhauling by deputing personnel to guard the equipments round the clock. Open oil spaces, steam spaces shall be covered properly against ingress of foreign materials while working.

#### RESPONSIBILITIES OF THE CONTRACTOR IN RESPECT OF SAFETY OF MAN, EQUIPMENT, MATERIAL AND ENVIRONMENT

3.8.3.1 Before commencing the work, contractor shall submit a 'SAFETY PLAN' to the authorised BHEL official. The 'Safety Plan' shall indicate in detail the measures that would be taken by the contractor to ensure safety of men, equipment, material and environment during execution of the work. The plan shall take care to satisfy all requirements specified here under. The contractor shall submit safety plan along with his offer. During negotiations before placing or work order and during execution of the contract, BHEL shall have right to review and suggest modifications in the safety Plan. Contractor shall abide by BHEL decision in this respect.

3.8.3.2 The contractor shall take all necessary safety precautions and arrange for appropriate appliances as per direction of BHEL or it's authorised officials to prevent loss of human lives, injuries to personnel engaged, and damage to property and environment.

3.8.3.3 The contractor shall provide to it's work force and ensure the use of the following personal protective equipment as found necessary and as directed by the authorised BHEL officials:

- a. Safety Helmets conforming to IS-2925 : 1984
- b. Safety Belts confirming to IS – 3521 : 1983
- c. Safety shoes conforming to IS-1989 : 1978
- d. Eye & Face Protection devices conforming to IS-8520 : 1987 and IS-8940 : 1978
- e. Hand & body protection devices conforming to :
  - IS – 2573 : 1975
  - IS – 6994 : 1973
  - IS – 8807 : 1973
  - IS – 8513 : 1977

3.8.3.4 All tools tackles, lifting appliances, material handling equipment scaffolds, cradles, safety nets, ladders, equipment etc. used by the contractor shall be of safe design and construction. These shall be tested and certificate of fitness obtained before putting them to use and from time to time as instructed by authorised BHEL official who shall have the right to ban the use of any item.

3.8.3.5 All electrical equipment, connections and wiring for construction power, its distribution and use shall conform to the requirements of Indian Electricity Act & Rules. Only electricians licensed by the appropriate statutory authority shall be employed by the contractor to carry out all types of electrical works. All electrical appliance including portable electrical tools used by the contractor shall have safe plugging system to source of power and be appropriately earthed.

- 3.8.3.6 The contractor shall not use any hand – lamp energised by electric power with supply voltage of more than 24 volts. For work in confined spaces, lighting shall be arranged with power source not more than 24 volts.
- 3.8.3.7 The contractor shall adopt all fire safety measures as laid down in the “Code for Fire Safety at Construction Sites” issued by the safety Department of the Construction Management (HQ) of BHEL and as per directions of the authorised BHEL official. A copy of the above referred “Code for Fire Safety at Construction Sites” shall be made available by BHEL to the contractor for reference, on demand by the contractor, during tendering stage itself.
- 3.8.3.8 Where it become necessary to provide and / or store petroleum products, explosives, chemicals, and liquid or gaseous fuel or any other substance that may cause fire or explosion, the contractor shall be responsible for carrying out such provisions and / or storage in accordance with the rules and regulations laid down in the relevant government acts, such as Petroleum Act, Explosives Act, Petroleum & Carbides of Calcium Manual of the Chief Controller of Explosives, Govt. of India, etc. Prior approval of the authorised BHEL official at the site shall also be taken by the contractor in all such matters.
- 3.8.3.9 The contractor shall arrange at his cost (wherever not specified) appropriate illumination at all work spots for safe working, when natural daylight may not be adequate for clear visibility.
- 3.8.3.10 The contractor shall be held responsible for any violation of statutory regulations (local, state or central) and BHEL instructions, that may endanger safety of men, equipment, material and environment in his scope of work or another contractor's or agency's Cost of damage if any, to life and property arising out of such violation of statutory regulations and BHEL instructions shall be borne by the contractor.
- 3.8.3.11 In case of a fatal or disabling injury, accident to any person at construction site due to lapses by the contractor, the victim and / or his / her dependents shall be compensated by the contractor as per statutory requirements. However, if considered necessary, BHEL shall have the right to impose appropriate financial penalty on the contractor and recover the same from payments due to the contractor for suitably compensating the victim and / or his/her dependents. Before imposing any such penalty, appropriate enquiry shall be held by BHEL giving opportunity to the contractor to present his case.
- 3.8.3.12 In case of any damage to property due to lapses by the contractor, BHEL shall have the right to recover cost of such damages from payments due to the contractor after holding an appropriate enquiry.
- 3.8.3.13 In case of any delay in the completion of a job due to mishaps attributable to lapses by the contractor, BHEL shall have right to recover cost of such delay from payments due to the contractor, after notifying the contractor suitably and giving him opportunity to present his case.
- 3.8.3.14 If the contractor fails to improve the standards of safety in its operation to the satisfaction of BHEL after being given a reasonable opportunity to do so, and/or if the contractor fails to take appropriate safety precautions or to provide necessary safety devices and equipment or to carry out instructions regarding safety issued by the authorised BHEL official, BHEL shall have the right to take corrective steps at the risk and cost of the contractor after giving a notice of not less than seven days indicating the steps that would be taken by BHEL.

3.8.3.15 The contractor shall submit report of the accidents, fires and property damage, dangerous occurrences, to the authorised BHEL official immediately after such occurrence, but in any case not later than twelve hours of the occurrence. Such reports shall be furnished in the manner prescribed by BHEL. In addition, periodic reports on safety shall also be submitted by the contractor to the authorised BHEL official from time to time as prescribed.

3.8.3.16 Before commencing the work, the contractor shall appoint / nominate a responsible officer to supervise implementation of all safety measures and liaison with his counterpart of BHEL.

3.8.3.17 If safety record of the contractor in execution of the awarded job is to the satisfaction of safety Department of BHEL, issue of an appropriate certificate to recognise the safety performance of the contractor may be considered by BHEL after completion of the jobs.

3.9 Housekeeping and preservation:

3.9 Work floor/area shall be cleaned every day and be kept absolutely clean. A regular cleaning gang may be engaged for the purpose.

All dismantled components of the equipments under overhauling should be tag marked and stored properly according to type of components, namely all loose/small parts shall be kept in boxes bearing and matching components shall be kept on wooden planks. A list of such components shall be maintained to identify / locate be preserved properly against probable damages.

No floor shall be damaged while working and necessary steps shall be taken by the contractor for repair in case of any damage.

3.9 Tools stores and Consumables:

Tools & tackles, other than special tools and tackles supplied along with the equipments, shall be arranged and kept properly by the contractor. A register must be maintained and updated regularly.

All consumables, other than those going permanently into the equipment, shall be stored by the contractor for daily use. Regular check shall be made at end of each day's work and exhausted consumables shall be replenished immediately.

The store may be visited by BHEL Engineers without notice for verification.

3.9 The contractor shall make all necessary arrangement to receive spares from BHEL/Customer's stores, as and when required. The unused and scrap materials shall be returned to BHEL / Customer's stores on completion of the work.

A detailed account shall be submitted by the contractor to this effect at the end of the work certifying no dues remained against them duly signed by Resident Engineer BHEL/Customer.



3.9 General:

- 3.9.1 Standard printed conditions if enclosed with the offer by the tenderers will not be accepted and only those in main body of the offer will be considered for acceptance.
- 3.9.2 The tenders are likely to be rejected if the tendered is not acceptable to the ultimate customer.
- 3.9.3 It will be the responsibility of the contractor to carry out trial run of all the equipments overhauled and confirm the satisfactory operation of equipment. The contractor's personnel shall also be present at time of final commissioning and attend to any defects that shall occur during this time.

**PROFORMA OF BANK GUARANTEE (in lieu of SECURITY DEPOSIT)**

In consideration of the Bharat Heavy Electricals Limited (hereinafter referred to as the 'Employer' which expression shall unless repugnant to the context or meaning thereof, include its successors and permitted assigns) incorporated under the Companies Act, 1956 and having its registered office at BHEL House, Siri Fort, Asiad, New Delhi – 110049 through its Unit at Bharat Heavy Electricals Limited, Power Sector Eastern Region, BHEL Bhawan, Plot No 9/1, DJ Block, Sector-II, Salt lake City, Kolkata – 700091 having agreed to exempt (Name of the Vendor / Contractor / Supplier) having its registered office at \_\_\_\_\_<sup>1</sup> (hereinafter called the said Contractor which term includes supplier), from demand under the terms and conditions of the Contract reference No. \_\_\_\_\_<sup>2</sup> dated \_\_\_\_\_<sup>2</sup> valued at Rs. ....<sup>2</sup> ( Rupees -----)<sup>2</sup> for <Nature of the Work><sup>3</sup> (hereinafter called the said Contract) of Security Deposit for the due fulfilment by the said contractor of the terms and conditions contained in the said Contract, on production of a Bank Guarantee for Rs. \_\_\_\_\_<sup>4</sup> (Rupees \_\_\_\_\_ only), we \_\_\_\_ (indicate the name and address of the Bank) having its Head Office at \_\_\_\_\_ (address of the head Office) (hereinafter referred to as the Bank) at the request of \_\_\_\_\_ [Name of Contractor(s)] do hereby undertake to pay to the Employer an amount not exceeding Rs. \_\_\_\_\_ in the event of any breach by the said Contractor(s) of any of the terms and conditions contained in the said Contract.

We, \_\_\_\_\_ (indicate the name of the Bank), do hereby undertake to pay the amounts due and payable under this guarantee without any demur, merely on a demand from the Employer. Any such demand made on the bank, shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs. \_\_\_\_\_.

We undertake to pay to the Employer any money so demanded notwithstanding any dispute or disputes raised by the Contractor(s) in any suit or proceeding pending before any Court or Tribunal relating thereto our liability under this present being absolute and unequivocal.

The payment so made by us under this guarantee shall be a valid discharge of our liability for payment hereunder and the Contractor(s) shall have no claim against us for making such payment.

We, further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Contract and that it shall continue to be enforceable till all the dues of the Employer under or by virtue of the said Contract have been fully paid and its claim satisfied or discharged or till \_\_\_\_\_<sup>5</sup> or till the office/Department/Division of Bharat Heavy Electricals Limited certifies that the terms and conditions of the said Contract have been fully and properly carried out by the said contractor(s) and also including the satisfactory performance of the equipment during guarantee period and accordingly discharges this guarantee. Unless a demand or claim under this guarantee is made on us in writing on or before the \_\_\_\_\_<sup>6</sup>, (3 months more than the present date of validity of Bank Guarantee) we shall be discharged from all the liability under this guarantee thereafter.

We, \_\_\_\_\_ (indicate the name of the Bank) \_\_\_\_\_ further agree with the Employer that the Employer shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Contract or to extend time of performance by the said contractor(s) from time to time or to postpone for any time or from time to time any of the powers exercisable by the Employer against the said contractor(s) and to forbear or enforce any of the terms and conditions relating to the said Contract and we shall not be relieved from our liability by any reason of any such variation or extension being granted to the said contractor(s) or for any forbearance, act or omission on the part of the Employer or any indulgence by the Employer to the said contractor(s) or by any such matter or thing whatsoever which under the law relating to sureties would but for this provision have effect of so relieving us.

This guarantee will not be discharged due to the change in the constitution of the Bank or the Contractor(s).

We,..... BANK lastly undertake not to revoke this guarantee during its currency except with the previous consent of the Employer in writing.

Notwithstanding anything to the contrary contained hereinabove:

- a) The liability of the Bank under this Guarantee shall not exceed.....<sup>7</sup>
- b) This Guarantee shall be valid up to .....<sup>8</sup>
- c) Unless the Bank is served a written claim or demand on or before \_\_\_\_\_<sup>9</sup> (3 months more than the present date of validity of Bank Guarantee) all rights under this guarantee shall be forfeited and the Bank shall be relieved and discharged from all liabilities under this guarantee irrespective of whether or not the original bank guarantee is returned to the Bank.

We, \_\_\_\_\_ (indicate the name of the Bank) \_\_\_\_\_ lastly undertake not to revoke this guarantee during its currency except with the previous consent of the Employer in writing.

Any claim or dispute arising under the terms of this document shall only be enforced or settled in the courts of at Kolkata only.

Date \_\_\_\_\_ Day of \_\_\_\_\_  
for \_\_\_\_\_ (indicate the name of the Bank) \_\_\_\_\_

(Signature of Authorised signatory)

<sup>1</sup> NAME AND ADDRESS OF THE VENDOR /CONTRACTOR / SUPPLIER .

<sup>2</sup> DETAILS ABOUT THE NOTICE OF AWARD/CONTRACT REFERENCE

<sup>3</sup> PROJECT/SUPPLY DETAILS

<sup>4</sup> BG AMOUNT IN FIGURES AND WORDS

<sup>5</sup> VALIDITY DATE

<sup>6</sup> DATE OF EXPIRY OF CLAIM PERIOD

<sup>7</sup> BG AMOUNT IN FIGURES AND WORDS.

<sup>8</sup> VALIDITY DATE

<sup>9</sup> DATE OF EXPIRY OF CLAIM PERIOD

**Note:**

1. Units are advised that expiry of claim period may be kept 2/3 months after validity date.

2. In Case of Bank Guarantees submitted by Foreign Vendors-

- a. **From Nationalized/Public Sector / Private Sector/ Foreign Banks (BG issued by Branches in India)** can be accepted subject to the condition that the Bank Guarantee should be enforceable in the town/city or at nearest branch where the Unit is located i.e. Demand can be presented at the Branch located in the town/city or at nearest branch where the Unit is located.
- b. **From Foreign Banks (wherein Foreign Vendors intend to provide BG from local branch of the Vendor country's Bank)**
- b.1 In such cases, in the Tender Enquiry/ Contract itself, it may be clearly specified that Bank Guarantee issued by **any of the Consortium Banks only** will be accepted by BHEL. As such, Foreign Vendor needs to make necessary arrangements for issuance of Counter-Guarantee by Foreign Bank in favour of the Indian Bank (BHEL's Consortium Bank). It is

advisable that all charges for issuance of Bank Guarantee/ counter- Guarantee should be borne by the Foreign Vendor. The tender stipulation should clearly specify these requirements.

- b.2**     **In case, Foreign Vendors intend to provide BG from Overseas Branch of our Consortium Bank (e.g. if a BG is to be issued by SBI Frankfurt), the same is acceptable.** However, the procedure at **sl.no. b.1** will required to be followed.
- b.3**     The BG issued may preferably be subject to Uniform Rules for Demand Guarantees (URDG) 758 (as amended from time to time). In case, of Foreign Vendors, the BG Format provided to them should clearly specify the same.
- b.4**     The BG should clearly specify that the demand or other document can be presented in electronic form.

## **BANK GUARANTEE FOR PERFORMANCE SECURITY**

Bank Guarantee No:

Date:

To

NAME

& ADDRESSES OF THE BENEFICIARY

Dear Sirs,

In consideration of the Bharat Heavy Electricals Limited (hereinafter referred to as the 'Employer' which expression shall unless repugnant to the context or meaning thereof, include its successors and permitted assigns) incorporated under the Companies Act, 1956 and having its registered office at BHEL House, Siri Fort, Asiad, New Delhi – 110049 through its Unit at Bharat Heavy Electricals Limited, Power Sector Eastern Region, BHEL Bhawan, Plot No 9/1, DJ Block, Sector-II, Salt lake City, Kolkata – 700091 having awarded to (Name of the Vendor / Contractor / Supplier) having its registered office at \_\_\_\_\_<sup>1</sup> hereinafter referred to as the 'Contractor/Supplier', which expression shall unless repugnant to the context or meaning thereof, include its successors and permitted assigns), a contract Ref No.....dated .....<sup>2</sup> valued at Rs.....<sup>2</sup> ( Rupees -----)for <Nature of Work><sup>3</sup> (hereinafter called the 'Contract') and the Contractor having agreed to provide a Contract Performance Guarantee, equivalent to .....% (.... Percent) of the said value of the Contract to the Employer for the faithful performance of the Contract,

we, ....., (hereinafter referred to as the Bank), having registered/Head office at ..... and inter alia a branch at ..... being the Guarantor under this Guarantee, hereby, irrevocably and unconditionally undertake to forthwith and immediately pay to the Employer a maximum amount Rs ----- ( Rupees -----)<sup>4</sup> without any demur, immediately on a demand from the Employer, .

Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs. \_\_\_\_\_.

We undertake to pay to the Employer any money so demanded notwithstanding any dispute or disputes raised by the Contractor/ Supplier in any suit or proceeding pending before any Court or Tribunal relating thereto our liability under this present being absolute and unequivocal.

The payment so made by us under this Guarantee shall be a valid discharge of our liability for payment thereunder and the contractors/supplier shall have no claim against us for making such payment.

We the .....bank further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Contract and that it shall continue to be enforceable till all the dues of the Employer under or by virtue of the said Contract have been fully paid and its claims satisfied or discharged.

We ..... BANK further agree with the Employer that the Employer shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Contract or to extend time of performance by the said Contractor/Supplier from time to time or to postpone for any time or from time to time any of the powers exercisable by the Employer against the said Contractor/Supplier and to forbear or enforce any of the terms and conditions relating to the said Agreement and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said Contractor/Supplier or for any forbearance, act or omission on the part of the Employer or any indulgence by the Employer to the said Contractor/Supplier or by any such matter or thing whatsoever which under the law relating to sureties would but for this provision have effect of so relieving us.

The Bank also agrees that the Employer at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor, in the first instance without proceeding against the Contractor and notwithstanding any security or other guarantee that the Employer may have in relation to the Contractor's liabilities.

This Guarantee shall remain in force upto and including.....<sup>5</sup> and shall be extended from time to time for such period as may be desired by Employer.

This Guarantee shall not be determined or affected by liquidation or winding up, dissolution or change of constitution or insolvency of the Contractor/Supplier but shall in all respects and for all purposes be binding and operative until payment of all money payable to the Employer in terms thereof.

Unless a demand or claim under this guarantee is made on us in writing on or before the .....<sup>6</sup> (3 months more than the present date of validity of Bank Guarantee) we shall be discharged from all liabilities under this guarantee thereafter.

We, ..... BANK lastly undertake not to revoke this guarantee during its currency except with the previous consent of the Employer in writing.

Notwithstanding anything to the contrary contained hereinabove:

- a) The liability of the Bank under this Guarantee shall not exceed.....<sup>7</sup>
- b) This Guarantee shall be valid up to .....<sup>8</sup>
- c) Unless the Bank is served a written claim or demand on or before .....<sup>9</sup> (3 months more than the present date of validity of Bank Guarantee) all rights under this guarantee shall be forfeited and the Bank shall be relieved and discharged from all liabilities under this guarantee irrespective of whether or not the original bank guarantee is returned to the Bank.

We, \_\_\_\_\_ Bank, have power to issue this Guarantee under law and the undersigned as a duly authorized person has full powers to sign this Guarantee on behalf of the Bank.

*Any claim or dispute arising under the terms of this document shall only be enforced or settled in the courts of at Kolkata only.*

For and on behalf of  
(Name of the Bank)

Dated.....

Place of Issue.....

<sup>1</sup> NAME AND ADDRESS OF THE VENDOR /CONTRACTOR / SUPPLIER.

<sup>2</sup> DETAILS ABOUT THE NOTICE OF AWARD/CONTRACT REFERENCE

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**Note:**

**1. Units are advised that expiry of claim period may be kept 2/3 months after validity date.**

**2. In Case of Bank Guarantees submitted by Foreign Vendors-**

- a. From Nationalized/Public Sector / Private Sector/ Foreign Banks (BG issued by Branches in India)** can be accepted subject to the condition that the Bank Guarantee should be enforceable in the town/city or at nearest branch where the Unit is located i.e. Demand can be presented at the Branch located in the town/city or at nearest branch where the Unit is located.
- b. From Foreign Banks (wherein Foreign Vendors intend to provide BG from local branch of the Vendor country's Bank)**
  - b.1** In such cases, in the Tender Enquiry/ Contract itself, it may be clearly specified that Bank Guarantee issued by **any of the Consortium Banks only** will be accepted by BHEL. As such, Foreign Vendor needs to make necessary arrangements for issuance of Counter- Guarantee by Foreign Bank in favour of the Indian Bank (BHEL's Consortium Bank). It is advisable that all charges for issuance of Bank Guarantee/ counter- Guarantee should be borne by the Foreign Vendor. The tender stipulation should clearly specify these requirements.
  - b.2** In case, Foreign Vendors intend to provide BG from Overseas Branch of our Consortium Bank (e.g. if a BG is to be issued by SBI Frankfurt), the same is acceptable. However, the procedure at **sl.no. b.1** will required to be followed.



- b.3** The BG issued may preferably be subject to Uniform Rules for Demand Guarantees (URDG) 758 (as amended from time to time). In case, of Foreign Vendors, the BG Format provided to them should clearly specify the same.
- b.4** The BG should clearly specify that the demand or other document can be presented in electronic form.

**List of Consortium Banks \***

	<b>Nationalised Banks</b>		<b>Nationalised Banks</b>
1	Allahabad bank	19	Vijaya Bank
2	Andhra bank		<b>Public Sector Banks</b>
3	Bank of Baroda	20	IDBI
4	Canara Bank		<b>Foreign banks</b>
5	Corporation bank	21	CITI Bank N.A
6	Central bank	22	Deutsche Bank AG
7	Indian Bank	23	The Hongkong and Shanghai Banking Corporation Limited
8	Indian Oversea Bank	24	Standard Chartered Bank
9	Oriental bank of Commerce	25	J P Morgan
10	Punjab National Bank		
11	Punjab & Sindh Bank		<b>Private banks</b>
12	State Bank of India	26	Axis Bank
13	State Bank of Hyderabad	27	The Federal Bank Limited
14	Syndicate Bank	28	HDFC
15	State Bank of Travancore	29	Kotak Mahindra Bank
16	UCO Bank	30	ICICI
17	Union Bank of India	31	Indusind Bank
18	United Bank of India	32	Yes Bank

\*      wef 22.03.2016

## **RTGS FORMAT**

### **Form for getting payment through RTGS (Real Time Gross Settlement)**

01. NAME OF VENDOR
02. ADDRESS
03. VENDOR'S BANK A/C NAME
04. VENDOR'S BANK A/C NO.
05. NAME OF BANK
06. NAME OF BRANCH
07. BRANCH PH. NO.
08. CITY
09. IFSC CODE OF THE BRANCH

THE CHARGES IF ANY FOR PAYMENT THROUGH RTGS MAY BE RECOVERED FROM THE BILL SUBMITTED BY US.

SIGNATURE OF AUTHORISED REPRESENTATIVE  
OF VENDOR WITH DATE & SEAL

CONFIRMATION BY BANKER WITH  
OFFICE SEAL

Note : Incorrect information will create accounting complications and payment will be delayed.

Form for getting payment through RTGS (Real Time Gross Settlement)

01. Name of Vendor BHARAT HEAVY ELECTRICALS LTD.  
02. Address ~~BHEL~~ BHEL HOUSE, SIRI FORT, N. DELHI  
03. Vendors Bank A/c Name BHARAT HEAVY ELECTRICALS LTD.  
04. Vendors Bank A/c No. 11107800029  
05. Name of Bank STATE BANK OF INDIA  
06. Name of Branch COMMERCIAL BR., SALT LAKE, SECTOR-V  
07. Branch Phone No. KOLKATA  
08. City 033-23575666  
09. IFSC Code of the Branch KOLKATA  
SBIN 0004289

The charges if any for payment through RTGS may be recovered from the Bill submitted by us.

Signature of Authorized Representative of Vendor  
के. के. कोआरी / K. K. Coari  
उप महाप्रबंधक (वित्त) / Dy. General Manager (Fin)  
बी. एच. ई. एल. : पी.एस.ई.आर : कोलकाता - 700 091  
BHEL: PSER / Kolkata-700 091

Confirmation by Banker  
with office seal

Note : Incorrect information will create Accounting complications and payment will be delayed