

# TENDER SPECIFICATION

SI No	Tender Specification Number	Unit Number & Project
1	BHE/PW/PUR/KKT-COH/1152	UNIT # 3, 210 MW OH OF TURBINE, KKT

FOR

**JOB: OH OF HP/IP/LP TURBINE, VALVES & STRAINERS UNIT # 3, 210 MW  
KHAPERKHEDA TPS**

**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/KKT-COH/1152	UNIT # 3, 210 MW OH OF TURBINE, KKT

FOR

**JOB: OH OF HP/IP/LP TURBINE, VALVES & STRAINERS UNIT # 3, 210 MW KHAPERKHEDA TPS**

At

**KHAPERKHEDA**

**MAHARASHTRA**

**EARNEST MONEY DEPOSIT: Refer Notice Inviting Tender**

**LAST DATE FOR TENDER SUBMISSION: 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.**

For Bharat Heavy Electricals Limited

AGM (Purchase)

Place: Nagpur

Date :

1152

# NOTICE INVITING TENDER

Bharat Heavy Electricals Limited



Ref:

T.S.No BHE/PW/PUR/KKT-COH/1152

Date: 11.07.2013

**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/KKT-COH/1152	
ii	Broad Scope of job	OH of HP/IP/LP Turbine, Valves & Strainers Unit # 3, 210 MW Khaperkheda TPS	
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>	<i>Applicable</i>
b	Volume-IB	<i>Special Conditions of Contract (SCC)</i>	<i>Applicable</i>
c	Volume-IC	<i>General Conditions of Contract (GCC)</i>	<i>Applicable</i>
d	Volume-ID	<i>Forms and Procedures</i>	
e	Volume-II	<i>Price Schedule (Absolute value).</i>	<i>Applicable</i>
iv	Issue of Tender Documents	<b>1. Sale from BHEL PS Regional office at : Start : 11/072013 Closes: 16/07/2013 , Time : 16: 00Hrs</b> <b>2. From BHEL website (<a href="http://www.bhel.com">www.bhel.com</a>)</b> Tender documents will be available for downloading from website till due date of submission	<i>Applicable/ Not applicable</i>
v	DUE DATE & TIME OF OFFER SUBMISSION	<b>Date : 17/07/2013 , Time : 15:00 Hrs</b> <b>Place : <u>BHEL PS Regional office at :Nagpur</u></b>  Tenders being submitted through representative shall be submitted at dispatch section of of PSWR HQ Office after making entry/registration at the	<i>Applicable</i>

		reception. For any assistance on the matter kindly contact following officials: <b>Saravana Kumar / Engineer(Purchase)</b> <b>Pratish Gee Varghese/Sr. Engineer(Purchase)</b>	
vi	<b>OPENING OF TENDER</b>	<b>1 hours after the latest due date and time of Offer submission</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 1,50,000/- (Rupees One Lakh Fifty Thousand Only)	Applicable
viii	<b>COST OF TENDER</b>	Rs 2000/-.	Applicable
ix	<b>LAST DATE FOR SEEKING CLARIFICATION</b>	Atleast 2 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 hosted in BHEL webpage ( <a href="http://www.bhel.com">www.bhel.com</a> -->Tender Notifications →View Corrigendums) <b>and not in the newspapers</b> . Bidders to keep themselves updated with all such information	

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.

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>	
	<p><b><u>ENVELOPE – I superscribed as :</u></b> PART-I (TECHNO COMMERCIAL BID) TENDER NO : NAME OF WORK : PROJECT: DUE DATE OF SUBMISSION:</p> <p><b><u>CONTAINING THE FOLLOWING:-</u></b></p>	
i.	Covering letter/Offer forwarding letter of Tenderer.	
ii.	<p>Duly filled-in 'No Deviation Certificate' as per prescribed format to be placed after document under sl no (i) above.</p> <p><b><u>Note:</u></b></p> <p>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.</p> <p>b. BHEL reserves the right to accept/reject the deviations without assigning any reasons, and BHEL decision is final and binding.</p> <p style="padding-left: 20px;">i). In case of acceptance of the deviations, appropriate loading shall be done by BHEL</p> <p style="padding-left: 20px;">ii). In case of unacceptable deviations, BHEL reserves the right to reject the tender</p>	
iii.	<p>Supporting documents/ annexure/ schedules/ drawing etc as required in line with Pre-Qualification criteria.</p> <p>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.</p>	
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 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><u>ENVELOPE – II superscribed as:</u></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 <b>OR</b> 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>		
PRICE BID consisting of the following shall be enclosed		
	<p><b><u>ENVELOPE-III</u></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)	
<b>OUTER COVER</b>		
	<p><b><u>ENVELOPE-IV (MAIN ENVELOPE / OUTER ENVELOPE)</u></b> 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 **BHEL reserve the right to reject a bidder based on their unsatisfactory past performance at any other project.**
- 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 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.
- 23.0 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.
- 24.0 The bidder may have to produce original document for verification if so decided by BHEL.
- 25.0 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

for BHARAT HEAVY ELECTRICALS LTD

(SCT)

**Enclosure**

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

**ANNEXURE - 1**

**PRE QUALIFYING REQUIREMENTS**

JOB	OH of HP/IP/LP Turbine, Valves & Strainers Unit # 3, 210 MW Khaperkheda TPS
TENDER NO	<b>BHE/PW/PUR/KKT-COH/1152</b>

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)	<b>NOT APPLICABLE</b>	
B	<p><b><u>Technical</u></b> Bidder must have executed following works i.e. Bidder must meet {(B.1.1 or B.1.2 ) <b>And</b> (B.2.1 or B.2.2)} in the last seven (7) years as on latest date of bid submission:-</p> <p>B.1.1) Executed atleast <b>Two Overhauling</b> work of KWU design Turbine all three module ( HPT,IPT &amp; LPT) at a time in Power Plant of <b>190MW or above</b> against single work order.</p> <p style="text-align: center;"><b>OR</b></p> <p>B.1.2) Executed atleast One Erection, Testing &amp; Commissioning Work of KWU design Turbine for <b>190MW or above</b> in Power Plant against single work order.</p> <p style="text-align: center;"><b>AND</b></p> <p>B.2.1) Executed atleast <b>One Overhauling</b> work of KWU design 190MW or above Turbine in Power Plant of value not less than <b>Rs.45 Lakhs</b> against single work order.</p> <p style="text-align: center;"><b>OR</b></p> <p>B.2.2) Executed atleast <b>Two Overhauling</b> work of KWU design 190MW or above Turbine in Power Plant of value not less than <b>Rs.35 Lakhs</b> against single work order.</p>	APPLICABLE	
<p>FOR QR: (B.1.1 OR B.1.2) BIDDER SHALL SUBMIT "WORK ORDER" COPY ALONG WITH RESPECTIVE "BILL OF QUANTITY &amp; SCOPE OF WORK" INCLUDING "RELEVANT DOCUMENT FOR WORK COMPLETION" DOCUMENTS FOR THE RESPECTIVE WORK ORDER IN SUPPORT OF THE TECHNICAL QR.</p>			

<p>FOR QR: (B.2.1 OR B.2.2) BIDDER SHALL SUBMIT "WORK ORDER" COPY ALONG WITH RESPECTIVE "BILL OF QUANTITY &amp; SCOPE OF WORK" INCLUDING "RELEVANT DOCUMENT FOR WORK COMPLETION" &amp; "RELEVANT DOCUMENT FOR WORK EXECUTED VALUE" DOCUMENTS FOR THE RESPECTIVE WORK ORDER IN SUPPORT OF THE TECHNICAL QR.</p> <p>IN ABSENCE OF ABOVE SAID DOCUMENTS, OFFER OF THE BIDDER WILL NOT BE CONSIDERED FOR EVALUATION.</p>			
C-1	<p><b><u>Financial Turnover</u></b> Bidders must have achieved an average annual financial turnover (Audited) of Rs 17 Lakhs or more over last three Financial Years (FY) i.e. 2010-2011, 2011-2012, 2012-2013 or for 2009-2010, 2010-2011, 2011-12 if Annual Accounts for FY 2012-2013 are not audited.</p>	APPLICABLE	
C-2	<p><b><u>NETWORTH</u></b> (only in case of Companies) Net worth of the Bidder based on the latest Audited Accounts as furnished for 'C-1' above should be positive</p>	APPLICABLE	
C-3	<p><b><u>PROFIT</u></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.</p>	APPLICABLE	
D	Assessment of Capacity of Bidder to execute the work as per sl no 9 of NIT	NOT APPLICABLE	By BHEL
E	Approval of Customer	NOT APPLICABLE	BY BHEL
F	Price Bid Opening Note: Price Bids of only those bidders shall be opened who stand qualified after compliance of criteria A to E	APPLICABLE	BY BHEL
F	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. 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</li> <li>6. '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</li> </ol>			

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 WITH BOQ AND WORK COMPLETION CERTIFICATE AND TDS CERTIFICATE ETC IN THE RESPECTIVE ANNEXURES IN THEIR OFFER

**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: Please tick ( ✓ ) whichever applicable:- 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
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/Signing Contract Agreement	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

1152

# TECHNICAL CONDITIONS OF CONTRACT (TCC)

BHARAT HEAVY ELECTRICALS  
LIMITED



# TECHNICAL CONDITIONS OF CONTRACT (TCC) CONTENTS

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SI No	DESCRIPTION	Chapter	No. OF PAGES
<b>Volume-IA</b>	<b>Part-I: Contract specific details</b>		
1	Project Information	Chapter-I	1
2	Scope of Works	Chapter-II	4
3	Special Terms and Other Conditions	Chapter-III	4
4	T&Ps and MMEs to be deployed by Contractor	Chapter-IV	3
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	3

# TECHNICAL CONDITIONS OF CONTRACT (TCC)

## Chapter - I: Project Information

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### Project Information

1. Purchaser M/s Maharashtra State Power Generation company Limited
2. Project Title OH of HP/IP/LP Turbine, Valves & Strainers Unit # 3, 210 MW  
Khaperkheda TPS

### Location & Approach

3. Nearest Railway Station Nagpur
4. Nearest airport Nagpur

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 is 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 Works

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### **PRE SHUTDOWN WORK TO CARRY OUT:**

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

### **SCOPE OF WORK:**

#### **SCHEDULE A 1: GENERAL OVERHAUL OF TURBINE SET**

- 1.0 Removal of Bearing covers & bearing No1 to 7
- 2.0 Coupled run out check of all rotors.
- 3.0 Decoupling of HP, IP, LP and MOP rotors.
- 4.0 Free run-out check on rotors and couplings.
- 5.0 Checking of Bearing Clearances, rectification of oil clearances by scraping & matching. Adjustment, repair, replacement of bearings & Generator seal rings as per requirement.
- 6.0 Ultrasonic & DP testing of all bearings and Generator Seal rings.
- 7.0 Alignment check of all rotors, MOP & corrections.
- 8.0 Rolling check of HP, IP and LP Turbines and corrections.
- 9.0 Centering of LP gland boxes.
- 10.0 Resetting of all bearing oil catchers, pedestal oil guard rings including replacement/ repairs as per requirement. Refitting of all bearings & setting of bearings & setting of pads Yoke keys etc. as per requirement.
- 11.0 Bump check of HP and IP rotors and corrections.
- 12.0 Horn Drop Test of HP/IP casings & corrections.
- 13.0 Overhauling of Thrust Bearing Trip & over speed trip devices & adjustment.
- 14.0 Overhauling of complete MOP.
- 15.0 Swing Check of HP rotor & adjustment if any to the extent possible.
- 16.0 Rotor Float & thrust pad check of thrust bearing, repair & replacement.
- 17.0 Final alignment check & adjustment in Keys & packers.
- 18.0 Couplings of HP-MOP, HP-IP, IP-LP, LP-GEN, and Gen/slip ring shaft including reaming / honing of couplings if required.
- 19.0 Box up of all bearings. (1to 7).
- 20.0 Cleaning of thrust Bearing Filters/Basket Strainers during oil flushing & up to 48 Hrs. after synchronization.
- 21.0 Witnessing & assisting turning gear operation & steam rolling.
- 22.0 Trim balancing if required.
- 23.0 Turbine lubricating oil coolers (2 Nos) cleaning by brushing.
- 24.0 Cleaning of Seal oil storage tank, seal oil coolers and SOST.
- 25.0 Cleaning of Generator H2 coolers cleaning by brushing and acid cleaning.
- 26.0 Generator Hydrogen seal revisioning.
- 27.0 Generator End Shields removal and replacement of sealing compound

#### **SCHEDULE – A2: HP TURBINE OVERHAUL**

- 1.0. Removal of insulation of HP turbine.
- 2.0. Locking of rotor with casing.
- 3.0. Breech nut loosening and removal.
- 4.0. Lifting and shifting of HP module to unloading bay.

# TECHNICAL CONDITIONS OF CONTRACT (TCC)

## Chapter - II : Scope of Works

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- 5.0. Dismantling of HP casing, inspection and carry out necessary repairs.
- 6.0. Cleaning of rotor, casing and gland segment by sand blasting.
- 7.0. Ovality check of inner casing with and without tightening of parting plane bolts.
- 8.0. Record flow path clearances.
- 9.0. Assembly of rotor and casing and carry out necessary checks.
- 10.0. Locking of rotor with casing and shifting casing to its proper position on pedestal.
- 11.0. Connection of inlet, exhaust and gland piping.

### **SCHEDULE: A3 I P TURBINE OVERHAUL**

- 1.0. Removal of insulation from casing, inlet and exhaust pipe.
- 2.0. Opening outer casing, inner casing and lifting upper halves.
- 3.0. Recording flow path element clearances.
- 4.0. Removal of rotor, cleaning of rotor and upper half of casing with sand blasting. Manual cleaning of lower half of casing. Inspection of rotor and casing.
- 5.0. Replacement of stationary fins on gland area if required.
- 6.0. Ovality check of inner casing with and without heat tightening of parting plane bolts.
- 7.0. Placing rotor in casing, recording clearances and box up inner casing with roll check and box up of outer casing.
- 8.0. Carryout roll check of outer casing and alignment of the casing.
- 9.0. Recording of face run out of IP casing, correction of run out and matching the face with HP coupling to improve the coupled run out and swing check value of HPT rotor.

### **SCHEDULE – A 4: L P TURBINE OVERHAUL**

- 1.0 Support the LP inner outer casing at bottom.
- 2.0 Open parting plane & lift upper half.
- 3.0 Open inner parting plane & lift upper half.
- 4.0 Record the relevant clearances at parting plane one set.
- 5.0 Removal of rotor, cleaning of rotor & upper half with sand blasting. Manual cleaning for lower half, Inspection of rotor & casing. .
- 6.0 Check Ovality of inner- inner casing with & without tightening of parting plane bolts.
- 7.0 Place rotor, record clearances & box up inner- inner followed by inner outer casing.
- 8.0 Carry out roll check of inner outer & align the casing.
- 9.0 Inspection/repair/replacement of LP casing extraction bellows as per requirement.
- 10.0 Replacing all LPT diaphragms (safety valve) with new ones.

### **SCHEDULE – A 5: NFT and MPI of LP rotor free standing blades**

- 1.0 Cleaning of rotor blades.
- 2.0 Carrying out NFT and MPI test of free standing blades.
- 3.0 Replacement of blades if required.

### **SCHEDULE – A 6: OVERHAULING OF HYDRAULICALLY OPERATED TURBINE VALVES AND SERVOMOTORS**

List of valves –

- |    |                                       |        |
|----|---------------------------------------|--------|
| 1. | HP By pass valve (ARS - 100)          | 2 Nos. |
| 2. | HP By pass Spray valves (BPE1/2 & BD) | 3 Nos. |
| 3. | HP stop valve                         | 2 Nos. |
| 4. | HP control valves                     | 2 Nos. |
| 5. | IP stop valves                        | 2 Nos  |

# TECHNICAL CONDITIONS OF CONTRACT (TCC)

## Chapter - II : Scope of Works

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6.	IP Control valves	2 Nos
7.	LP Bypass Stop valves	2 Nos.
8.	LP Bypass control valves	2 Nos.
9.	LP bypass spray valves	4 Nos.
10.	CRH NRVs	1 Nos.
11.	Extraction NRV	4 nos.

### **Schedule of Work:**

- 1.0. Decoupling & removal of servomotors / actuators as may be required.
- 2.0. Dismantling of valves.
- 3.0. Cleaning, checking & DP test as per requirement. Repair/replacement of components if any.
- 4.0. Complete Lapping of seats & discs as per requirement to. (Full extent possible and seat cutting if necessary).
- 5.0. Assembly of valves.
- 6.0. Dismantling of servomotors, cleaning of components as per requirement, repair/ replacement of various part as per requirement
- 7.0. Assembly of servomotor, placement & coupling with valves.
- 8.0. Commissioning all valves.

### **SCHEDULE – A 7: OVERHAULING OF MS AND HRH STEAM STRAINERS**

- 1.0 Overhauling of MS and HRH steam strainers – 04 Nos.

### **Work involved:**

- 1.0. Dismantling of strainers.
- 2.0. Cleaning and thorough inspection with DP Test of welds joints and repair if necessary.
- 3.0. Assembly with new seal rings.
- 4.0. Hot Tightening.

### **SCHEDULE – A 8: PROVISION OF EOT CRANE OPERATOR:**

Arranging of two nos. of EOT Crane Operators to work in all shifts for round the clock working. EOT cranes shall be made available by Contractor.

### **SCHEDULE – A 9: CHECKING & SETTING OF HANGERS/ SUPPORTS OF CRITICAL PIPING IN TG AREA**

Checking, repairing & setting of cold valves of hangers and supports of critical piping in TG area.

### **SCHEDULE – A 10: REPLACEMENT OF EXISTING SEAL OIL FILTERS BY BOLL & KIRCH AS PER RECOMMENDATION OF BHEL HWR**

- 1.0. Removing existing filters and replaces it with Boll & Kirch filter.
- 2.0. Pipe root weld should be carried out by Argon welding.
- 3.0. New Boll & Kirch filter assembly & required pipes, bends will be provided by MSPGCL.

## TECHNICAL CONDITIONS OF CONTRACT (TCC)

### Chapter – III: SPECIAL TERMS AND OTHER CONDITIONS

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1. 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. 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.
3. 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.
4. All the works shall be carried out as per the instructions and to the satisfaction of the Engineer In-charge.
5. The contractor will attend contributory to faulty and poor workmanship during commissioning and trial run of the equipment.
6. Round the clock working under expert supervision shall be ensured by the contractor deploying two equal parallel strength of group in 12 hrs. Shift with equal T&P for all the jobs so as to complete the work in stipulated period or earlier.
7. 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.
8. 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.
9. 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.
10. Two office boys in each shift are to be provided for BHEL site office.
11. Experienced Engineers preferably ex-BHEL employees with more than 25 years' experience in erection/ servicing of Turbine & Generator (Hydrogen Dryer expert) area to be engaged during entire overhauling period in consultation with BHEL.
12. It is the responsibility of contractor to keep the plant, equipment, machinery and surrounding area clean.
13. 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.
14. 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 **3 days** after machine comes on full load.
15. Work distribution sheet for all the workers/supervisors deployed shall be submitted to BHEL one day in advance on daily basis.

## TECHNICAL CONDITIONS OF CONTRACT (TCC)

### Chapter – III: SPECIAL TERMS AND OTHER CONDITIONS

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16. Subcontractor should mobilize additional resources such as plant, equipment's, 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.
17. Subcontractor should get registered under relevant sales tax and or work contract Act (VAT) where the jobs are executed.
18. Radiography and stress relieving, wherever mentioned are in the scope of the contractor.
19. Scrap and insulation etc. is to be shifted to scrap disposal area as indicated by the Engineer-in-charge.
20. One administrative personnel to control the resources and attendance of the workers to be ensured.
21. Contractor shall arrange certified HP welder for welding job whose welding test will be conducted.
22. Contractor shall arrange skilled EOT crane operator for round clock job.
23. Argon, Oxy- Acetylene gas shall be arranged by the contractor with cutting/welding set / argon welding set and other welding appliances.
24. Enerpac make close height Hydraulic jacks of 50T and 100T capacity - 4 nos. each shall be arranged by the contractor in 100 % working conditions.
25. Scaffolding material, Tarpaulin etc. Will be arranged by the subcontractor on his own cost.
26. If the duration of work continues beyond stipulated period due to any reason, no claim for compensation will be entertained.
27. The work details are brief & for Subcontractor knowledge only. Subcontractor will have to do all the related works as per requirement.
28. 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.
29. No compensation claimed for idle labor for any reason will be entertained by BHEL.
30. 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.
31. Accommodation for the sub-contractor's manpower will be provided if made available by the customer as per the applicable charges.
32. Contractor is to obtain labor license before the start of the work.
33. Workmen compensation policy to taken before the start of the work
34. Third party liability insurance to taken before the start of the work
35. The copy of registration of sales tax/Excise Duty/VAT. If this is not applicable then contractor shall submit an undertaking.
36. Copy of registration of EPF along with the PF account number of the employees. Challans for EPF for previous month shall be submitted along with subsequent RA bill
37. Partnership deed of firm in case of partnership firm or power of attorney of the representative in case of company to be submitted before the start of the work
38. Bank details, address & RTGS numbers etc. to be submitted
39. Copy of service tax registration to be submitted before the start of the work
40. Copy of professional tax registration to be submitted before the start of the work (If required)
41. Copy of PAN card in the name of firm to be submitted before the start of the work
42. Copy of wage register witnessed by MSPGCL representative for the bill period & bank transfer details to be submitted

# TECHNICAL CONDITIONS OF CONTRACT (TCC)

## Chapter – III: SPECIAL TERMS AND OTHER CONDITIONS

43. The contractor has to take clearance from HR group of TMD/DSPM TPS MSPGCL before release of final bill.
44. The contractor has taken NO OBJECTION CERTIFICATE (NOC) from Safety section, stores, health physics section, HR/HS section & security section of MSPGCL KHAPERKHEDA before release of final bill.
45. Calibration certificate with validity for all measuring instruments and T&P should be submitted to MSPGCL KHAPERKHEDA east before start of work.
46. 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, if any.

Contractor has to carry out tree plantation in customer premises.

### MANPOWER LIST

Sl. No.	Description	Numbers
1.	Site In-charge	1
2.	Supervisors	6
3.	Foreman	6
4.	Mill Wright Fitters	12
5.	Junior Fitters	20
6.	Riggers	25
7.	Gas Cutters / LP welder	5
8.	Electrician	2
9.	Store keeper	3
10.	Sarang	3
11.	Unskilled worker	50
12.	HP Welder	2
13.	Carpenter	2
14.	EOT Crane Operators	2

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.

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

### SUBMISSION OF DOCUMENTS

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.

## TECHNICAL CONDITIONS OF CONTRACT (TCC)

### Chapter – III: SPECIAL TERMS AND OTHER CONDITIONS

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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. ESI code to be furnished.

The contractor shall submit following documents in report form within 15 days from commissioning of unit after the overhaul/shut down work is completed 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(to be submitted in bidders letterhead, and furnished in a separate Sealed envelope)

# TECHNICAL CONDITIONS OF CONTRACT (TCC)

## Chapter – IV: T&Ps and MMEs to be deployed by Contractor

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### 4.0 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 ½" to 1 ½"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.
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.

# TECHNICAL CONDITIONS OF CONTRACT (TCC)

## Chapter – IV: T&Ps and MMEs to be deployed by Contractor

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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/rectifiers 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 and 500 V megger.
48. Electric switchboards and flood light arrangements with fuse boxes and isolating switches, plugs and sockets.
49. 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.
50. Pedestal fans/air coolers.
51. Wooden sleepers.
52. Wooden Planks.
53. Magnifying glass.
54. Plastic helmets, Fibre helmet.
55. Gas cutting/welding goggles, grinding goggles.
56. Bearing pullers.
57. Tarpaulin.
58. Insulation testers and Meggers 500 V and 1000 V at least 1 No. each.
59. Any other T and P as per requirement and as per our General and special conditions of Contracts.
60. Digital Multimeter
61. Analogue multimeters of Motwane make
62. 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.
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.

# TECHNICAL CONDITIONS OF CONTRACT (TCC)

## Chapter – IV: T&Ps and MMEs to be deployed by Contractor

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### 4.1 CONSUMABLES TO BE ARRANGED BY CONTRACTOR

(The list is indicative only and not exhaustive)

01. Kerosene oil.
02. Rustolene.
03. Petrol/white Petrol/Benzylne/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/Molycote/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. Carborundum 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. Polythelene 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 REQUIREMENTS

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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 alignment/ clearance/ centering/ leveling readings and inspection details of various other ESP and auxiliaries and to be submitted to BHEL.
- 4.0. All the important measurements like preassembly 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. All the welders including HP welders shall carry identity cards. Only welders duly authorised by BHEL/ Boiler inspector/ customer/ consultant shall be engaged on the work.
- 9.0. STAGE INSPECTION BY BHEL / CUSTOMERS ENGINEERS

Apart from day-to-day inspection/ stage inspection of equipments by BHEL engineers, the set 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

Full-fledged team shall be mobilized within 2 days after the placement of LOI and consultation with RSM/SAS

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

The activities for erection, testing, Overhauling etc. 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 work shall be completed within a period of **30 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 MSPGCL Khaperkheda TPS shall be in the second week of July' 2013

# 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 50% after the mobilization, Dismantling and 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 40% after Completion of Assembly and Barring Gear.
- 3.0 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 manpower 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 and Other 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 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.

# TECHNICAL CONDITIONS OF CONTRACT (TCC)

## Chapter-VIII: Taxes and Other Duties

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.