

# TENDER SPECIFICATION

SI No	Tender Specification Number	Unit Number & Project
1	BHE/PW/PUR/BSI-OH/1244	U#2, 30 MW, NSPCL Bhilai

FOR

Replacement of 30 MW Generator Rotor of Unit # 2 of Power Plant – II at NSPCL Bhilai

VOLUME – I

## CONSISTING OF:

- Notice Inviting Tender,
- Volume-IA : Technical Conditions of Contract,
- Volume-IB : Special Conditions of Contract,
- Volume-IC : General Conditions of Contract
- Volume-ID : Forms & Procedures



**Bharat Heavy Electricals Limited**  
(A Government of India Undertaking)  
Power Sector - Western Region  
345-Kingsway, Nagpur-440001

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# Tender Specification Issue Details

## TENDER SPECIFICATION

SI No	Tender Specification Number	Unit Number & Project
1	BHE/PW/PUR/BSI-OH/1244	U#2, 30 MW, NSPCL Bhilai

FOR

**Replacement of 30 MW Generator Rotor of Unit # 2 of Power Plant – II at NSPCL Bhilai**

EARNEST MONEY DEPOSIT: Refer Notice Inviting Tender

LAST DATE FOR Refer Notice Inviting Tender

THESE TENDER SPECIFICATION DOCUMENTS CONTAINING VOLUME-I AND VOLUME- II ARE ISSUED TO:

M/s. ....

.....

PLEASE NOTE:  
THESE TENDER SPECS DOCUMENTS ARE NOT TRANSFERABLE.

Bharat Heavy Electricals Limited

AGM (Purchase)

Place:

Nagpur

1244

# NOTICE INVITING TENDER

Bharat Heavy Electricals Limited



**BHEL PSWR**  
**Notice Inviting Tender**  
**Tender Specification No: BHE/PW/PUR/BSI-OH/1244**

Ref: BHE/PW/PUR/BSI-OH/1244

Date: 11.03.2014

**NOTICE INVITING TENDER (NIT)**  
**NOTE: BIDDER MAY DOWNLOAD FROM WEB SITES**  
**OR**  
**PURCHASE TENDERS FROM THIS OFFICE ALSO**

To

Dear Sir/Madam

**Sub : NOTICE INVITING TENDER**

Sealed offers in two part bid system are invited from reputed & experienced bidders (meeting PRE QUALIFICATION CRITERIA as mentioned in Annexure-I) for the subject job by the undersigned on the behalf of BHARAT HEAVY ELECTRICALS LIMITED as per the tender document. Following points relevant to the tender may please be noted and complied with.

**1.0 Salient Features of NIT**

SL NO	ISSUE	DESCRIPTION
i	TENDER NUMBER	BHE/PW/PUR/BSI-OH/1244
ii	Broad Scope of job	Replacement of 30 MW Generator Rotor of Unit # 2 of Power Plant – II at NSPCL Bhilai
iii	DETAILS OF TENDER DOCUMENT	
a	Volume-IA	<i>Technical Conditions of Contract (TCC) consisting of Scope of work, Technical Specification, Drawings, Procedures, Bill of Quantities, Terms of payment, etc</i> <span style="float: right;">Applicable</span>
b	Volume-IB	<i>Special Conditions of Contract (SCC)</i> <span style="float: right;">Applicable</span>
c	Volume-IC	<i>General Conditions of Contract (GCC)</i> <span style="float: right;">Applicable</span>
d	Volume-ID	<i>Forms and Procedures</i> <span style="float: right;">Applicable</span>
e	Volume-II	<i>Price Schedule (Absolute value).</i> <span style="float: right;">Applicable</span>
iv	Issue of Tender Documents	<b>11.03.2014</b> <span style="float: right;">Applicable/ <del>Not applicable</del></span>
v	DUE DATE & TIME OF OFFER SUBMISSION	<b>Date : 01.04.2014 , Time : 15.00 Hrs</b> <b>Place : <u>BHEL PS Regional office at :Nagpur</u></b> Tenders being submitted through representative shall be handed over to any of the following BHEL officials after making entry/registration at the reception: Saravana Kumar/Engineer(Purchase) Nirmal P.G/ Asst.Engineer(Purchase) <span style="float: right;">Applicable</span>

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vi	<b>OPENING TENDER</b>	<b>OF</b>	<b>Date : 01.04.2014 , Time : 16.00 Hrs</b> Notes: (1) In case the due date of opening of tender becomes a non-working day, then the due date & time of offer submission and opening of tenders get extended to the next working day. (2) Bidder may depute representative to witness the opening of tender	Applicable
vii	<b>EMD AMOUNT</b>		Rs.40,000/- (Rupees Forty Thousand Only)	Applicable
viii	<b>COST OF TENDER</b>		Rs.2000/-	Applicable
ix	<b>LAST DATE FOR SEEKING CLARIFICATION</b>		Atleast 5 days before the due date of offer submission Along with soft version also, addressing to undersigned & to others as per contact address given below	Applicable
x	<b>SCHEDULE OF Pre Bid Discussion (PBD)</b>		Date :	Applicable/Not applicable.
xi	<b>INTEGRITY PACT &amp; DETAILS OF INDEPENDENT EXTERNAL MONITOR (IEM)</b>		-----	Applicable/Not applicable.
xii	<b>Latest updates</b>		Latest updates on the important dates, Amendments, Correspondences, Corrigenda, Clarifications, Changes, Errata, Modifications, Revisions, etc to Tender Specifications will be intimated by Fax/E-mail. Bidders to keep themselves updated with all such information	<b><u>Applicable</u></b>

- 2.0 The offer shall be submitted as per the instructions of tender document and as detailed in this NIT. Bidders to note specifically that all pages of tender document, including these NIT pages of this particular tender together with subsequent correspondences shall be submitted by them, duly signed & stamped on each page, as part of offer. **Rates/Price including discounts/rebates, if any, mentioned anywhere/in any form in the techno-commercial offer other than the Price Bid, shall not be entertained.**
- 3.0 Unless specifically stated otherwise, bidder shall remit cost of tender and courier charges if applicable, in the form of Demand Draft drawn in favour of Bharat Heavy Electricals Ltd, payable at Power Sector Regional HQ at Nagpur issuing the Tender, along with techno-commercial offer. Bidder may also choose to deposit the Tender document cost by cash at the Cash Office as stated above against sl no iv of 1, on any working day; and in such case copy of Cash receipt is to be enclosed with the Techno Commercial offer. Sale of tender Documents shall not take place on National Holidays, holidays declared by Central or State Governments and BHEL PS HQ at Nagpur, Sundays and second/ last Saturdays
- 4.0 Unless specifically stated otherwise, bidder shall deposit EMD through Demand Draft/Pay Order in favour of Bharat Heavy Electricals Ltd, payable at Nagpur. For other details and for 'One Time EMD' please refer General Conditions of Contract.

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- 5.0 **Procedure for Submission of Tenders:** The Tenderers must submit their Tenders to Officer inviting Tender, as detailed below:
- PART-I consisting of 'PART-I A (Techno Commercial Bid)' & 'PART-I B (EMD/COST of TENDER)' in two separate sealed and superscribed envelopes (ENVELOPE-I & ENVELOPE-II)
  - PART-II (Price Bid) – in sealed and superscribed envelope (ENVELOPE-III)
  - One set of tender documents shall be retained by the bidder for their reference
- 6.0 The contents for ENVELOPES and the superscription for each sealed cover/Envelope are as given below.  
**(All pages to be signed and stamped)**

Sl no	Description	Remarks
	<b>Part-I A</b>	
	<b>ENVELOPE – I superscribed as :</b> PART-I (TECHNO COMMERCIAL BID) TENDER NO : NAME OF WORK : PROJECT: DUE DATE OF SUBMISSION:  <b>CONTAINING THE FOLLOWING:-</b>	
i.	Covering letter/Offer forwarding letter of Tenderer.	
ii.	Duly filled-in 'No Deviation Certificate' as per prescribed format to be placed after document under sl no (i) above.  <b>Note:</b> <ol style="list-style-type: none"> <li>a. In case of any deviation, the same should be submitted separately for technical &amp; commercial parts, indicating respective clauses of tender against which deviation is taken by bidder. The list of such deviation shall be placed after document under sl no (i) above. It shall be specifically noted that deviation recorded elsewhere shall not be entertained.</li> <li>b. BHEL reserves the right to accept/reject the deviations without assigning any reasons, and BHEL decision is final and binding.               <ol style="list-style-type: none"> <li>i). In case of acceptance of the deviations, appropriate loading shall be done by BHEL</li> <li>ii). In case of unacceptable deviations, BHEL reserves the right to reject the tender</li> </ol> </li> </ol>	
iii.	Supporting documents/ annexure/ schedules/ drawing etc as required in line with Pre-Qualification criteria.  It shall be specifically noted that all documents as per above shall be indexed properly and credential certificates issued by clients shall distinctly bear the name of organization, contact ph no, FAX no, etc.	
iv.	All Amendments/Correspondences/Corrigenda/Clarifications/Changes/ Errata etc pertinent to this NIT.	
v.	Integrity Pact Agreement (Duly signed by the authorized signatory)	If applicable
vi.	Duly filled-in annexures, formats etc as required under this Tender	

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	Specification/NIT	
vii.	Notice inviting Tender (NIT)	
viii.	Volume – I A : <u>Technical</u> Conditions of Contract (TCC) consisting of Scope of work, Technical Specification, Drawings, Procedures, Bill of Quantities, Terms of payment, etc	
ix.	Volume – I B : Special Conditions of Contract (SCC)	
x.	Volume – I C : General Conditions of Contract (GCC)	
xi.	Volume – I D : Forms & Procedures	
xii.	Volume – II (UNPRICED – without disclosing rates/price, but mentioning only 'QUOTED' or 'UNQUOTED' against each item	
xiii.	Any other details preferred by bidder with proper indexing.	

	<b>PART-I B</b>	
	<p><b>ENVELOPE – II superscribed as:</b>  PART-I (EMD/COST of TENDER)  TENDER NO :  NAME OF WORK :  PROJECT:  DUE DATE OF SUBMISSION:</p> <p><b>CONTAINING THE FOLLOWING:-</b></p>	
i.	<p>1. Earnest Money Deposit (EMD) in the form as indicated in this Tender  <u>OR</u>  Documentary evidence for 'One Time EMD' with the Power Sector Region of BHEL floating the Tender</p> <p>2. Cost of Tender ( Demand Draft or copy of Cash Receipt as the case may be)</p>	

	<b>PART-II</b>	
	<b>PRICE BID</b> consisting of the following shall be enclosed	
	<p><b>ENVELOPE-III</b>  superscribed as:  PART-II (PRICE BID)  TENDER NO :  NAME OF WORK :  PROJECT:  DUE DATE OF SUBMISSION:</p> <p><b>CONTAINING THE FOLLOWING</b></p>	
i	Covering letter/Offer forwarding letter of Tenderer enclosed in Part-I	
ii	Volume II – PRICE BID ( Duly Filled in Schedule of Rates – rate/price to be entered in words as well as figures)	

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<b>OUTER COVER</b>	
	<p><b>ENVELOPE-IV</b> (MAIN ENVELOPE / OUTER ENVELOPE)  superscribed as:  TECHNO-COMMERCIAL BID, PRICE BID &amp; EMD  TENDER NO:  NAME OF WORK:  PROJECT:  DUE DATE OF SUBMISSION:</p> <p><b>CONTAINING THE FOLLOWING:</b></p>
i	<ul style="list-style-type: none"> <li>○ Envelopes I</li> <li>○ Envelopes II</li> <li>○ Envelopes III</li> </ul>

SPECIAL NOTE : 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.

- 7.0 Deviation with respect to tender clauses and additional clauses/suggestions in Techno-commercial bid / Price bid shall NOT be considered by BHEL. Bidders are requested to positively comply with the same.
- 8.0 BHEL reserves the right to accept or reject any or all Offers without assigning any reasons thereof. BHEL also reserves the right to cancel the Tender wholly or partly without assigning any reason thereof. Also BHEL shall not entertain any correspondence from bidders in this matter (except for the refund of EMD).
- 9.0 Since the job shall be executed at site, bidders must visit site/ work area and study the job content, facilities available, availability of materials, prevailing site conditions including law & order situation, applicable wage structure, wage rules, 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.
- 10.0 Since the job shall be executed at site, bidders must visit site/ work area and study the job content, facilities available, availability of materials, prevailing site conditions including law & order situation, applicable wage structure, wage rules, 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.
- 11.0 For any clarification on the tender document, the bidder may seek the same in writing or through e-mail, as per specified format, within the scheduled date for seeking clarification, from the office of the undersigned. BHEL shall not be responsible for receipt of queries after due date of seeking clarification due to postal delay or any other delays. Any clarification / query received after last date for seeking clarification may not be normally entertained by BHEL and no time extension will be given.
- 12.0 BHEL may decide holding of pre-bid discussion [PBD] with all intending bidders as per date indicated in the NIT. The bidder shall ensure participation for the same at the appointed time, date and place as may be

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decided by BHEL. Bidders shall plan their visit accordingly. The outcome of pre-bid discussion (PBD) shall also form part of tender.

- 13.0 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, the same to be brought to the knowledge of BHEL in writing for clarification before due date of seeking clarification (whichever is applicable), otherwise, interpretation by BHEL shall prevail. Any typing error/missing pages/ other clerical errors in the tender documents, noticed must be pointed out before pre-bid meeting/submission of offer, else BHEL's interpretation shall prevail.
- 14.0 Unless specifically mentioned otherwise, bidder's quoted price shall deemed to be in compliance with tender including PBD.
- 15.0 Bidders shall submit Integrity Pact Agreement (Duly signed by authorized signatory who signs in the offer), **if applicable**, along with techno-commercial bid. This pact shall be considered as a preliminary qualification for further participation. **The names and other details of Independent External Monitor (IEM) for the subject tender is as given at point (1) above.**
- 16.0 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 be qualified for the subject job on the basis of satisfying the Pre Qualification Criteria specified in this NIT as per Annexure-I (as applicable), past performance etc. and date of opening of price bids shall be intimated to only such bidders. BHEL reserves the right not to consider offers of parties under HOLD.
- 17.0 In case BHEL decides on a 'Public Opening', the date & time of opening of the sealed PRICE BID shall be intimated to the qualified bidders and in such a case, bidder may depute one authorised representative to witness the price bid opening. BHEL reserves the right to open 'in-camera' the 'PRICE BID' of any or all Unsuccessful/Disqualified bidders under intimation to the respective bidders.
- 18.0 Validity of the offer shall be for **six months** from the latest due date of offer submission (including extension, if any) unless specified otherwise.
- 19.0 BHEL reserves the right to decide the successful bidder on the basis of Reverse Auction process. In such case all qualified bidders will be intimated regarding procedure/ modality for Reverse Auction process prior to Reverse Auction and price will be decided as per the rules for Reverse Auction. .  
  
However, if reverse auction process is unsuccessful as defined in the RA rules/procedures, or for whatsoever reason, then the sealed 'PRICE BIDS' will be opened for deciding the successful bidder. BHEL's decision in this regard will be final and binding on bidder.
- 20.0 On submission of offer, further consideration will be subject to compliance to tender & qualifying requirement and customer's acceptance, as applicable.
- 21.0 In case the bidder is an "Indian Agent of Foreign Principals", 'Agency agreement has to be submitted along with Bid, detailing the role of the agent along with the terms of payment for agency commission in INR, along with supporting documents.
- 22.0 The bidders shall not enter into any undisclosed M.O.U. or any understanding amongst themselves with respect to tender.

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- 23.0 Consortium Bidding (or Technical Tie up) shall be allowed only if specified in Pre Qualifying Requirement (PQR) criteria, and in such a case the following shall be complied with:
- 23.1 Prime Bidder and Consortium Partner or partners are required to enter into a consortium agreement with a validity period of six months initially. In case the consortium is awarded the contract, then the Consortium Agreement between the Prime Bidder and Consortium Partner or partners shall be extended till contractual completion period including extension periods if any applicable.
- 23.2 'Stand alone' bidder cannot become a **Prime Bidder** or a **Consortium bidder** or **Technical Tie up bidder** in a consortium (or Technical Tie up) bidding. Prime bidder shall neither be a consortium partner to other prime bidder nor take any other consortium partners. However, consortium partner may enter into consortium agreement with other prime bidders. In case of non compliance, consortium bids of such Prime bidders will be rejected.
- 23.3 Number of partners for a consortium Bidding (or Technical Tie up) shall be as specified in the PQR
- 23.4 Prime Bidder shall be as specified in the Pre Qualification Requirement, else the bidder who has the major share of work
- 23.5 In order to be qualified for the tender, Prime Bidder and Consortium partner or partners shall satisfy (i) the Technical 'Pre Qualifying Requirements' specified for the respective package, (ii) "Assessment of Capacity of Bidder" as specified in clause 9.0
- 23.6 Prime Bidder shall comply with additional 'Technical' criteria of PQR as defined in 'Explanatory Notes for the PQR'
- 23.7 Prime Bidder shall comply with all other Pre Qualifying criteria for the Tender unless otherwise specified
- 23.8 In case customer approval is required, then Prime Bidder and Consortium Partner or partners shall have to be individually approved by Customer for being considered for the tender.
- 23.9 Prime Bidder shall be responsible for the overall execution of the contract
- 23.10 In case of award of job, Performance shall be evaluated for Prime Bidder and Consortium Partner or partners for their respective scope of work(s) as per prescribed formats
- 23.11 In case the Consortium partner or partners back out, their SDs shall be encashed by BHEL. In such a case, other consortium partner or partners meeting the PQR have to be engaged by the Prime Bidder, and if not, the respective work will be withdrawn and executed on risk and cost basis of the Prime Bidder. The new consortium partner or partners shall submit fresh SDs as applicable.
- 23.12 In case the prime Bidder withdraws, the whole contract shall be considered cancelled and short closed.
- 23.13 After execution of work, the work experience shall be assigned to the Prime Bidder and the consortium partner or partners for their respective scope of work. After successful execution of two

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similar works with the same consortium partner or partners under direct orders of BHEL, the Prime Bidder shall be eligible for becoming a 'stand alone' bidder for similar works, subject to certification from BHEL about the active involvement of the Prime Bidder for satisfactory execution of the works.

- 23.14 The consortium partner shall submit SD equivalent to 2% of the total contract value in addition to the SD to be submitted by the prime Bidder for the total contract value. In case there are two consortium partners, then each partner shall submit SD equivalent to 1% of the total contract value in addition to the SD to be submitted by the prime Bidder for the total contract value.
- 23.15 In case of a Technical Tie up, all the clauses applicable for the Consortium partner shall be applicable for the Technical Tie up partner also
- 24.0 The bidder shall submit documents in support of possession of 'Qualifying Requirements' duly self certified and stamped 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.
- 25.0 The bidder may have to produce original document for verification if so decided by BHEL.
- 26.0 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:
- a. Amendments/Clarifications/Corrigenda/Errata etc issued in respect of the tender documents by BHEL
  - b. Notice Inviting Tender (NIT)
  - c. Price Bid
  - d. Technical Conditions of Contract (TCC)—Volume-1A
  - e. Special Conditions of Contract (SCC) —Volume-1B
  - f. General Conditions of Contract (GCC) —Volume-1C
  - g. Forms and Procedures —Volume-1D

It may please be noted that guidelines/rules in respect of suspension of business dealings', 'Vendor evaluation format', 'Quality, Safety & HSE guidelines', etc may undergo change from time to time and the latest one shall be followed

for BHARAT HEAVY ELECTRICALS LTD

AGM Pur

**Enclosure**

1. Annexure-1: Pre Qualifying criteria.
2. Annexure-2: Check List.
3. Annexure-4: Important Information.
4. Other Tender documents as per this NIT.

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**PRE QUALIFYING REQUIREMENTS**

JOB	Replacement of 30 MW Generator Rotor of Unit # 2 of Power Plant – II at NSPCL Bhilai
TENDER NO	BHE/PW/PUR/BSI-OH/1244

SL NO	PRE QUALIFICATION CRITERIA	Bidders claim in respect of fulfilling the PQR Criteria	
		Name and Description of qualifying criteria	Page no of supporting document. Bidder must fill up this column as per applicability
A	Submission of Integrity Pact duly signed (if applicable)	NOT APPLICABLE	
B	<p><b><u>Technical</u></b></p> <p>Bidder must have executed following works {i.e. Bidder must meet (B.1.1 or B.1.2)} in the last seven (7) years as on latest date of bid submission:-</p> <p><b>B.1.1)</b> Bidder must have, Executed Erection and assistance in Commissioning of atleast one Generator of any rating in a single Order</p> <p style="text-align: center;"><b>OR</b></p> <p><b>B.1.2)</b> Bidder must have, Executed One Job of Overhauling of atleast one Generator of any rating in a single Order</p>	APPLICABLE	
C-1	<p><b><u>FINANCIAL TURNOVER</u></b></p> <p>Bidders must have achieved an average annual financial turnover (Audited) of <b>Rs.4 Lakhs</b> or more over last three Financial Years (FY) i.e. 2010-2011, 2011-2012, 2012-2013.</p>	APPLICABLE	

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C-2	<b>NETWORTH (only in case of Companies)</b> Net worth of the Bidder based on the latest Audited Accounts as furnished for 'C-1' above should be positive	APPLICABLE	
C-3	<b>PROFIT</b> Bidder must have earned cash profit in any one of the three Financial Years as applicable in the last three Financial Years defined in 'C-1' above based on latest Audited Accounts.	APPLICABLE	
D	Assessment of Capacity of Bidder to execute the work as per sl no 9 of NIT (if applicable)	NOT APPLICABLE	By BHEL
E	<b>Approval of Customer (if applicable)</b> <b>Note:</b> Names of bidders (including consortium/Technical Tie up partners in case consortium bidding is permitted) who stand qualified after compliance of criteria A to D shall be forwarded to customer for their approval.	NOT APPLICABLE	BY BHEL
F	<b>Price Bid Opening</b> <b>Note:</b> Price Bids of only those bidders shall be opened who stand qualified after compliance of criteria A to E	APPLICABLE	BY BHEL
G	Consortium criteria	NOT APPLICABLE	
<p><b><u>Explanatory Notes for the PQR (unless otherwise specified in the PQR):</u></b></p> <ol style="list-style-type: none"> <li>1. Bidder to submit Audited Balance Sheet and Profit and Loss Account for the respective years as indicated against C-1 above along with all annexures</li> <li>2. In case audited Financial statements have not been submitted for all the three years as indicated against C-1 above, then the applicable audited statements submitted by the bidders against the requisite three years, will be averaged for three years i.e total divided by three.</li> <li>3. C-2:-NETWORTH : Shall be calculated based on the latest Audited Accounts as furnished for C-1 above. Net worth = Paid up share capital + Reserves. (Net worth is required to be evaluated in case of companies)</li> <li>4. C-3:- PROFIT : shall be NET profit (PAT + Non cash expenditure viz depreciation) earned during any one of the three financial years as in C-1 above</li> <li>5. <del>'Additional' Criteria in respect of 'Technical' criteria of PQR (as in 'B' above) for Civil, Electrical, CI, unless otherwise specified:-</del> <ol style="list-style-type: none"> <li>1. <del>Bidder should have executed similar work of any one of the following:</del> <ol style="list-style-type: none"> <li>a. <del>One (1) work of value not less than Rs XXX</del></li> <li style="text-align: center;"><del>OR</del></li> <li>b. <del>Two (2) works of not less than Rs YYY</del></li> <li style="text-align: center;"><del>OR</del></li> <li>c. <del>Three (3) works of not less than Rs ZZZ</del></li> </ol> <p><del>(Value XXX, YYY, ZZZ shall be as indicated by BHEL)</del></p> </li> <li>2. <del>'Similar' work for criteria 5 above means</del> <ol style="list-style-type: none"> <li>a. <del>Civil or Structures or Civil &amp; Structures or Chimney respectively as applicable to the tendered scope in respect of 'CIVIL' Works</del></li> </ol> </li> </ol> </li> </ol>			

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	<p><del>b. Electrical works in respect of 'ELECTRICAL'</del> <del>c. CI works in respect of 'CI' Works</del> <del>d. Material Handling and/or Management works in respect of 'MM' works</del></p> <p>6. Time period for achievement of the 'Technical' criteria of PQR (as in 'B' above) will be the last 7 years ending on the 'latest date' of Bid submission</p> <p>7. 'EXECUTED' means the Vendor should have achieved the criteria specified in the Technical criteria of PQR (as in 'B' above) even if the Contract has not been completed or closed</p> <p>8. Unless otherwise specified, for the purpose of 'Technical' criteria of PQR ( as in 'B' above), the word 'EXECUTED' means:</p> <ol style="list-style-type: none"><li>1. "BOILER LIGHT UP" in respect of Boiler &amp; Aux and ESP</li><li>2. "SYNCHRONISATION" in respect of STG/GTG and 'SPINNING' in case of HTG</li><li>3. "STEAM BLOWING COMPLETION" in respect of at least Main Steam Line of Power Cycle Piping</li><li>4. "HYDRAULIC TEST" of the system in respect of Structures, Pressure parts/IBR Piping</li><li>5. "CHARGING" in respect of power Transformers, Bus ducts, HT/LT switchgears</li><li>6. "Completion of RCC Shell and liner (steel or brick as per tendered scope) up to the HEIGHT specified using slip form" in case of RCC Chimney.</li><li>7. <del>Achievement of physical Quantities as per respective PQRs in respect of Civil &amp; Structures and Piling Works</del></li><li>8. 'Readiness for coal Filling" in respect of Bunker Structure Work.</li></ol> <p>9. Boiler means HRSG or WHRB or any other types of Steam Generator</p> <p>10. Critical/Power Cycle piping means Main Steam, Hot Reheat, Cold Reheat, HP Bypass, LP Bypass lines</p> <p>11. For the purpose of evaluation of the PQR, one MW shall be considered equivalent to 3.5TPH where ever rating of HRSG/BOILER is mentioned in MW. Similarly, where ever rating of Gas Turbine is mentioned in terms of Frame size, ISO rating in terms of MW shall be considered for evaluation.</p> <p>12. <del>In case the experience/PO/WO certificate enclosed by bidders do not have separate break up prices for the E&amp;C portion of Electrical and CI Works, (i.e. the certificates enclosed are for composite order for supply and erection of Electrical &amp; CI and other works if any), then value of Erection and Commissioning for the Electrical &amp; CI portion shall be considered as 15% of the supply &amp; erection of Electrical &amp; CI, unless otherwise specifically indicated in the PQR.</del></p> <p>13. Scope for capital overhaul of STG shall cover Bearing Inspection work and overhauling of all cylinders of the Turbine unless otherwise specifically indicated in the PQR.</p> <p>14. In case the tendered scope is not a Pulverised Fuel Boiler, experience of Oil/Gas Fired Boilers also can be considered unless otherwise specifically indicated in the PQR.</p>
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BIDDER SHALL SUBMIT ABOVE PRE-QUALIFICATION CRITERIA FORMAT, DULY FILLED-IN, SPECIFYING RESPECTIVE ANNEXURE NUMBER AGAINST EACH CRITERIA AND FURNISH RELEVANT DOCUMENT INCLUSIVE OF WORK ORDER AND WORK COMPLETION CERTIFICATE ETC IN THE RESPECTIVE ANNEXURES IN THEIR OFFER.

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ANNEXURE - 2

**CHECK LIST**

**NOTE:- Tenderers are required to fill in the following details and no column should be left blank**

1	Name and Address of the Tenderer		
2	Details about type of the Firm/Company		
3.a	Details of Contact person for this Tender	Name : Mr/Ms Designation: Telephone No: Mobile No: Email ID: Fax No:	
3.b	Details of alternate Contact person for this Tender	Name : Mr/Ms Designation: Telephone No: Mobile No: Email ID: Fax No:	
4	EMD DETAILS	DD No:                      Date : Bank :                      Amount: <u>Please tick ( √ ) whichever applicable:-</u> ONE TIME EMD / ONLY FOR THIS TENDER	
5	Validity of Offer	TO BE VALID FOR SIX MONTHS FROM DUE DATE	
		APPLICABILITY (BY BHEL)	ENCLOSED BY BIDDER
6	Whether the format for compliance with <b>PRE QUALIFICATION CRITERIA</b> (ANNEXURE-I) is understood and filled with proper supporting documents referenced in the specified format	Applicable	YES / NO
7	Audited profit and Loss Account for the last three years	Applicable	YES/NO
8	Copy of PAN Card	Applicable	YES/NO
9	Whether all pages of the Tender documents including annexures, appendices etc are read understood and signed	Applicable	YES/NO
10	Integrity Pact	NOT Applicable	YES/NO
11	Declaration by Authorised Signatory	Applicable	YES/NO
12	No Deviation Certificate	Applicable	YES/NO
13	Declaration confirming knowledge about Site Conditions	Applicable	YES/NO

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14	Declaration for relation in BHEL	Applicable	YES/NO
15	Non Disclosure Certificate	Applicable	YES/NO
16	Bank Account Details for E-Payment	Applicable	YES/NO
17	Capacity Evaluation of Bidder for current Tender	NOT Applicable/	YES/NO
18	Tie Ups/Consortium Agreement are submitted as per format	NOT Applicable	YES/NO
19	Power of Attorney for Submission of Tender	Applicable	YES/NO
20	Analysis of Unit rates	Applicable	YES/NO

NOTE : STRIKE OFF 'YES' OR 'NO', AS APPLICABLE. TENDER NOT ACCOMPANIED BY THE PRESCRIBED ABOVE  
**APPLICABLE DOCUMENTS** ARE LIABLE TO BE SUMMARILY REJECTED.

**DATE :**  
**SIGNATORY**

**AUTHORISED**  
**(With Name, Designation and Company seal)**

## ANNEXURE 4: IMPORTANT INFORMATION

1. The offers of the bidders who are on the banned list as also the offer of the bidders, who engage 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) ---> Tender Notification -> List of Banned Firms)
2. All Statutory Requirements as applicable for this project shall be complied with.
3. Please take note of following Revised Tender Clauses:
  - i. Notice Inviting Tender: SI No 9
  - ii. General conditions of Contract: Clause No 1.15.13 (New), Clause No 2.8.3, 2.8.4 and 2.8.5

### 4. Broad Terms & Conditions of Reverse Auction

In continuation to Clause 19.0 of NIT (Notice Inviting Tender) following are the broad terms and conditions of Reverse Auction are given in Annexure V of NIT:

- 4.1. 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).
- 4.2. BHEL reserves the right to go for Reverse Auction (RA) instead of opening the sealed envelope price bid, submitted by the bidder. This will be decided after techno-commercial evaluation. All bidders to give their acceptance 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 Reverse Auction, only those bidders who have given their acceptance to participate in RA will be allowed to participate in the Reverse Auction. Those bidders who have given their acceptance to participate in Reverse Auction will have to necessarily submit „online sealed bid“ in the Reverse Auction. Non-submission of „online sealed bid“ by the bidder will be considered as tampering of the tender process and will invite action by BHEL as per extant guidelines in vogue.
- 4.3. For the proposed reverse auction, technically and commercially acceptable bidders only shall be eligible to participate.
- 4.4. 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.
- 4.5. 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.
- 4.6. In case of reverse auction, BHEL will inform the bidders the details of Service Provider to enable them to contact & get trained.
- 4.7. Business rules like event date, time, bid decrement, extension etc. also will be communicated through service provider for compliance.

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- 4.8. Bidders have to fax the Compliance form (annexure IV) before start of Reverse auction. Without this, the bidder will not be eligible to participate in the event.
- 4.9. 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, Service Tax for Services and loading factors (for noncompliance 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.
- 4.10. Reverse auction will be conducted on scheduled date & time.
- 4.11. At the end of Reverse Auction event, the lowest bidder value will be known on auction portal.
- 4.12. 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, (Annexure VII) as provided on case-to-case basis to Service provider within two working days of Auction without fail.
- 4.13. 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.
- 4.14. 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.
- 4.15. 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.
- 4.16. The Bidder shall not divulge either his Bids or any other exclusive details of BHEL to any other party.

In case BHEL decides to go for reverse auction, the H1 bidder (whose quote is highest in online sealed bid) may not be allowed to participate in further RA process

5. PVC is not applicable
6. Progress Monitoring, Monthly Review and Performance Evaluation of Vol-I BCD is not applicable. Separate Performance evaluation as per SAS format shall be considered for evaluation purpose.
7. Overrun compensation is not applicable
8. Interest bearing recoverable advances is not applicable
9. Quantity variation is not applicable
10. Extra works in man-hours is not applicable
11. Retention amount shall be 5% of the total contract value.

1244

# TECHNICAL CONDITIONS OF CONTRACT (TCC)

BHARAT HEAVY ELECTRICALS LIMITED



# TECHNICAL CONDITIONS OF CONTRACT (TCC) CONTENTS

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<b>SI No</b>	<b>DESCRIPTION</b>	<b>Chapter</b>	<b>No. OF PAGES</b>
<b>Volume-IA</b>	<b>Part-I: Contract specific details</b>		
1	Project Information	Chapter-I	1
2	Scope of Works	Chapter-II	2
3	Special Terms and Other Conditions	Chapter-III	5
4	Manpower, T&Ps and Consumables to be deployed by Contractor	Chapter-IV	6
5	Quality Requirements	Chapter-V	1
6	Time Schedule	Chapter-VI	1
7	Terms of Payment	Chapter-VII	1
8	Taxes and other Duties	Chapter-VIII	2

**TECHNICAL CONDITIONS OF CONTRACT (TCC)**  
**Chapter - I : PROJECT INFORMATION**

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<b>1.0</b>	<b>Project Information</b>
	<p>1) Purchaser : M/s NSPCL Bhilai</p> <p>2) Project Title : Replacement of 30 MW Generator Rotor of Unit # 2 of Power Plant – II at NSPCL Bhilai</p> <p>3) Nearest Railway Station : Bhilai</p> <p>4) Nearest airport : Raipur</p>

The Bidder shall visit site and get acquainted himself with the conditions prevailing at site before submission of the bid. The information given here in under are for general guidance and shall not be contractually binding on BHEL/ Owner. All relevant site data/information as may be necessary shall have to be obtained /collected by the Bidder.

# TECHNICAL CONDITIONS OF CONTRACT (TCC)

## Chapter – II: SCOPE OF WORK

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The work under the scope of these specifications is broadly as follows.

### **PRE SHUTDOWN WORK**

1. Mobilization of site.
2. Arranging Gate pass hence the action should take well in advance i.e. before shutdown of unit.
3. Arrangement of Accommodation to the contractor personnel.
4. Shifting of material and T&Ps to work spot.
5. Shifting of special T&Ps to turbine floor.

### **SCOPE OF WORK FOR REPLACEMENT OF ROTOR**

1. Dismantling connection of cables at brush gear.
2. Dismantling of brush gear, shaft earthing brush.
3. Dismantling of Generator end covers & taking reading / measurement of all clearances, air gap, rotor axial position etc before removal of bearings.
4. Measurement of bearing clearances and dismantling of Generator bearings.
5. Removal of coupling Bolts between Turbine & Generator rotor.
6. Threading out of rotor with the help of Hanger, Sliding Plate, Bush etc, by EOT crane / hock-chuck.
7. Measuring IR valve of stator / rotor before cleaning
8. Thorough cleaning of Generator Stator with dry pressurized air / cleaning liquid.
9. Cleaning / clearing of stator cooling ducts, air chambers (Hot/Cold) & repair of hot air duct insulation as per requirement.
10. Cleaning of spare rotor by air with periodic heating of the same by incandescent high wattage bulbs for dislodging of dust particles & repeated air blowing through ventilation ducts.( incandescent high wattage bulbs, holder, wires, etc. has to be arranged by NSPCL).
11. NDT on Generator Rotor and Bearings 3&4
  - i. Dye Penetration Test on Journal Bearings 3&4.
  - ii. Ultrasonic Test on Journal Bearings 3&4.
  - iii. Dye Penetration Test on front and rear fan Blades.
  - iv. Dye Penetration Test on front and rear End Retaining Rings.
  - v. Ultrasonic Test on End Retaining Rings.
  - vi. Ultrasonic Test on Rotor Shaft Journals and accessible area on Rotor Shaft.
12. Conducting ELCID Test of stator through a renowned n external agency and attending any defects thereof.
13. Checking tightness of generator terminal connections.
14. Assistance during checking of Generator slot wedge tightness. Replacement of wedges / packers if required.

# TECHNICAL CONDITIONS OF CONTRACT (TCC)

## Chapter – II: SCOPE OF WORK

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15. Visual inspection of winding & insulation of overhang portion of Generator. Rectification as required with glass tapes, varnishes etc. Strengthening of bracings of the overhang portion if required. Replacement of Brackets, Bachelite Baffle plates along with Hardware's at overhang portion & fan outer, inner. Further Insulation varnish shall be applied on stator re outer wherever approachable through manholes & openings between stator body & core.
16. Application of insulation varnish on stator / rotor and drying out as per norms.
17. Cleaning of space below stator frame.
18. Assistance for Measurement of winding resistance, inductance, IR valve of stator / rotor.
19. Insertion of spare rotor after proper cleaning, drying & testing. Checking of geometric/magnetic center and air gap of rotor & adjustment as per norms.
20. Reaming & honing of coupling bolt holes of LP rotor and Generator rotor couplings.
21. Checking of all the required clearance of rotor parts with stationary parts and adjustment as required. Replacement of shaft oil seals and other worn out parts if required.
22. Meggering of generator outboard bearing pedestal with rotor lifted from bearing and replacing insulation if required.
23. Assembly of end covers and measurement of all clearances during box up.
24. Matching / Alignment and boxing up with old/new bearings (if replaced due to dimensional inaccuracies). Coupling of Turbine & Generator rotor with necessary alignment  
Box up of all bearings top cover after clearance of Engineer-in-charge. Assembly of oil lines.  
Flushing of oil line till desired level of oil cleanliness achieved. Bearing flushing oil basket strainers  
has to be cleaned periodically as per requirement.
25. Assembly of brush gear and cable connections
26. Putting the machine on barring gear.
27. Assistance during over speed testing and synchronizing.
28. Rectification of any defects noticed after synchronizing of the machine

# TECHNICAL CONDITIONS OF CONTRACT (TCC)

## Chapter – III: SPECIAL TERMS AND CONDITIONS

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### **3.1 SPECIAL TERMS AND CONDITIONS:**

- 1.0. Subcontractor should assure that the repair of the equipment covered in the scope of this offer will be conducted with the best of skills and know how available with Subcontractor and in conformance with the clearances and adjustments set forth in manufacture's drawing instruments and other information's furnished to Subcontractor.
- 2.0. All welding electrode (special type also) required for the welding will be bidder's scope.
- 3.0. The various setting, clearances, adjustments and benchmarks will be restored to the extent possible during rectification to the condition as per the erection and commissioning log sheets available with customer. If however we are not able to produce erection / commissioning log sheets, efforts will be made to attend the best possible parameter or the conditions as observed at the time of dismantling of the equipment in consultation with us.
- 4.0. Subcontractor must prepare PERT CHART/BAR CHART. Daily monitoring will be done jointly and log sheets of important activities should be noted down and signed jointly.
- 5.0. All the works shall be carried out as per the instructions and to the satisfaction of the Engineer In-charge.
- 6.0. The contractor will attend contributory to faulty and poor workmanship during commissioning and trial run of the equipment.
- 7.0. Round the clock working under expert supervision shall be ensured by the contractor deploying two equal parallel strength of groups in 12 hrs. Shift with equal T&P for all the jobs so as to complete the work in stipulated period or earlier.
- 8.0. It is the responsibility of contractor to keep the plant, equipment, machinery and surrounding area clean.
- 9.0. The names of working persons like Site in-charge, supervisors, foreman, main fitters to be deployed during the job with full details has to be submitted stating their area of work and experience and specialization of the work to site in-charge before the start of work. BHEL may ask to change/delete the person not found suitable for the work at any point of time during execution of job. For any addition and deletion of the working person prior permission from BHEL shall be taken.
- 10.0. Subcontractor has to ensure that all the key persons must continue till completion of job i.e. machine comes on load. Subcontractor manpower should remain at site for a period of **three days** after machine comes on full load.
- 11.0. Mobilization of full strength shall be done three days before Shutdown of unit.
- 12.0. Work distribution sheet for all the workers/supervisors deployed shall be submitted to BHEL one day in advance on daily basis.
- 13.0. Subcontractor should mobilize additional resources such as plant, equipments, material as may be required by site in-charge to improve the progress of the work if the progress of the work is not satisfactory.

# TECHNICAL CONDITIONS OF CONTRACT (TCC)

## Chapter – III: SPECIAL TERMS AND CONDITIONS

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- 13.0. Subcontractor should get registered under relevant sales tax and or work contract Act (VAT) where the jobs are executed.
- 14.0. Party has to quote lump sum rate for all activities mentioned in the price bid as the actual quantities may vary during overhauling of the unit for which the contractor is not permitted to raise any dispute or claims. Items mentioned as optional will be taken up depending on condition, availability of spares and requirement.
- 15.0. Radiography and stress relieving, wherever mentioned are in the scope of the contractor.
- 16.0. Scrap & insulation etc. is to be shifted to scrap disposal area as indicated by the Engineer-in-charge.
- 17.0. One administrative personnel to control the resources and attendance of the workers to be ensured.
- 18.0. Contractor shall arrange certified HP welder for welding job whose welding test will be conducted.
- 19.0. Argon, Oxy- Acetylene gas shall be arranged by the contractor with cutting/welding set / argon welding set and other welding appliances.
- 20.0. Enerpack make close height Hydraulic jacks of 50T and 100T capacity - 4 nos. each shall be arranged by the contractor in 100 % working conditions.
- 21.0. If the duration of work continues beyond stipulated period due to any reason, no claim for compensation will be entertained.
- 22.0. The work details are brief & for Subcontractor knowledge only. Subcontractor will have to do all the related works as per requirement.
- 23.0. The contractor will be responsible to pay the damages to the property of Board or individual caused by his worker during the course of contract. If the contractor fails to pay the same it will be recovered from his bill.
- 24.0. No compensation claimed for idle labor for any reason will be entertained by BHEL.
- 25.0. All general tools and plants for execution of the work will have to be arranged/ maintained by the contractor at his own cost & risk.
- 26.0. In normal course, the interpretation of the under signed on any matter or decision given by him on any disputable points will be final and binding on the contractor.
- 27.0. Successful bidder is to obtain labor license before the start of the work.
- 28.0. Successful bidder is to obtain necessary "No Dues" certificate before de-mobilization from site.
- 29.0. Successful bidder has to arrange 10 copies of overhauling reports which will include various protocols with necessary data/ MOMs / important correspondences / log sheets etc. and the book shall be spiral bound with thick acetate papers in front and back along with BHEL logo printed suitably on thick art paper at the front.
- 30.0. Successful bidder has to arrange Site mobile recharge till the site closing.
- 31.0. Completion of all the activities listed in the scope within a tight schedule of **15 days** barring Gear to Barring Gear is the essence of the contract.
- 32.0. Sufficiently adequate man power T&P and other resources should be mobilized by the contractor to operate round the clock work progress with standby technicians to be deployed immediately if need arises. Offer should be submitted considering these requirements.

# TECHNICAL CONDITIONS OF CONTRACT (TCC)

## Chapter – III: SPECIAL TERMS AND CONDITIONS

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- 33.0. Accommodation for the sub-contractor's manpower will be provided if made available by the customer as per the applicable charges.
- 34.0. Magnetic base drilling machine along with drill/reamer is required for dowelling of cylindrical support of bearing in case of their replacement.
- 35.0. Taper reamer along with drill is to be arranged for dowelling of MOP if required.
- 36.0. Scaffolding pipes and 40 mm thick wooden planks are to be arranged by Sub-contractor for various platforms and locking of deck spring.
- 37.0. Adequate numbers of tarpaulin are to be arranged by the sub-contractor for covering of various equipments during insulation removal / application
- 38.0. Wherever cleaning of rotor or casing is required should be done by Alumina Blasting.
- 39.0. All Casing and Valves fasteners should be loosen / tighten by Induction Heating Method.
- 40.0. Contractor to depute one Ex BHEL Expert each in the areas of Turbine, Generator, valves & strainers and for electrical tests during entire overhaul period.
- 41.0. Contractor to depute One Safety and One quality personnel during entire overhaul period.
- 42.0. The bidder has to quote Lump Sum price (as mentioned in Price Bid) for total works (Sl. No.: 1 to 20) and based on this value, evaluation for L1 shall be decided. The lump sum prices for each part shall be calculated on the percentage price mentioned keeping quoted price as 100%.

### 3.2. LAISON WITH ALL STATUTORY AUTHORITIES:

- a) Compliance of statutory provisions, whether mentioned in this contract or not shall be binding on the contractor.
- b) If there is any change in labour laws after the contract has been awarded, then the new law shall automatically be binding on the contractor.
- c) No additional financial compensation shall be paid by BHEL to the contractor on account of increased expenditure caused by a) and b) above.
- d) Liaisoning with local commercial tax dept. to obtain Coml. Tax exemption certificate.

### 3.3. PAYMENT TO WORKERS:

- a) Payment to workers shall be done in the presence of BHEL/RIL representative.
- b) The contractor shall intimate the day of payment at least three days in advance in writing along with copy of the pay sheet and attendance cards.
- c) All workmen shall be covered by PF Rules irrespective of their period of employment.
- d) Payment shall be made inside the plant premises and during office hours of RIL..

### 3.4. SUBMISSION OF DOCUMENTS:

# TECHNICAL CONDITIONS OF CONTRACT (TCC)

## Chapter – III: SPECIAL TERMS AND CONDITIONS

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The contractor shall submit following documents at appropriate time either before or during the execution of the work and as directed by Site in-Charge.

1. Test certificates of Pulling and Lifting machines and appliances.
2. Details of workers to be deployed with name, address, category.
3. Details of supervisory staff to be deployed.
4. Authorization for receipt of materials and for signing of Measurement Books etc,
5. Labour license specific to the contract.
6. List of T&P brought into plant premises along with their serial numbers and dates/years of purchase.
7. All the Staff/Workers deputed for the Job should have Insurance Cover and document in this regard should be submitted along with 1<sup>st</sup> RA Bill.
8. List of consumables brought into plant premises along with their serial numbers and dates/years of purchase, along with test certificates wherever applicable.
9. Insurance policy for the workers to be deployed in this contract.
10. Safety undertaking.
11. Copy of ESI certificate to be furnished.
12. Proof of Payment of Service Tax.

The contractor shall submit following documents in report form within 15 days from commissioning of unit after the overhaul/shut down work is completed (except Sl.No.11 to 12 which are required before final bill is processed):

- Details of work executed.
- Measurements against different schedules in compiled form.
- Material issue details.
- Material consumption details.
- Material returns details.
- Details of retrenchment benefits given to workmen.
- Details of issue of PF slip to workmen.
- Details of settlement of accident benefits if any to workmen
- Copies of pay sheets to workmen.
- Details and proof of remittance of PF to workmen (before final bill).
- No dues clearance from different stores of customer
- Valid labour license

### 3.5 Statutory Inspection

# TECHNICAL CONDITIONS OF CONTRACT (TCC)

## Chapter – III: SPECIAL TERMS AND CONDITIONS

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Please refer General and Special Conditions of Contract. In addition to it the scope includes getting the approvals from the statutory authorities (like IBR, smoke nuisance inspector, anti-pollution authorities, labour officials). This includes arranging for inspection visits of such authorities periodically as per requirement, submitting documents etc. and payment of fees connected with it.

### 3.6 Safety:

#### **Strict Safety measures have to be followed at Site.**

Contractor shall also adhere to all the safety provisions of our customer. In case violation of any provision at site fine of Rs.500/- to Rs.2000/- at the discretion of our site in-charge shall be imposed for each of such occasion and shall be recoverable from the contractor's bill.

### 3.7 Security Deposit

Please refer our "General and special conditions of contracts".

### 3.8 Other terms and conditions

- 1.0 Successful bidder has to extend manpower assistance for minor cleaning/scrapping, etc. for carrying vibration measurement and putting balance weights during Trim Balancing at site
- 2.0 A copy of tender document with each page duly signed and stamped shall be submitted along with your offer as a token of your unconditional acceptance to this tender condition. Also any deviation to the tender conditions shall be submitted in a separate paper duly signed by the bidder, any overwriting / correction by the bidder on the tender will not be recognized and the offer may be rejected on this ground.
- 3.0 General and special conditions of contract' enclosed herewith will be fully applicable, except otherwise stated in this enquiry. In case of any conflict, the conditions specified in this enquiry letter will prevail over that of the 'General and special conditions of contract'

**TECHNICAL CONDITIONS OF CONTRACT (TCC)**  
**Chapter – IV: MANPOWER, T&P AND CONSUMABLES TO BE  
DEPLOYED BY CONTRACTOR**

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**4.0 LIST OF MANPOWER REQUIRED**

<b>Sl. No.</b>	<b>Description</b>	<b>Numbers</b>
01.	Site In-charge	01
02.	Supervisors	2
03	Foreman	2
03.	Mill Wright Fitters	6
04.	Fitter & Junior Fitters	6
05.	Riggers	6
06.	Gas Cutters / LP welder	1
07.	Electrician	1
08.	Store keeper	2
09.	Sarang	2
10.	Unskilled worker	10
11.	HP Welder	01
12	Carpenter	1
13	Grinder man	1

This is an indicative list; the sub-contractor shall deploy adequate manpower to carry out the work round the clock and as per requirement of the site during execution of the Job.

**Note:** Site in-charge should be qualified Engineer, B.E. (Mechanical) and all the supervisors should have diploma in engineering.

**4.1 Man power & T&P:**

1. Adequate manpower along with T&P should be deployed at site. All the T&P required for the work shall be arranged by the contractor and all T&P should reach the site 3 days before the shutdown of the unit. All the measuring instruments shall be duly tested / calibrated and valid certificate to that effect should be submitted to our Site In-charge before start of the work.

**TECHNICAL CONDITIONS OF CONTRACT (TCC)**  
**Chapter – IV: MANPOWER, T&P AND CONSUMABLES TO BE  
DEPLOYED BY CONTRACTOR**

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2. A deployment plan along with experience and name of the Site In-charge, Engineers, Supervisors, Foreman and main technicians to be submitted on per shift basis.
3. LAP-TOP with latest configuration, DVD/CD writer, its peripherals including printer-scanner and one USB Modem for Internet connectivity to be provided for BHEL site office.
4. One office boy in each shift is to be provided for BHEL site office.
5. Three Nos. of EOT Crane Operators are to be engaged during entire overhauling period for round the clock working.

**TECHNICAL CONDITIONS OF CONTRACT (TCC)**  
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**4.2 LIST OF TOOLS AND PLANTS TO BE ARRANGED BY CONTRACTOR**

01. Taper gauge, slip gauge set, depth gauge and depth micrometer.
02. Feeler gauge sets, feeler strips of 0.03 to 0.10 mm size.
03. One set of 2 meter long feeler gauge strips (0.05 to 1.0 mm).
04. Dial indicators with magnetic bases (at least 2 dials of diameter 40 mm travel – 5 mm).
05. Micrometers (inside and outside up to 300 mm, 450mm, 600mm & 1000mm).
06. Telescopic gauge (2 sets). Bevel protractor and combination sets.
07. Try square.
08. Set of parallel blocks/ V blocks.
09. Vernier calipers, (150 and 300 mm), measuring steel tapes and 5 meters steel rulers.
10. Precision spirit level (with micro head).
11. 2 sets of D.E. and Ring spanners (6-36mm).
12. 2 sets of ox spanners (6 to 20mm and 22-50mm).
13. Allen keys of various sizes (from 2mm. onwards).
14. D.P. Test Kit (with consumables).
15. Crowbars tin cutters, pliers (cutting plier, nose plier grip plier circlip-outside and inside).
16. Screw drivers and sledge hammers – 10 lbs – 1 lbs.
17. Adjustable wrenches, pipe wrenches and heck saws.
18. Single ended spanners (36 Mm and above).
19. Flat, half round, triangular bearing scrappers-8", to 12".
20. Files flat round, half round and square, rough and smooth (sizes 6", 9" and 12").
21. Bench Grinders, straight grinders GQ4 and GQ6, Angle grinders.
22. Reamers upto 30 mm. Taper reamers.
23. Drilling machine with magnetic stand upto –30 mm with drill bits.
24. Flexible grinders with grinding stones and cutters of different Shapes and sizes, Angles Grinders and Sander machine.
25. Number punch, letter punch, centre punch and hole punches etc.
26. Steel wire brushes, wire brush wheels, nylon wire brushes and Painting bushes.
27. Reamers and honing tools with proper jigs and fixtures for carrying out coupling hole Reaming /honing.
28. Lifting devices eye bolts, D-shackles, slings of various sizes Guide rods etc.
29. Chain pulley blocks upto 5 tons, 2 tons pull/lift.
30. Copper/Brass rods dia. 1/2" to 1 1/2" X450 mm.
31. Tap and die sets 6 to 36 mm.
32. Surface plate 450 X 450 mm.
33. Torch light/hand lamps with cables, 230/24 V transformer.

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34. Torque wrench and torque multiplier.
35. Wooden mallet, Nylon Mallet.
36. Hand glover-asbestos, Manila rope, asbestos cloth leather and Rubber gloves.
37. Set of needle files.
38. Air blower – electric.
39. Electric drills – ¼”, ½”, and 5/8”.
40. Ball pen hammer of various sizes.
41. Gas cutting and heating set with torches regulators, hoses and cylinder minimum two sets).
42. Arc welding generator/rectiformers with regulator, cables, Electrode holders and shields, TIG welding holders.
43. Pneumatic – grinders.
44. Hose pipes for compressed air.
45. Bench vices.
46. Hydraulic jacks 5, 10, 25, 50 & 150 tons capacity and screw jacks- 5 to 10 tons.
47. Hydraulic pump for testing coolers
48. 500 V Megger.
49. Electric switchboards and flood light arrangements with fuse boxes and isolating switches, Plugs and sockets.
50. In addition to above T and P contractor will be required to fabricate fixtures such as pullers etc. for removal of any other equipments related to the scope of work.
51. Pedestal fans/air coolers.
52. Wooden sleepers.
53. Wooden Planks.
54. Magnifying glass.
55. Plastic helmets, Fiber helmet.
56. Gas cutting/welding goggles, grinding goggles.
57. Bearing pullers.
58. Tarpaulin.
59. Insulation testers and Meggers 500 V and 1000 V at least 1 No. each.
60. Any other T and P as per requirement and as per our General and special conditions of Contracts.
61. Digital Multimeter
62. Analogue multimeter of Motwane make
63. Scaffolding materials

**NOTE:**

1. The above list is only indicative and not exhaustive. Arrangement for any other T and P required for completion of the job shall be the responsibility of the contractor and shall be arranged by him.

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2. All the tools and tackles/measuring instruments shall be duly tested/calibrated and valid certificate to that effect should be submitted to our site in-charge before the start of work.

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**4.3 CONSUMABLES TO BE ARRANGED BY CONTRACTOR**

(The list is indicative only and not exhaustive)

01. Kerosene oil.
02. Rustolene.
03. Petrol/white Petrol/Benzene/CRC.
04. Grease/Graphite Grease.
05. Hacksaw Blades.
06. Waste cloth/Cotton.
07. Marking/lint free cloth/Muslin.
08. Asbestos cloth/Asbestos cord.
09. Prussian blue.
10. Graphite (flaked) powder/Molykote/Mosil.
11. Cardiom compound.
12. Holdtite/shellac/Gasket sealing compound.
13. Lead wire 1.0 m/1.5 mm/0.5 mm.
14. Liquid soap.
15. Carborandum grinding paste coarse/fine/Diamond lapping paste.
16. Emery papers/Rolls.
17. Cutoff wheels.
18. Grinding wheels.
19. Oil stones, Mounted wheels, rotary cutters.
20. D. P. test chemicals.
21. Gas Cylinders for cutting/welding.
22. Chalk pieces, marking pens, thermo chalks upto 400c
23. Insulation tape, Johnson Tapes.
24. Sander discs and wheels.
25. Polyethylene sheets.
26. Araldite, M. Seal, Instabond, Dendrite.
27. CRC 2-26, white spirit.
28. Electric fuse wire, cables for the connections
29. 2.5 mm<sup>2</sup> Cu cable (flexible) of 200 mtr. length.
30. Ortho phosphoric acid
31. CRC Lectra-clean.

**NOTE:**

The above list is only indicative & not exhaustive. Arrangement for any other consumables required for completion of the job shall be the responsibility of the contractor & shall be arranged by him.

# TECHNICAL CONDITIONS OF CONTRACT (TCC)

## Chapter – V: QUALITY REQUIREMENT

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### QUALITY REQUIREMENT

- 1.0 Various inspection/ quality control / quality assurance procedure/ methods at various stages will be as per BHEL/ customer quality control procedure/ codes/ IBR and other statutory provisions and as per BHEL Engineer's instructions.
- 2.0 Preparation of quality assurance log sheets and protocols with customer's engineers, welding logs, other quality control and quality assurance documentation as per BHEL Engineer's instructions, is within the scope of work/ specification.
- 3.0 A daily log book should be maintained by Area In-charge of contractor on the job incorporating erection / alignment / welding clearance /radiography / progress of work etc. and the same shall be submitted to BHEL. Also, daily reports shall be submitted to BHEL.
- 4.0 All the important measurements like pre-assembly checking of alignment leveling/ centering work etc. shall be recorded in the daily log book with sketches based on BHEL drawings indicating readings/ measurements actually taken and signed by BHEL/ Customer/ Contractor representatives.
- 5.0 The inspection/measuring and testing equipments should be of brand, quality and accuracy, as specified by BHEL engineer and should have valid calibration certificates traceable to national/international standards.
- 6.0 Total quality is the watchword of the work and contractor shall strive to achieve the quality standards, procedures laid down by BHEL. He will follow the instructions as per BHEL drawings and quality standards.
- 7.0 The welder's performance will be reviewed from time to time as per the BHEL/ IBR standards and any welder not performing to the standards set by BHEL/ IBR standards will be removed from working, Contractor shall arrange for the alternate welders immediately.
- 8.0 **STAGE INSPECTION BY BHEL / CUSTOMERS ENGINEERS**  
Apart from day-to-day inspection/ stage inspection of equipments by BHEL engineers, the equipments may be checked at various stages by customer's engineers and quality assurance teams. Contractor shall arrange all labour, tools/tackles etc. for such inspections free of cost.

# TECHNICAL CONDITIONS OF CONTRACT (TCC)

## Chapter – VI: Time Schedule

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### 6.1 TIME SCHEDULE & MOBILIZATION

#### 6.1.1 INITIAL MOBILIZATION

After receipt of fax LOI, Contractor shall discuss with Project Manager / Construction Manager/BHEL In charge regarding initial mobilization. A small team of manpower consisting of riggers, welders, fitters, helpers along with T& P has to be mobilized 3 days in advance before shutdown of the unit for making necessary arrangements for installation & testing of winches, chain pulley blocks etc. Full-fledged team shall be mobilized one week before shutdown of the unit

#### 6.1.2 MOBILIZATION FOR ERECTION, TESTING, ASSISTANCE FOR COMMISSIONING, OVERHAULING ETC.

The activities for Overhauling shall be started as per directions of Construction Manager/BHEL In charge of BHEL. Contractor shall mobilize further resources (in addition to those required for activities under clause no. 6.1.1) as per requirement to commence the work of erection, testing, Overhauling etc. of boiler and auxiliaries and progressively augment the resources to match schedule of the project.

The entire work of overhauling shall be completed within a period of **20 days** (stopping of barring gear to putting the machine on barring gear after completion of overhaul).

The tentative outage schedule of the TG set as informed by NSPCL shall be in the First week of May-2014.

# TECHNICAL CONDITIONS OF CONTRACT (TCC)

## Chapter-VII: Terms of Payment

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### 7.1 Payment will be released on completion of activities as below:

- 1.0 90% after the Mobilization, Dismantling, Assembly and Barring Gear submission of Insurance & Labour License (5% for T & P and consumables, 5% for Deployment of manpower). Penalty of 1% per day of the total contract value will be levied for improper mobilization of man power and 1% per day for T & P and consumables separately subject to maximum 10% of the contract value shall be deducted from your bill
- 2.0 Final 10% on successful commissioning / full load operation / completion of all works and also on payment of all dues and submission of all the documents like No Dues certificate from Customer, EPF challan, Insurance, Labour License, Labour Payment sheets, proof of payment of service tax etc).

**Note: While submitting invoices, Vendor should mention their Bank Account No. on each of their invoices for making e-payment.**

**Note:**

1. Penalty of 1% per day of the total contract value will be levied for improper mobilization of man power and 1% per day for T & P and consumables separately subject to maximum 10% of the contract value shall be deducted from contractor's bill
2. While submitting the invoices, Vendor should mention their Bank Account No. on each of their invoices for the purpose of making e-payment.

**7.2 Retention money: Retention amount as indicated in Clause 2.22.1 of Vol. I C 'General Conditions of Contract' shall be read as 1% of the total contract value.**

The bill due for payment shall be submitted to the Engineer in-charge of BHEL at site for necessary verification and processing through proper channel. It may be noted that payment will be released from the office of the RSM/Nagpur after minimum fifteen days from the date of receipt of the duly verified bill from site.

**7.3 Performance Guarantee Period for Workmanship:** Guarantee Period as indicated in Clause 2.24.1 of 'General Conditions of Contract' shall be 6 Months.

# TECHNICAL CONDITIONS OF CONTRACT (TCC)

## Chapter-VIII TAXES & DUTIES

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### 8.0 TAXES, DUTIES, LEVIES (Consolidated Rev 03 dated 09/04/2013)

8.1. For All types of works excepting works covered under sl no 8.2

8.1.1

The contractor shall pay all (save the specific exclusions as enumerated in this contract) taxes, fees, license charges, deposits, duties, tools, royalty, commissions or other charges which may be levied on the input goods & services consumed and output goods & services delivered in course 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 his bills or otherwise as deemed fit.

**However, provisions regarding Service Tax and Value Added Tax (VAT) on output services and goods shall be as per following clauses.**

#### 8.1.2 Service Tax & Cess on Service Tax

Contractor's price/rates shall be exclusive of Service Tax and Cess on Services. In case, it becomes mandatory for the contractor under provisions of relevant act/law to collect the Service Tax & Cess from BHEL and pay the same to the concerned tax authorities, such applicable amount will be paid by BHEL at the prevailing Service Tax Rate (presently 12.36 %) on the admitted bill value.

**Contractor shall submit to BHEL documentary evidence of Service Tax registration certificate specifying name of services covered under this contract. Contractor shall submit serially numbered Service Tax and Cess Invoice, signed by him or a person authorized by him in respect of taxable service provided, and shall contain the following, namely,**

1. The name, address and the registration number of the contractor,
2. The name and address of the party receiving taxable service,
3. Description, classification and value of taxable service provided and,
4. The service tax payable thereon.

**All the Four conditions shall be fulfilled in the invoice before release of service tax payment.**

**Wherever, more than one route/option are available for discharge of service tax liability under a particular service, (e.g. "works contract Service"), contractor shall obtain prior written consent from BHEL site before billing the amount towards Service Tax.**

#### 8.1.3 VAT (Sales Tax /WCT)

As regards Value Added Tax (VAT)/CST on transfer of property in goods involved in Works Contract (previously known as Works Contract Tax) applicable as per local laws, the price quoted by the contractor shall be inclusive of the same and in no case input or output VAT/CST will be reimbursed extra.

In any case the Contractor shall register himself with the respective Sales Tax authorities of the state and submit proof of such registration to BHEL along with the first RA bill. Contractor will submit all the details of VAT/CST paid for the contract in the prescribed format of the respective state VAT laws. Also, the

# TECHNICAL CONDITIONS OF CONTRACT (TCC)

## Chapter-VIII TAXES & DUTIES

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contractor will issue the tax Invoices to BHEL as per the Tax laws of respective state on monthly basis. Contractor shall also be required to furnish to BHEL necessary proof of VAT remittance on monthly basis.

Deduction of tax at source shall be made as per the provisions of law and is to be construed as an advance tax paid by the contractor and no reimbursement thereof will be made.

Further, if BHEL, at the instance of customer or otherwise adopts the specific route for discharging output VAT liability itself, benefit of the reduction in liability of the contractor will be passed on to BHEL.

In case, BHEL is forced to pay any VAT liability on behalf of contractor, the same will be recovered from contractor's bill or otherwise as deemed fit

### 8.2 ——— 'Enabling Works'

~~The contractor shall pay all (save the specific exclusions as enumerated in this contract) taxes, fees, license charges, deposits, duties, tools, royalty, commissions or other charges which may be levied on the input goods & services consumed and output goods & services delivered in course 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 his bills or otherwise as deemed fit. ( i.e. rates quoted by bidder shall be inclusive of Service Tax, VAT/WCT and all other taxes and duties )~~

~~However, Since the proposed work is in the nature of 'Works Contract service' as per Service tax law, Hence, For non corporate contractors being Individual, HUF, Proprietary Firm, Partnership Firm or Association of Persons (AOP), BHEL shall recover the applicable Service Tax under reverse charge mechanism from the contractor and remit the same with the Government as per the provisions of Law. Necessary advice/confirmation of remittance shall be issued to the contractor. The contractor shall not be eligible for any refund/reimbursement of such service tax from BHEL. It shall be the responsibility of the contractor to submit proper invoice giving all the requisite details as per Service Tax Law for the determination of the service tax liability of BHEL under reverse charge mechanism. BHEL reserves the right to determine such liability based on the invoice submitted by the contractor or otherwise independently and remittance of the same with the Government.~~

### 8.3 New Taxes/Levies

In case the Government imposes any new levy/tax on the output service/ goods/work after award of the contract, the same shall be reimbursed by BHEL at actual.

In case any new tax/levy/duty etc. becomes applicable after the date of Bidder's offer, the Bidder/Contractor must convey its impact on his price duly substantiated by documentary evidence in support of the same **before opening of Price Bid**. Claim for any such impact after opening the Price Bid will not be considered by BHEL for reimbursement of tax or reassessment of offer.

No reimbursement/recovery on account of increase/reduction in the rate of taxes, levies, duties etc. on input goods/services/work shall be made. Such impact shall be taken care of by the Price Variation/Adjustment Clause (PVC) if any. In case PVC is not applicable for the contract, Bidder has to make his own assessment of the impact of future variation if any, in rates of taxes/duties/ levies etc. in his price bid.