

TENDER SPECIFICATION

| SI No | Tender Specification Number | Unit Number & Project |
|-------|---------------------------------|-------------------------------------|
| 1. | BHE/PW/PUR/SAT-BLR U 6 & 7/1255 | Unit # 6&7, 210 MW, Satpura, MPPGCL |
| 2. | BHE/PW/PUR/SAT-BLR U 9/1256 | Unit # 9, 210 MW, Satpura, MPPGCL |

FOR

PACKAGE – A: ANNUAL OVERHAULING OF BOILER AT UNIT # 6&7, 210 MW, SATPURA, MPPGCL

&

PACKAGE – B: ANNUAL OVERHAULING OF BOILER AT UNIT # 9, 210 MW, SATPURA, MPPGCL

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/SAT-BLR U 6 & 7/1255 | Unit # 6&7, 210 MW, Satpura, MPPGCL |
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FOR

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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

Date :

1255 &
1256

NOTICE INVITING TENDER

(Document No PS:MSX:NIT:Rev 01 dated 1st
Jun 2012)

Bharat Heavy Electricals Limited



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& BHE/PW/PUR/SAT-BLR U#9 /1256

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Ref: BHE/PW/PUR/SAT-BLR/1255/1256

Date: 11/04/2014

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/SAT-BLR/1255 & 1256 | |
| ii | Broad Scope of job | AOH of Boiler of U # 6, 7 & 9 at MPPGCL Satpura | |
| 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> | Applicable |
| b | Volume-IB | <i>Special Conditions of Contract (SCC)</i> | Applicable |
| c | Volume-IC | <i>General Conditions of Contract (GCC)</i> | Applicable |
| d | Volume-ID | <i>Forms and Procedures</i> | Applicable |
| e | Volume-II | <i>Price Schedule (Absolute value).</i> | Applicable |
| iv | Issue of Tender Documents | 11.04.2014 | Applicable/ Not applicable |
| v | DUE DATE & TIME OF OFFER SUBMISSION | Date : 02.05.2014 , Time : 15.00 Hrs Place : <u>BHEL PS Regional office at :Nagpur</u> Tenders being submitted through representative shall be handed over to any of the following BHEL officials after making entry/registration at the reception: Nirmal /Asst. Engineer(Purchase) Saravana Kumar/Engineer(Purchase) | Applicable |
| vi | OPENING OF TENDER | Date : 02.05.2014 , Time : 16.00 Hrs Notes: (1) In case the due date of opening of tender becomes a non-working day, then the due date & | Applicable |

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| | | | |
|------|---|--|-----------------------------------|
| | | <i>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</i> | |
| vii | EMD AMOUNT | <i>Rs 2,00,000/- (Rupees Two Lakhs Only)</i> | <i>Applicable</i> |
| viii | COST OF TENDER | <i>Rs. 2000/-</i> | <i>Applicable/Not Applicable</i> |
| ix | LAST DATE FOR SEEKING CLARIFICATION | <i>Atleast 3 days before the due date of offer submission Along with soft version also, addressing to undersigned & to others as per contact address given below</i> | <i>Applicable</i> |
| x | SCHEDULE OF Pre Bid Discussion (PBD) | <i>Date :</i> | <i>Applicable/Not applicable.</i> |
| xi | INTEGRITY PACT & DETAILS OF INDEPENDENT EXTERNAL MONITOR (IEM) | ----- | <i>Applicable/Not applicable.</i> |
| xii | Latest updates | <i>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</i> | <u>Applicable</u> |

- 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 |
|-----------------|-------------|---------|
| Part-I A | | |

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| | | |
|-------|--|---------------|
| | <p>ENVELOPE – I superscribed as : PART-I (TECHNO COMMERCIAL BID) TENDER NO : NAME OF WORK : PROJECT: DUE DATE OF SUBMISSION:</p> <p>CONTAINING THE FOLLOWING:-</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>Note:</p> <p>a. In case of any deviation, the same should be submitted separately for technical & 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>i). In case of acceptance of the deviations, appropriate loading shall be done by BHEL</p> <p>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. | |

| | | |
|----|--|--|
| | PART-I B | |
| | <p>ENVELOPE – II superscribed as: PART-I (EMD/COST of TENDER) TENDER NO : NAME OF WORK : PROJECT: DUE DATE OF SUBMISSION:</p> <p>CONTAINING THE FOLLOWING:-</p> | |
| i. | <p>1. Earnest Money Deposit (EMD) in the form as indicated in this Tender</p> <p style="text-align: center;">OR</p> <p>Documentary evidence for 'One Time EMD' with the Power Sector Region of BHEL</p> | |

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| | | |
|--|--|--|
| | floating the Tender | |
| | 2. Cost of Tender (Demand Draft or copy of Cash Receipt as the case may be) | |

| | | |
|----|--|--|
| | PART-II | |
| | PRICE BID consisting of the following shall be enclosed | |
| | ENVELOPE-III superscribed as: PART-II (PRICE BID) TENDER NO : NAME OF WORK : PROJECT: DUE DATE OF SUBMISSION: | |
| | CONTAINING THE FOLLOWING | |
| 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) | |

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

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 **Assessment of Capacity of Bidders:**
Bidders capacity for executing the job under tender shall be assessed 'LOAD' wise and 'PERFORMANCE' wise as per the following:

I. **LOAD:** Load takes into consideration **ALL** the contracts of the Bidder under execution with BHEL Regions, irrespective of whether they are similar to the tendered scope or not. The 'Load' is the sum of the unit wise identified packages (refer Table-1) for contracts with BHEL Regions. The cut off month for

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reckoning 'Load' shall be the month, two (2) months preceding the month corresponding to the 'latest date of bid submission', in the following manner:

(Note: For example if latest bid submission is in Aug 2011, then the 'load' shall be calculated upto and inclusive of June 2011)

i). Total number of Packages

Total number of Packages in hand = P

Where

- 'P' is the sum of all unit wise identified packages under execution with BHEL Regions as of the cut off month defined above, including packages yet to be commenced, excepting packages which are on HOLD due to reasons not attributable to Bidder..

II. **PERFORMANCE:** Here 'Monthly Performance' of the bidder for all the packages (**under execution/** executed during the 'Period of Assessment' in all the Power Sector Regions of BHEL) **SIMILAR** to the packages covered under the tendered scope, excepting packages not commenced shall be taken into consideration. The 'Period of Assessment' shall be 6 months preceding the cut off month. The cut off month for reckoning 'Period of Assessment' shall be the month two (2) months preceding the month corresponding to the 'latest date of bid submission', in the following manner:

(Note: For example if 'latest date of bid submission' is in Aug 2011, then the 'performance' shall be assessed for a 6 month period upto and inclusive of June 2011, for all the unit wise identified packages (refer Table I)

i). Calculation of Overall 'Performance Rating' for 'similar Package/Packages' for the tendered scope under execution at Power Sector Regions for the 'Period of Assessment':

This shall be obtained by summing up the 'Monthly Performance Evaluation' scores obtained by the bidder in all Regions for all the similar Package/packages', divided by the total number of Package months for which evaluation should have been done, as per procedure below:

- a) $P_1, P_2, P_3, P_4, P_5, \dots, P_N$ etc be the packages (**under execution/** executed during the 'Period of Assessment' in all Regions) **SIMILAR** to the packages covered under the tendered scope, excepting packages not commenced. Total number of similar packages for all Regions = P_T (i.e $P_T = P_1 + P_2 + P_3 + P_4 + \dots + P_N$)
- b) Number of Months ' T_1 ' for which 'Monthly Performance Evaluation' as per relevant formats, should have been done in the 'Period of Assessment' for the corresponding similar package P_1 . Similarly T_2 for package P_2 , T_3 for package P_3 , etc for the tendered scope. Now calculate cumulative total months ' T_T ' for total similar Packages ' P_T ' for all Regions (i.e $T_T = T_1 + T_2 + T_3 + T_4 + \dots + T_N$)
- c) Sum ' S_1 ' of 'Monthly Performance Evaluation' Scores ($S_{1-1}, S_{1-2}, S_{1-3}, S_{1-4}, S_{1-5}, \dots, S_{1-N}$) for similar package P_1 , for the 'period of assessment' ' T_1 ' (i.e $S_1 = S_{1-1} + S_{1-2} + S_{1-3} + S_{1-4} + S_{1-5} + \dots + S_{1-N}$). Similarly S_2 for package P_2 for period T_2 , S_3 for package P_3 for period T_3 , etc for the tendered scope for all Regions. Now calculate cumulative sum ' S_T ' of 'Monthly Performance Evaluation' Scores for total similar Packages ' P_T ' for all Regions (i.e ' $S_T = S_1 + S_2 + S_3 + S_4 + S_5 + \dots + S_N$).
- d) **Overall Performance Rating ' R_{BHEL} ' for the similar Package/Packages (under execution/** executed during the 'Period of Assessment') in all the Power Sector Regions of BHEL):

Aggregate of Performance scores for all similar packages in all the Regions
 =

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.....
Aggregate of months for each of the similar package for which performance should have been evaluated in all the Regions

$$= \frac{S_T}{T_T}$$

e) Bidders to note that the risk of non evaluation or non availability of the 'Monthly Performance Evaluation' reports as per relevant formats is to be borne by the Bidder

f) Table showing methodology for calculating 'a', 'b' and 'c' above

| Sl no | Item Description | Details for all Regions | | | | | | | Total |
|-------|---|--|--|--|--|--|------------------|--|--|
| (i) | (ii) | (iii) | (iv) | (v) | (vi) | (vii) | (viii) | (ix) | (x) |
| 1 | Similar Packages for all Regions → (under execution/ executed during period of assessment) | P ₁ | P ₂ | P ₃ | P ₄ | P ₅ | ... | P _N | Total No of similar packages for all Regions = P_T ie Sum (Σ) of columns (iii) to (ix) |
| 2 | Number of Months for which 'Monthly Performance Evaluation' as per relevant formats should have been done in the 'period of assessment for corresponding similar Package (as in row 1) | T ₁ | T ₂ | T ₃ | T ₄ | T ₅ | ... | T _N | Sum (Σ) of columns (iii) to (ix) = T_T |
| 3 | Monthly performance scores for the corresponding period (as in Row 2) | S ₁₋₁ , S ₁₋₂ , S ₁₋₃ , S ₁₋₄ , ... S _{1-T1} | S ₂₋₁ , S ₂₋₂ , S ₂₋₃ , S ₂₋₄ , ... S _{2-T2} | S ₃₋₁ , S ₃₋₂ , S ₃₋₃ , S ₃₋₄ , ... S _{3-T3} | S ₄₋₁ , S ₄₋₂ , S ₄₋₃ , S ₄₋₄ , ... S _{4-T4} | S ₅₋₁ , S ₅₋₂ , S ₅₋₃ , S ₅₋₄ , ... S _{5-T5} | | S _{N-1} , S _{N-2} , S _{N-3} , S _{N-4} , ... S _{N-TN} | ----- |
| 4 | Sum of Monthly Performance scores of the corresponding Package for the corresponding period (as in row-3) | S ₁ | S ₂ | S ₃ | S ₄ | S ₅ | ... | S _N | Sum (Σ) of columns (iii) to (ix) = S_T |

ii) Calculation of Overall 'Performance Rating' (R_{BHEL}) in case 'similar Package/Packages' for the tendered scope ARE NOT AVAILABLE, during the 'Period of Assessment':

This shall be obtained by summing up the 'Monthly Performance Evaluation' scores obtained by the bidder in all Regions for ALL the packages, divided by the total number of Package months for which evaluation should have been done. 'R_{BHEL}' shall be calculated subject to availability of 'performance scores' for at least.6 'package months' in the order of precedence below:

- a) 'Period of Assessment.
- b) 12 months preceding the cut-off month
- c) 24 months preceding the cut-off month

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d) 36 months preceding the cut-off month
 In case, R_{BHEL} cannot be calculated as above, then Bidder shall be treated as 'NEW VENDOR'. Further eligibility and qualification of this bidder shall be as per definition of 'NEW VENDOR' described in 'Explanatory Notes'

iii) Factor "L" assigned based on Overall Performance Rating (R_{BHEL}) at Power Sector Regions.:

| Sl no | Overall Performance Rating (R_{BHEL}) | Corresponding value of 'L' |
|-------|---|----------------------------|
| 1 | $=60$ | NA |
| 2 | > 60 and ≤ 65 | 0.4 |
| 3 | > 65 and ≤ 70 | 0.35 |
| 4 | > 70 and ≤ 75 | 0.25 |
| 5 | > 75 and < 80 | 0.2 |
| 6 | ≥ 80 | NA |

III. 'Assessment of Capacity of Bidder':

'Assessment of Capacity of Bidder' is based on the Maximum number of packages for which a vendor is eligible, considering the performance scores of similar packages, as below:

Max number of packages $P_{Max} = (R_{BHEL} - 60)$ divided by corresponding value of 'L'
 i.e. $(R_{BHEL} - 60)/L$

Note:

- i. In case the value of P_{Max} results in a fraction, the value of P_{Max} is to be rounded off to next whole number
- ii. For $R_{BHEL} = 60$, $P_{Max} = '1'$
- iii. For $R_{BHEL} \geq 80$, there will be no upper limit on P_{Max}

The Bidder shall be considered 'Qualified' as per 'Assessment of Capacity of Bidder' for the subject Tender if $P \leq P_{Max}$
 (where P is calculated as per clause 9.I)

IV. Explanatory note:

- a) Similar package means Boiler or ESP or Piping or Turbine or Civil or Structure or Electrical or CI, etc at the individual level irrespective of rating of Plant, and irrespective of whether the subject tender is a single package or as part of combined/composite packages. Normally Boiler, ESP, Piping, Turbine, Electrical, CI, Civil, Structure, etc is considered individual level of package. For example in case the tendered scope is a Boiler Vertical Package comprising of Boiler, ESP and Power Cycle Piping (i.e the 'identified packages as per Table-1 below), the 'PERFORMANCE' part against sl no II above, needs to be evaluated considering all the identified packages (ie Boiler, ESP and Power Cycle Piping) and finally the Bidder's capacity to execute the tendered scope is assessed in line with III above
- b) Identified Packages (Unit wise)

Table-1

| | Civil | Electrical & CI | Mechanical |
|--|---|---|--|
| | i). Enabling works ii). Pile and Pile Caps iii). Civil Works including foundations iv). Structural Steel Fabrication | i). Electrical ii). CI iii). Others (Elec & CI) | i). Boiler & Aux (All types including CW Piping if applicable) ii). Power Cycle Piping/Critical Piping iii). LP Piping iv). ESP |

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| | | | |
|--|---|--|---|
| | & Erection v). Chimney vi). Cooling Tower vii). Others (Civil) | | v). Steam Turbine Generator set & Aux vi). Gas Turbine Generator set & Aux vii). Hydro Turbine Generator set & Aux viii). Turbo Blower (including Steam Turbine) ix). Material Handling x). Material Management xi). Material Handling & Material Management xii). Others (Mechanical) |
|--|---|--|---|

- c) Bidders who have not been evaluated for at least six package months in the last 36 months in the online BHEL system for contractor performance evaluation in BHEL PS Regions, wef July'2010 shall be considered "NEW VENDOR".

A 'NEW VENDOR' shall be considered qualified subject to satisfying all other tender conditions

A 'NEW VENDOR' if awarded a job (of package/packages identified under this clause) shall be tagged as "FIRST TIMER" on the date of first LOI from BHEL.

The "FIRST TIMER" tag shall remain till execution of work for a period of not less than 09 months, from the commencement of work of first package

A Bidder shall not be eligible for the next job as long as the Bidder is tagged as "FIRST TIMER" excepting for the Tenders which have been opened on or before the date of the bidder being tagged as 'FIRST TIMER'.

After removal of 'FIRST TIMER' tag, the Bidder shall be considered 'QUALIFIED' for the future tenders subject to satisfying all other tender conditions including 'Capacity Evaluation of Bidders'.

- d) In the unlikely event of all bidders shortlisted against Technical and Financial Qualification criteria not meeting the criteria on 'Assessment of Capacity of Bidders' detailed above, OR leads to a single tender response on applying the criteria of 'Assessment of Capacity of Bidders' or due to non-approval by Customer, then BHEL at its discretion reserves the right to consider the further processing of the Tender based on the **Overall Performance Rating 'R_{BHEL}'** only, starting from the upper band.
- e) 'Under execution' shall mean works in progress as per the following:
- i. up to Boiler Steam Blowing in case of Steam Generator and Auxiliaries
 - ii. upto Synchronisation in case of all other works excepting sl no (i) and (iii)
 - iii. Upto execution of at least 90% of anticipated contract value in case of Civil & Structures (unit wise), Enabling works and upto 90% of material unloading (in tonnage) as per the original contract in case of MM Package.

Note : BHEL at its discretion can extend (or reduce in exceptional cases in line with Contract conditions) the period defined against (i), (ii) and (iii) above, depending upon the balance scope of work to be completed.

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- f) Performance evaluation in CL 9 above is applicable to Prime bidder and consortium partner (or Technical tie up partner) for their respective scope of work
- 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.

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- 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 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 similar works

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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 Purchase

Enclosure

01. Annexure-1: Pre Qualifying criteria.
02. Annexure – 2 Check List
03. Annexure-3 IMPORTANT INFORMATION
04. Other Tender documents as per this NIT.

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ANNEXURE - 1

PRE QUALIFYING REQUIREMENTS

| | | | |
|------------------|--|--|---|
| JOB | AOH of Boiler of U # 6, 7 & 9 at MPPGCL Satpura | | |
| TENDER NO | BHE/PW/PUR/SAT-BLR U 6, 7 & 9/1255-1256 | | |
| 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><u>Technical</u></p> <p>Bidder must have executed following works i.e. Bidder must meet {(B.1.1 or B.1.2) And (B.2.1)} in the last seven (7) years as on latest date of bid submission:-</p> <p>B.1.1) Executed Erection, Testing & assistance in Commissioning of atleast one Boiler (Consisting of Pressure Parts) of rating 120MW or above against single work order.</p> <p style="text-align: center;">OR</p> <p>B.1.2) Executed Overhauling of atleast one Boiler (Consisting of Pressure Parts) of rating 120MW or above against single work order.</p> <p style="text-align: center;">AND</p> <p>B.2.1) Executed Overhauling of atleast one Boiler (any Parts) of any rating against single work order of value Rs.81 Lakhs.</p> | APPLICABLE | |
| C-1 | <p><u>FINANCIAL TURNOVER</u></p> <p>Bidders must have achieved an average annual financial turnover (Audited) of Rs.70 Lakhs or more over last three Financial Years (FY) i.e. 2010-2011,</p> | APPLICABLE | |

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| | | | |
|--|--|----------------|---------|
| | 2011-2012, 2012-2013. | | |
| C-2 | NETWORTH (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 | APPLICABLE | |
| C-3 | PROFIT 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) | APPLICABLE | By BHEL |
| E | Approval of Customer (if applicable) Note: 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 | 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 |
| G | Consortium criteria | NOT APPLICABLE | |
| <p><u>Explanatory Notes for the PQR (unless otherwise specified in the PQR):</u></p> <ol style="list-style-type: none"> 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 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. 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) 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 5. 'Additional' Criteria in respect of 'Technical' criteria of PQR (as in 'B' above) for Civil, Electrical, CI, unless otherwise specified : <ol style="list-style-type: none"> 1. Bidder should have executed similar work of any one of the following: <ol style="list-style-type: none"> a. One (1) work of value not less than Rs XXX <li style="text-align: center;">OR b. Two (2) works of not less than Rs YYY <li style="text-align: center;">OR c. Three (3) works of not less than Rs ZZZ <p>(Value XXX, YYY, ZZZ shall be as indicated by BHEL</p> 2. 'Similar' work for criteria 5 above means <ol style="list-style-type: none"> a. Civil or Structures or Civil & Structures or Chimney respectively as applicable to the tendered scope in respect of 'CIVIL' Works | | | |

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| | <p>b. Electrical works in respect of 'ELECTRICAL'</p> <p>c. CI works in respect of 'CI' Works</p> <p>d. Material Handling and/or Management works in respect of 'MM' works</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">1. "BOILER LIGHT UP" in respect of Boiler & Aux and ESP2. "OVERHAULING" Repair/Replacement/Refurbishment work3. "SYNCHRONISATION" in respect of STG/GTG and 'SPINNING' in case of HTG4. "STEAM BLOWING COMPLETION" in respect of at least Main Steam Line of Power Cycle Piping5. "HYDRAULIC TEST" of the system in respect of Structures, Pressure parts/IBR Piping6. "CHARGING" in respect of power Transformers, Bus ducts, HT/LT switchgears7. "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.8. Achievement of physical Quantities as per respective PQRs in respect of Civil & Structures and Piling Works9. 'Readiness for coal Filling" in respect of Bunker Structure Work. <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. In case the experience/PO/WO certificate enclosed by bidders do not have separate break up prices for the E&C portion of Electrical and CI Works, (i.e. the certificates enclosed are for composite order for supply and erection of Electrical & CI and other works if any), then value of Erection and Commissioning for the Electrical & CI portion shall be considered as 15% of the supply & erection of Electrical & CI, unless otherwise specifically indicated in the PQR.</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> |
|--|---|

FOR QR: (B.1.1 OR B.1.2) BIDDER SHALL SUBMIT "WORK ORDER" COPY ALONG WITH RESPECTIVE "BILL OF QUANTITY & SCOPE OF WORK" INCLUDING "RELEVANT DOCUMENT FOR WORK COMPLETION" DOCUMENTS FOR THE RESPECTIVE WORK ORDER IN SUPPORT OF THE TECHNICAL QR.

FOR QR: (B.2.1) BIDDER SHALL SUBMIT "WORK ORDER" COPY ALONG WITH RESPECTIVE "BILL OF QUANTITY & SCOPE OF WORK" INCLUDING "RELEVANT DOCUMENT FOR WORK COMPLETION" & "RELEVANT DOCUMENT FOR WORK EXECUTED VALUE" DOCUMENTS FOR THE RESPECTIVE WORK ORDER IN SUPPORT OF THE TECHNICAL QR.

IN ABSENCE OF ABOVE SAID DOCUMENTS, OFFER OF THE BIDDER SHALL NOT BE CONSIDERED FOR EVALUATION.

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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

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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 PRE QUALIFICATION CRITERIA (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 |

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| | | | |
|----|---|-------------------|--------|
| 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 | 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 :

AUTHORISED SIGNATORY

(With Name, Designation and Company seal)

ANNEXURE 3: 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 ---> 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.
- 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.

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- 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.

12. This is a combined tender for Annual Overhauling of Boiler at Unit # 6, 7 & 9, 210 MW, Satpura, MPPGCL

- 12.1. Single Lumpsum Price is invited as per Price Bid for Satpura U#6, 7 & 9.
- 12.2. This Lumpsum Price split into percentages as per Price Bid (36% of Lumpsum Price for U#6, 31% of Lumpsum Price for U#7 and 33% of Lumpsum Price for U#9). These percentages of Units are further split with respect to works
- 12.3. Lowest acceptable Awarded/finalized Lumpsum rate shall be split into U#6, 7 & 9 as per respective percentages allocated in Price Bid
- 12.4. L-1 bidder (Lowest acceptable price) shall be considered for award of Unit # 6 & 7, i.e. approximately 67% of the total indent value. (Refer Price Bid)
- 12.5. For U#9, lowest acceptable Awarded/finalized Lumpsum rate shall be calculated for allocated 33%
- 12.6. For award of Unit#9, next bidder in the order of their price competitiveness (i.e. L-2, then L-3 and hence forth) shall be given an opportunity to match the Awarded/finalized L-1 rate (100% Lumpsum rate of Awarded/finalized L-1 rate will be counter offered and 33% shall be considered for award of Unit#9, as allocated in the Price Bid)
- 12.7. In case none of the bidders agree to match the Awarded/finalized L-1 rate, then BHEL shall award 33% (Unit #9 allocation) to L-1 bidder.

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TECHNICAL CONDITIONS OF CONTRACT (TCC)

BHARAT HEAVY ELECTRICALS LIMITED



TECHNICAL CONDITIONS OF CONTRACT (TCC) CONTENTS

| SI No | DESCRIPTION | Chapter | No. OF PAGES |
|------------------|---|--------------|--------------|
| Volume-IA | Part-I: Contract specific details | | |
| 1 | Project Information | Chapter-I | 1 |
| 2 | Scope of Work (Package .A U#6&7) | Chapter-II | 10 |
| | Scope of Work (Package .B U# 9) | | 6 |
| 3 | Time Schedule | Chapter-III | 1 |
| 4 | T&Ps ,Manpower & Consumables to be deployed by Contractor | Chapter-IV | 6 |
| 5 | Terms of Payment | Chapter-V | 2 |
| 6 | General Terms and Other Conditions | Chapter-VI | 4 |
| 7 | Quality Requirements | Chapter-VII | 2 |
| 8 | Taxes & Duties | Chapter-VIII | 2 |
| 9 | Special Inputs to be provided by Contractor | Chapter-IX | 1 |

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter - I : PROJECT INFORMATION

| 1.0 | Project Information |
|-----|---|
| | <ul style="list-style-type: none">1) Purchaser : M/s Madhya Pradesh Power Generation Company Limited2) Project Title : AOH of Boiler of U # 6, 7 & 9 at MPPGCL Satpura3) Nearest Railway Station : Ghoradongri (MP)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 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 (Package –A-U#6&7)

Annual Overhauling Of Boiler Pressure Parts, Replacement of Platen Super Heater Coils, Replacement of Complete Burner Panel Assemblies, Replacement of Reheater Header No. 1 (CRH)-01 No., Replacement of Complete Set of Reheater Coils of **Unit # 6 & 7** at Satpura TPS MPPGCL -Sarni

BRIEF SCOPE OF WORK:

- a. Overhaul of Boiler pressure parts
- b. Replacement of complete set of R.H. Coils (Front & Rear)
- c. Replacement of 13 Nos. of Platen S.H. Coils
- d. Replacement of complete Burner Panel Assembly
- e. Replacement of R.H. Header No.1 (CRH Header)

PRESHUT DOWN ACTIVITIES:

1. Mobilization of site one week before the shutdown of the unit with adequate manpower and T&P for Erection of temporary structures/platforms, arrangement of electric winches, ,Hydra, cranes, lifting & transporting equipment as required for dismantling & erection activities.
2. Identification/Verification of materials to be erected.
3. Arrangement of consumables like welding electrodes, filler wire, Argon, Oxy-acetylene gases, etc.
4. To obtain gates passes for staff & workers to be deployed for the job.
5. To obtain all required statutory approvals like labor license, safety training & insurance, etc.
6. To obtain IBR approvals for work execution and endorsement of HP welders' certificates.
7. Making arrangements for the stay of staff and workers at site.

Note: Bidders are advised to make a site visit to have on hand information about the prevailing site conditions and also accommodation arrangements for his manpower. may meet concerned MPPGCL officials at site in this regard.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-II Scope of Work (Package –A-U#6&7)

2.0 DETAILED SCOPE OF WORK(UNIT-6)

A. OVERHAULING OF BOILER PRESSURE PARTS of UNIT- 6.

1. External cleaning of Boiler by Water Washing (Floor).
2. Erection of scaffolding in stages inside furnace up to roof radiant tube, SH, RH and 2nd pass area as required to cover all pressure parts area for external surface cleaning by high pressure water jet, inspection, D-metering and tube replacement of the Boiler wherever required. The cup lock /scaffolding should be with provisions of platforms, at every 3 to 3.5 meter with railing supports and stair case for easy access to tube /coils. Entire quick erection scaffolding material will be arranged by contractor. S-panel scaffolding should be fully covered to prevent falling of debris/clinker into hopper & to facilitate work inside bottom hopper. All scaffolding material are will be arranged by contractor. Safety nets to be provided at three elevations.
3. High pressure water jet (more than 100 Kg/cm²) cleaning of Boiler followed by wire brush & scrubber cleaning if surface is not properly cleaned. High pressure water jet pump to be arranged by contractor. Checking of pressure parts for erosion /cracks or any other abnormality & replacement /rectification.
4. Checking of drum internals, covering of down comers to prevent ingress of foreign materials. Dismantling, cleaning, inspection of drum internals, replacement /repairing of damaged components, Re-fixing and re-aligning and NDT & DPT Test of welding joints and other components and repair and rectification, Through checking & chemical/cleaning of CBD line, chemical lines, sampling lines. Replacement of lines if necessary. Collection of drum deposits for testing.
5. Thorough cleaning of bottom ring headers by cutting their drain pipes and re-welding as per IBR.
6. Thorough checking of Economiser, Steam cool wall header stub joint and rectification as per IBR.
7. Thickness survey of pressure parts tubes by De-metering. Thickness survey will have to be carried in the following erosion prone area after cleaning the surfaces by wire brush /buffing wheel.
 - a) Water Walls :
Burner transition tubes, S-panel lower & upper bends & straight tubes. Goose neck bends, side wall bends, straight portion near ring header, upper corner transition tubes, bends of peep & manhole, soot blower holes, hanger tubes, rear arch wall tube bends.
 - b) Platen water wall:
All bends & coils including straight portion checking/rectification and replacement as per requirement.
Note : All bends straight portion thorough checking & replacement.
 - c) SH/RH/PLATEN SH/FINAL SH :
Oxide scale measurement and hardness measurement of RH, Platen & Final SH tubes – 2500 points.Thorough de-metering /inspection and necessary replacement inside pent house header including straight portion and offset bends and dissimilar joints. All re-heater offset bend protection Sleeves to be fixed up. All stub of inlet /outlet header to be checked and if required to be replaced.
 - d) SCREEN TUBES (WW, SH):
Thorough de-metering of screen tubes (WW, SH) and replacement of defective tubes and replacement of all protection sleeves. After removal of existing Protection sleeves, all tubes to be thoroughly checked and replaced.
 - e) LTSH /SUPPLY TUBES & BENDS.:
All stubs to be thoroughly checked by DPT, UT and other modern method as per IBR. Replacement of all LTSH supply tubes bends and straight tubes. Through de-metering /inspection and necessary replacement / repair of

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-II Scope of Work (Package –A-U#6&7)

bends facing flue gas path of LTSH including straight portion and bends. Through inspection and joint in between LTSH and economizer hanger tube and rectification as per requirement.

f) STEAM COOLED WALL /SCREEN TUBE :

All stub joints of header No. 4L 4R, 5 and 8 are to be thoroughly checked by DPT, UT and other modern method as per IBR and rectification. All bends including offset bends and straight tubes and bends of header if found eroded are to be replaced. Proper laying of refractory are to be applied in steam cool area and LTSH supply tube area.

g) STEAM COOLED SPACERS :

Spacer tube, straight portion and bends to be replaced.

h) WALL BLOWER AREA :

Thorough de-metering of Water wall tubes around wall blowers and rectification /replacement as necessary.

i) RANDOM DP TEST & NDT :

Random DP test & NDT of Platen SH, Final SH & RH, Platen water wall headers and at other areas, if required.

j) ROOF RADIANT TUBES :

Inspection/checking of roof tubes. Sagging portion of tubes, if any to be replaced as required.

8. Replacement of tubes based on inspection carried out. Replacement of tubes includes

a) Cutting, edge preparations, Cut edges of the tubes are to be properly covered to protect ingress of foreign material in the tubes. Covers for covering cut edges are to be fabricated by the contractor. Necessary material for fabrication of covers will be provided by MPPGCL. Fitting of tubes and offer for inspection before final welding.

b) Welding of root by TIG and subsequent SMAW – approx1500 HP Welding joints

c) Fitting of Tangent /fins /wear bar and welding wherever applicable – Approx. welding 2500 mtrs.

d) 100% Radiography of weld joints and stress relieving, if any as per IBR norms.

e) Radiography of around 2000 nos. of old approachable joints to be done in first week of overhaul. i.e. immediately after completion of scaffolding & cleaning of boiler.

f) Above welding joints includes cutting / re-welding for RLA purpose also. All cutting/welding/de-insulation/insulation for RLA purpose shall be in the scope of contractor.

9. Inspection of SH Desuperheater assembly by opening hand hole plug and necessary repairing if required.

10. Inspection & Replacement of RH Desuperheater assembly. Preheating and stress relieving, if required.

11. Replacement of damaged / worn out platen coil seal boxes, tie rods, crown plate & connected support in pent house. If any spare is not available then it should be fabricated from material available at site. Repairing of Pent House as per requirement, this include repairing of structure / trusses / Beams above pent house Roof. Replacement of damaged corrugated G.I. sheet above the pent house and at other areas like AB/CD/EF elevation after due repairing of support channel beam etc.

Workshop facilities as available will be provided by MPPGCL.

12. If spare bends are not available for replacement, fabrication of the same to be done by cold bending machine as per requirement and Contractor arrange tube bending machine.

13. Replacement of water wall soot blower line, SH drain lines, common drain header of spray drain, RH/SH spray drain lines, etc.

14. Replacement of RH &SH spray drain line and oil & steam trace lines.

15. Measurement of bowing of furnace walls and necessary correction by replacement of tubes as much as possible from 15m elevation to 40m elevation.

16. Inspection of cassette baffle, roof shield and erosion protection shield for Super heater screen tubes, water wall screen tubes, Super heater, Reheater and fixing the same if found missing /eroded.

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Chapter-II Scope of Work (Package –A-U#6&7)

17. Checking of buck stay links and corner connections (supporting pins, gussets plates etc.), Seismic guides of down comers, furnace guides, leveller guides and their rectification as required, Checking of scalloped bars, stirrup plates of buck stay channels and repairing /replacement if necessary. Removal of insulation & re insulation after necessary correction to be done. Replacement of Buck stays as per requirement.
18. De-insulation and re-insulation as required facilitating replacement / corrections of water wall tubes and buck stays, etc.
19. Replacement of damaged insulation along with cladding of 1st& 2nd pass of Boiler limited to 3000 Sqm. Insulating material, cladding etc. will be supplied by MPPGCL.
20. Recasting of damaged castable refractory in the boiler including bottom hopper limited to 50 M Tons. Thorough inspection of hanger supports in pent house and adjustment and rectification as required and repair of pent house including roof to achieve zero leakage. De-insulation and re-insulation of critical pipes like main steam. Hot and cold reheat, cold discharge lines and shall be limited to 1500 Sqm.
21. Checking /cleaning of sampling lines of main steam, hot /cold reheat, drum and rectification /replacement of the same, if needed.
22. Inspection of cassette baffle, roof shield and erosion protection shield for Super heater screen tubes, water wall screen tubes, Super heater, Reheater and fixing the same if found missing /eroded.
23. Through inspection of hanger support of all headers and connecting pipes in pent house, cat house and dead chamber and their rectification /adjustment /replacement as required.
24. Through inspection of hanger of all critical piping like main steam, HRH, CRH and down comers, feed lines and their rectification /adjustment /replacement as required. Hot & cold readings of above hangers are to be taken and adjustment of hangers to be done based on cold reading.
25. Providing assistance during Hydro-test. Installation of test plugs for hydro test and installation of disc in place of test plug after hydro test.
26. Removal of scaffolding after successful hydro-test.
27. Rectification /replacement of man holes & peep holes as required and boxing up of boiler.
28. Facilitate boiler directorate/inspector during dry inspection and hydro test.
29. Repairing /replacement of bottom ash hopper woven wire mesh including trough seal checking/repairing ensuring zero water leakage and rectification as required and recasting of damaged refractory.
30. Making provision for hanging scaffolding (Four numbers) at Roof Radiant roof.
31. Thorough Cleaning of ash and repairing of pent house, Cat house, Dead Chamber & Economizer hoppers, Economiser trench, flushing apparatus & APH hopper.
32. Replacement of corrugated G.I. sheets of Roof of Pent House after due repairing of support channel beam etc.
33. Thorough repair for proper sealing of boiler pent house, dog house, dead chamber with skin casing, Expansion joints, SH/RH crown plates, roof support, etc. so that there should not be any leakage.
34. Inspection of dead space for structural stability and any deformations, if any, will have to be rectified as much as possible.
35. During air tightness test if any leakage is found it is to be rectified as per requirement.
36. Cleaning of economizer hoppers and APH hoppers, and complete repairing with new plates of hoppers including supports. Repairing /Replacement of economizer/air preheater flushing apparatus, associated pipe lines. Thorough repairing of economiser ash trench and its drain pipe.
37. External cleaning of Boiler by water washing and transportation of accumulated ash /debris from work site to ash disposal area.
38. Cleaning/repair/replacement of steam line, drain line, vent line (any where in boiler) etc as required.

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Chapter-II Scope of Work (Package –A-U#6&7)

39. Cleaning/repairing/replacement of oil & steam line associated with oil heating station, oil firing station.
40. Servicing /Fitting /alignment/replacement (if required) of wall dislagers and long retractable soot blowers. Wall dislagers – 48 Nos. and LRSB - 4Nos.

B. REPLACEMENT OF PLATEN SUPER HEATER COILS – 13 Nos

1. Cleaning of pent house and removal of insulation of headers & coils as required.
2. Arrangement of working platforms and making openings on side water walls to facilitate dismantling & erection of the coils.
3. Cutting & dismantling of 13 Nos. of Platen SH coils from their positions and lowering to the ground.
4. Inspection of header stubs by DPT/UT, replacement if required and edge preparation of header stubs.
5. Steam cleaning of new coils.
6. Erection, alignment, fitting & HP welding.
7. Restoration of side water walls tubes after coils erection.
8. 100% radiography of welded joints and heat treatment as per IBR.
8. Restoration of Insulation & refractory

C. REPLACEMENT OF COMPLETE BURNER PANEL ASSEMBLIES IN ALL THE FOUR CORNERS OF FURNACE.

1. Removal of insulation cladding/ refractory around burner panels and restoration of same after erection.
2. Arrangement of working platforms and dismantling of existing burner panel tubes.
3. Edge preparation of tubes.
4. Steam cleaning of new burner panels, erection, alignment, fitting and HP welding of joints.
5. 100% Radiography of new joints as per IBR.
6. Any related work associated with dismantling/erection for successful completion of job will be in scope of contractor only.

D. REPLACEMENT OF REHEATER HEADER NO. 1 (CRH)-01 No.

1. Making of openings on side walls as required to facilitate dismantling of existing CRH Header
2. Cutting of coils and removal header from its position to ground level.
3. Thorough steam cleaning of header and polishing of stub edges, edge preparation if required.
4. Erection of new header to its position, providing supports and alignment.
5. Checking/replacement of header supports as required.
6. Fitting & HP welding, 100% radiography, heat treatment as per IBR.
7. Restoration of openings made for header replacement.

E. REPLACEMENT OF COMPLETE SET OF REHEATER COILS (RH-1: 59 Nos. & RH- 2 : 89 Nos)

1. Cleaning of pent house and removal of insulation of headers & coils.
2. Cutting & dismantling of complete set of Reheater coils from their positions and lowering to the ground.
3. Levelling and alignment of header.

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Chapter-II Scope of Work (Package –A-U#6&7)

4. Inspection of header stubs by DPT/UT and replacement if required.
5. Edge preparation of header stubs.
6. Steam cleaning of new coils
7. Erection, alignment, fitting & HP welding
8. 100% radiography of welded joints and heat treatment as per IBR.
9. Fitting & welding of crown plates, seal plates, etc.
10. Restoration of Insulation & refractory

2.1 DETAILED SCOPE OF WORK: (UNIT-7)

A. OVERHAULING OF BOILER PRESSURE PARTS ETC. OF UNIT-7

1. External cleaning of Boiler by Water Washing (Floor).
2. Erection of scaffolding in stages inside furnace up to roof radiant tube, SH, RH and 2nd pass area as required to cover all pressure parts area for external surface cleaning by high pressure water jet, inspection, D-metering and tube replacement of the Boiler wherever required. The cup lock /scaffolding should be with provisions of platforms, at every 3 to 3.5 meter with railing supports and stair case for easy access to tube /coils. Entire quick erection scaffolding material will be arranged by contractor. S Panel scaffolding should be fully covered to prevent falling of debris/clinker into hopper & to facilitate work inside bottom hopper. Also S Panel area should be fully covered from top to facilitate its dismantling and erection. All scaffolding material are will be arranged by contractor. Safety nets to be provided at three elevations.
3. High pressure water jet (more than 100 Kg/cm²) cleaning of Boiler followed by wire brush & scrubber cleaning if surface is not properly cleaned. High pressure water jet pump to be arranged by contractor. Checking of pressure parts for erosion /cracks or any other abnormality & replacement /rectification.
4. Checking of drum internals, covering of down comers to prevent ingress of foreign materials. Dismantling, cleaning, inspection of drum internals, replacement /repairing of damaged components, Re-fixing and re-aligning and NDT & DPT Test of welding joints and other components and repair and rectification, Through checking & chemical/cleaning of CBD line, chemical lines, sampling lines. Replacement of lines if necessary. Collection of drum deposits for testing.
5. Thorough cleaning of bottom ring headers by cutting their drain pipes and re-welding as per IBR.
6. Thorough checking of Economiser, Steam cool wall header stub joint and rectification as per IBR.
7. Thickness survey of pressure parts tubes by De-metering. Thickness survey will have to be carried in the following erosion prone area after cleaning the surfaces by wire brush /buffing wheel.
 - a) Water Walls :
Burner transition tubes, S Panel lower & upper bends & straight tubes. Goose neck bends, side wall bends, straight portion near ring header, upper corner transition tubes, bends of peep & manhole, soot blower holes, hanger tubes, rear arch wall tube bends.
 - b) Platen water wall:
All bends & coils including straight portion checking/rectification and replacement as per requirement.
Note : All bends straight portion thorough checking & replacement.
 - c) SH/RH/PLATEN SH/FINAL SH :

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-II Scope of Work (Package –A-U#6&7)

Oxide scale measurement and hardness measurement of RH, Platen & Final SH tubes – 2500 points. Thorough de-metering /inspection and necessary replacement inside pent house header including straight portion and offset bends and dissimilar joints. All re-heater offset bend protection Sleeves to be fixed up. All stub of inlet /outlet header to be checked and if required to be replaced.

d) SCREEN TUBES (WW, SH) :

Thorough de-metering of screen tubes (WW, SH) and replacement of defective tubes and replacement of all protection sleeves. After removal of existing Protection sleeves, all tubes to be thoroughly checked and replaced.

e) LTSH /SUPPLY TUBES & BENDS.:

All stubs to be thoroughly checked by DPT, UT and other modern method as per IBR. Replacement of all LTSH supply tubes bends and straight tubes. Through de-metering /inspection and necessary replacement / repair of bends facing flue gas path of LTSH including straight portion and bends. Through inspection and joint in between LTSH and economizer hanger tube and rectification as per requirement.

f) STEAM COOLED WALL /SCREEN TUBE :

All stub joints of header No. 4L, 4R, 5 and 8 are to be thoroughly checked by DPT, UT and other modern method as per IBR and rectification. All bends including offset bends and straight tubes and bends of header if found eroded are to be replaced. Proper laying of refractory are to be applied in steam cool area and LTSH supply tube area.

g) STEAM COOLED SPACERS :

Spacer tube, straight portion and bends to be replaced.

h) WALL BLOWER AREA :

Thorough de-metering of Water wall tubes around wall blowers and rectification /replacement as necessary.

i) RANDOM DP TEST & NDT :

For Platen SH, Final SH & RH, Platen water wall headers and others if required.

j) ROOF RADIANT TUBES :

Inspection/ checking of roof tubes. Sagging portion of tubes, if any to be replaced as required.

8. Replacement of tubes based on inspection carried out. Replacement of tubes includes;

a) Cutting, edge preparations, Cut edges of the tubes are to be properly covered to protect ingress of foreign material in the tubes. Covers for covering cut edges are to be fabricated by the contractor. Necessary material for fabrication of covers will be provided by MPPGCL. Fitting of tubes and offer for inspection before final welding.

b) Welding of root by TIG and subsequent SMAW – approx 1500 HP Welding joints

c) Fitting of Tangent /fins /wear bar and welding wherever applicable – Approx. welding 2500 mtrs.

d) 100% Radiography of weld joints and stress relieving, if any as per IBR norms.

e) Radiography of around 2000 nos. of old approachable joints to be done in first week of overhaul. i.e. immediately after completion of scaffolding & cleaning of boiler.

f) Above welding joints includes cutting / re-welding for RLA purpose also. All cutting/welding/de-insulation/insulation for RLA purpose shall be in the scope of contractor.

9. Inspection of SH Desuperheater assembly by opening hand hole plug and necessary repairing if required.

10. Inspection & Replacement of RH Desuperheater assembly. Necessary preheating and stress relieving.

11. Replacement of damaged / worn out platen coil seal boxes, tie rods, crown plate & connected support in pent house. If any spare is not available then it should be fabricated from material available at site. Repairing of Pent House as per requirement, this include repairing of structure / trusses / Beams above pent house Roof.

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Chapter-II Scope of Work (Package –A-U#6&7)

Replacement of damaged corrugated G.I. sheet above the pent house and at other areas like AB/CD/EF elevation after due repairing of support channel beam etc.

Workshop facilities as available will be provided by MPPGCL.

12. If spare bends are not available for replacement, fabrication of the same to be done by cold bending machine as per requirement and Contractor arrange tube bending machine.
13. Replacement of waterwall soot blower line, SH drain lines, common drain header of spray drain, RH/SH spray drain lines, etc.
14. Replacement of RH &SH spray drain line and oil & steam trace lines.
15. Measurement of bowing of furnace walls and necessary correction by replacement of tubes as much as possible from 15m elevation to 40m elevation.
16. Inspection of cassette baffle, roof shield and erosion protection shield for Super heater screen tubes, water wall screen tubes, Super heater, Reheater and fixing the same if found missing /eroded.
17. Checking of buck stay links and corner connections (supporting pins, gussets plates etc.), Seismic guides of down comers, furnace guides, leveller guides and their rectification as required, Checking of scalloped bars, stirrup plates of buck stay channels and repairing /replacement if necessary. Removal of insulation & re-insulation after necessary correction to be done. Replacement of Buck stays as per requirement.
18. De-insulation and re-insulation as required facilitating replacement / corrections of water wall tubes and buck stays, etc.
19. Replacement of damaged insulation along with cladding of 1st & 2nd pass of Boiler limited to 3000 Sqm. Insulating material, cladding etc. will be supplied by MPPGCL.
20. Recasting of damaged castable refractory in the boiler including bottom hopper limited to 50 MTons. Thorough inspection of hanger supports in pent house and adjustment and rectification as required and repair of pent house including roof to achieve zero leakage. De-insulation and re-insulation of critical pipes like main steam. Hot and cold reheat, cold discharge lines and shall be limited to 1500 Sqm.
21. Checking /cleaning of sampling lines of main steam, hot /cold reheat, drum and rectification /replacement of the same, if needed.
22. Inspection of cassette baffle, roof shield and erosion protection shield for Superheater screen tubes, water wall screen tubes, Superheater, Reheater and fixing the same if found missing /eroded.
23. Through inspection of hanger support of all headers and connecting pipes in pent house, cat house and dead chamber and their rectification /adjustment /replacement as required.
24. Through inspection of hanger of all critical piping like main steam, HRH, CRH and down comers, feed lines and their rectification /adjustment /replacement as required. Hot & cold readings of above hangers are to be taken and adjustment of hangers to be done based on cold reading.
25. Providing assistance during Hydro-test. Installation of test plugs for hydro test and installation of disc in place of test plug after hydro test.
26. Removal of scaffolding after successful hydro-test.
27. Rectification /replacement of man holes, peep holes as required and boxing up of boiler.
28. Facilitate boiler directorate/inspector during dry inspection and hydro test.
29. Repairing /replacement of bottom ash hopper woven wire mesh including trough seal checking/repairing ensuring zero water leakage and rectification as required and recasting of damaged refractory.
30. Making provision for hanging scaffolding (Four numbers) at Roof Radiant roof.
31. Thorough Cleaning of ash and repairing of pent house, Cat house, Dead Chamber & Economizer hoppers, Economiser trench, flushing apparatus & APH hopper.

BHEL-PSWR

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Chapter-II Scope of Work (Package –A-U#6&7)

32. Replacement of corrugated G.I. sheets of Roof of Pent House after due repairing of support channel beam etc.
33. Thorough repair for proper sealing of boiler pent house. dog house, dead chamber with skin casing, Expansion joints, SH/RH crown plates, roof support, etc. so that there should not be any leakage.
34. Inspection of dead space for structural stability and any deformations, if any, will have to be rectified as much as possible.
35. During air tightness test if any leakage is found it is to be rectified as per requirement.
36. Cleaning of economizer hoppers and APH hoppers, and complete repairing with new plates of hoppers including supports. Repairing /Replacement of economizer / air preheater flushing apparatus, associated pipe lines. Thorough repairing of economiser ash trench and its drain pipe.
37. External cleaning of Boiler by water washing and transportation of accumulated ash /debris from work site to ash disposal area.
38. Cleaning/repair/replacement of steam line, drain line, vent line (anywhere in boiler) etc. as required.
39. Cleaning/repairing/replacement of oil & steam line associated with oil heating station, oil firing station.
40. Servicing /Fitting /alignment/replacement (if required) of wall deslaggers and long retractable soot blowers. Wall deslaggers – 48 Nos and LRSB - 4 Nos.

B. REPLACEMENT OF COMPLETE SET OF RADIANT ROOF TUBES – 120 Nos.

1. Removal of accumulated ash and water cleaning of complete pent house area.
2. Cut & removal of skin cladding, refractory of complete roof tubes.
3. Arrangement of temporary platforms/scaffolding. Also necessary arrangement/shielding should be provided near roof (inside boiler) to prevent accident from falling material in boiler.
4. Cut & removal of complete set of roof tubes from header to header
5. Edge preparation of header tubes.
6. Cleaning of new tubes, erection, alignment, fitting and HP welding of new tubes.
7. 100% radiography, heat treatment of weld joints as required
8. Replacement of worn out platen coil seal box, tie rods / supports, crown plates & seal plates and connected supports.
9. Complete repairing of Pent House and its roof as per requirement, this includes through repairing of structure / trusses / Beams above pent house roof. If any assembly is not available, it is to be fabricated at site. Material for fabrication will be made available by MPPGCL. The pent house and roof to achieve Zero leakage.
10. Application of Refractory on roof tubes and complete roof areas and fitting & seal welding of skin cladding plates.
11. Replacement of damaged corrugated G.I. sheet above the pent house and other area like AB/CD/EF elevation after due repairing of support channel beam etc.
12. Through inspection of hanger supports of headers in pent house and adjustment and rectification as required and repair.

C. REPLACEMENT OF COMPLETE OF S - PANEL (FRONT & REAR):

1. Cut & removal of insulation, sheeting, at the S Panel area to facilitate Replacement of S Panel tubes.

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Chapter-II Scope of Work (Package –A-U#6&7)

2. Arrangement of temporary platform/scaffolding to facilitate dismantling & erection. Sealing to be made above S- Panel top (inside boiler) bends to prevent materials falling from top.
3. Locking/supporting of ring headers, water wall etc as required.
4. Opening at various areas to facilitate dismantling and erection of S Panel tubes.
5. Cutting and lowering of complete S Panel assembly (front & rear) till the bowed portion of W/W tube area.
6. Edge preparation of water wall tubes and stubs of ring header.
7. All the header stub joints of S Panel are to be checked through DPT &UT and other modern method as per IBR.
8. Cleaning of new S Panel tubes by steam.
9. Erection, alignment, fitting and HP welding of new joints.
10. 100% radiography, heat treatment of weld joints as required.
11. Replacement of supporting channel & the tie rod for S Panel.
12. Fixing of wear bar is to be done if same are not available with tube.
13. Restoration of ring header to its position.
14. Restoration of insulation, sheeting & refractory to achieve zero leakage from cat house and boiler.
15. Complete repair of cat house (front & rear) after erection of S Panel to achieve zero leakage.

Note:

1. Any activity required to be carried out for completion of work and not mentioned above is in the scope of sub-contractor. Also if there is a necessity of fitting spool piece during coil replacement or boiler overhauling, same should be done by contractor without any extra payment.
2. All the material scrap, insulation wool, ash & refractory muck generated during the overhauling to be disposed on regular basis to a specified area as per the directions of Engineer Incharge, MPPGCL.
3. All mechanical scrap that generated during overhaul has to be weighed as per instruction of Engineer Incharge, MPPGCL before its disposal.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-II Scope of Work (Package –B-U# 9)

ANNUAL OVERHAULING OF BOILER PRESSURE PARTS, REPLACEMENT OF COMPLETE BANK OF LTSH COILS, REPLACEMENT OF COMPLETE SET OF REHEATER COILS OF UNIT # 9 AT SATPURA TPS MPPGCL - SARNI

BRIEF SCOPE OF WORK:

- a. Overhaul of Boiler pressure parts
- b. Replacement of complete set of R.H. Coils (Front & Rear)
- c. Replacement of Complete Bank of LTSH coils

PRESHUT DOWN ACTIVITIES:

1. Mobilization of site one week before the shutdown of the unit with adequate manpower and T&P for Erection of temporary structures/platforms, arrangement of electric winches, , Hydra, cranes, lifting & transporting equipment as required for dismantling & erection activities.
2. Identification/Verification of materials to be erected.
3. Arrangement of consumables like welding electrodes, filler wire, Argon, Oxy-acetylene gases, etc.
4. To obtain gates passes for staff & workers to be deployed for the job.
5. To obtain all required statutory approvals like labor license, safety training & insurance, etc.
6. To obtain IBR approvals for work execution and endorsement of HP welders' certificates.
7. Making arrangements for the stay of staff and workers at site.

Note: Bidders are advised to make a site visit to have on hand information about the prevailing site conditions and also accommodation arrangements for his manpower. may meet concerned MPPGCL officials at site in this regard.

2.3 DETAILED SCOPE OF WORK: (Package .B-Unit-9)

A. OVERHAULING OF BOILER PRESSURE PARTS ETC of Unit-9

1. External cleaning of Boiler by Water Washing (all Floors).
2. Erection of scaffolding in stages inside furnace up to roof radiant tube, SH, RH and 2nd pass area as required to cover all pressure parts area for external surface cleaning by high pressure water jet, inspection, D-metering and tube replacement of the Boiler wherever required. The cup lock /scaffolding should be with provisions of platforms, at every 3 to 3.5 meter with railing supports and stair case for easy access to tube /coils. Entire quick erection scaffolding material will be arranged by contractor. S-panel scaffolding should be fully covered to prevent falling of debris/clinker into hopper & to facilitate work inside bottom hopper. All scaffolding material are will be arranged by contractor. Safety nets to be provided at three elevations.

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Chapter-II Scope of Work (Package –B-U# 9)

3. High pressure water jet (more than 100 Kg/cm²) cleaning of Boiler followed by wire brush & scrubber cleaning if surface is not properly cleaned. High pressure water jet pump to be arranged by contractor. Checking of pressure parts for erosion /cracks or any other abnormality & replacement /rectification.
4. Checking of drum internals, covering of down comers to prevent ingress of foreign materials. Dismantling, cleaning, inspection of drum internals, replacement /repairing of damaged components, Re-fixing and re-aligning and NDT & DPT Test of welding joints and other components and repair and rectification, Through checking & chemical/cleaning of CBD line, chemical lines, sampling lines. Replacement of lines if necessary. Collection of drum deposits for testing.
5. Thorough cleaning of bottom ring headers by cutting their drain pipes and re-welding as per IBR.
6. Thorough checking of Economiser, Steam cool wall header stub joint and rectification as per IBR.
7. Thickness survey of pressure parts tubes by De-metering. Thickness survey will have to be carried in the following erosion prone area after cleaning the surfaces by wire brush /buffing wheel.

a) Water Walls :

Burner transition tubes, S-panel lower & upper bends & straight tubes. Goose neck bends, side wall bends, straight portion near ring header, upper corner transition tubes, bends of peep & manhole, soot blower holes, hanger tubes, rear arch wall tube bends.

b) Platen water wall:

All bends & coils including straight portion checking/rectification and replacement as per requirement.

Note : All bends straight portion thorough checking & replacement.

c) SH/RH/PLATEN SH/FINAL SH :

Oxide scale measurement and hardness measurement of RH, Platen & Final SH tubes – 2500 points. Thorough de-metering /inspection and necessary replacement inside pent house header including straight portion and offset bends and dissimilar joints. All re-heater offset bend protection Sleeves to be fixed up. All stub of inlet /outlet header to be checked and if required to be replaced.

d) SCREEN TUBES (WW, SH):

Thorough de-metering of screen tubes (WW, SH) and replacement of defective tubes and replacement of all protection sleeves. After removal of existing Protection sleeves, all tubes to be thoroughly checked and replaced.

e) LTSH /SUPPLY TUBES & BENDS.:

All stubs to be thoroughly checked by DPT, UT and other modern method as per IBR. Replacement of all LTSH supply tubes bends and straight tubes. Through de-metering /inspection and necessary replacement / repair of bends facing flue gas path of LTSH including straight portion and bends. Through inspection and joint in between LTSH and economizer hanger tube and rectification as per requirement.

f) STEAM COOLED WALL /SCREEN TUBE :

All stub joints of header No. 4L 4R, 5 and 8 are to be thoroughly checked by DPT, UT and other modern method as per IBR and rectification. All bends including offset bends and straight tubes and bends of header if found eroded are to be replaced. Proper laying of refractory are to be applied in steam cool area and LTSH supply tube area.

g) STEAM COOLED SPACERS :

Spacer tube, straight portion and bends to be replaced.

h) WALL BLOWER AREA :

Thorough de-metering of Water wall tubes around wall blowers and rectification /replacement as necessary.

i) RANDOM DP TEST & NDT :

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-II Scope of Work (Package –B-U# 9)

For Platen SH, Final SH & RH, Platen water wall headers and others if required.

j) ROOF RADIANT TUBES :

Inspection/ checking of roof tubes. Sagging portion of tubes, if any to be replaced as required.

8. Replacement of tubes based on inspection carried out. Replacement of tubes includes;

- a) Cutting, edge preparations, Cut edges of the tubes are to be properly covered to protect ingress of foreign material in the tubes. Covers for covering cut edges are to be fabricated by the contractor. Necessary material for fabrication of covers will be provided by MPPGCL. Fitting of tubes and offer for inspection before final welding.
 - b) Welding of root by TIG and subsequent SMAW – approx 1500 HP Welding joints
 - c) Fitting of Tangent /fins /wear bar and welding wherever applicable – Approx. welding 2500 mtrs.
 - d) 100% Radiography of weld joints and stress relieving, if any as per IBR norms.
 - e) Radiography of around 2000 nos. of old approachable joints to be done in first week of overhaul. i.e. immediately after completion of scaffolding & cleaning of boiler.
 - f) Above welding joints includes cutting / re-welding for RLA purpose also. All cutting/welding/de-insulation/insulation for RLA purpose shall be in the scope of contractor.
9. Inspection of SH Desuperheater assembly by opening hand hole plug and necessary repairing if required.
10. Inspection &Replacement of RH Desuperheater assembly. Necessary preheating and stress relieving.
11. Replacement of damaged / worn out platen coil seal boxes, tie rods, crown plate & connected support in pent house. If any spare is not available then it should be fabricated from material available at site. Repairing of Pent House as per requirement, this include repairing of structure / trusses / Beams above pent house Roof. Replacement of damaged corrugated G.I. sheet above the pent house and at other areas like AB/CD/EF elevation after due repairing of support channel beam etc.

Workshop facilities as available will be provided by MPPGCL.

12. If spare bends are not available for replacement, fabrication of the same to be done by cold bending machine as per requirement and Contractor arrange tube bending machine.
13. Replacement of water wall soot blower line, SH drain lines, common drain header of spray drain, RH/SH spray drain lines, etc.
14. Replacement of RH &SH spray drain line and oil & steam trace lines.
15. Measurement of bowing of furnace walls and necessary correction by replacement of tubes as much as possible from 15m elevation to 40m elevation.
16. Inspection of cassette baffle, roof shield and erosion protection shield for Super heater screen tubes, water wall screen tubes, Super heater, Reheater and fixing the same if found missing /eroded.
17. Checking of buck stay links and corner connections (supporting pins, gussets plates etc.), Seismic guides of down comers, furnace guides, leveller guides and their rectification as required, Checking of scalloped bars, stirrup plates of buck stay channels and repairing /replacement if necessary. Removal of insulation & re insulation after necessary correction to be done. Replacement of Buck stays as per requirement.
18. De-insulation and re-insulation as required facilitating replacement / corrections of water wall tubes and buck stays, etc.
19. Replacement of damaged insulation along with cladding of 1st & 2nd pass of Boiler limited to 3000 Sqm. Insulating material, cladding etc. will be supplied by MPPGCL.
20. Recasting of damaged castable refractory in the boiler including bottom hopper limited to 50 MTons. Thorough inspection of hanger supports in pent house and adjustment and rectification as required and

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-II Scope of Work (Package –B-U# 9)

- repair of pent house including roof to achieve zero leakage. De-insulation and re-insulation of critical pipes like main steam. Hot and cold reheat, cold discharge lines and shall be limited to 1500 Sqm.
21. Checking /cleaning of sampling lines of main steam, hot /cold reheat, drum and rectification /replacement of the same, if needed.
 22. Inspection of cassette baffle, roof shield and erosion protection shield for Superheater screen tubes, water wall screen tubes, Superheater, Reheater and fixing the same if found missing /eroded.
 23. Through inspection of hanger support of all headers and connecting pipes in pent house, cat house and dead chamber and their rectification /adjustment /replacement as required.
 24. Through inspection of hanger of all critical piping like main steam, HRH, CRH and down comers, feed lines and their rectification /adjustment /replacement as required. Hot & cold readings of above hangers are to be taken and adjustment of hangers to be done based on cold reading.
 25. Providing assistance during Hydro-test. Installation of test plugs for hydro test and installation of disc in place of test plug after hydro test.
 26. Removal of scaffolding after successful hydro-test.
 27. Rectification /replacement of man holes peep holes as required and boxing up of boiler.
 28. Facilitate boiler directorate/inspector during dry inspection and hydro test.
 29. Repairing /replacement of bottom ash hopper woven wire mesh including trough seal checking/repairing ensuring zero water leakage and rectification as required and recasting of damaged refractory.
 30. Making provision for hanging scaffolding (Four numbers) at Roof Radiant roof.
 31. Thorough Cleaning of ash and repairing of pent house, Cat house, Dead Chamber & Economizer hoppers, Economiser trench, flushing apparatus & APH hopper.
 32. Replacement of corrugated G.I. sheets of Roof of Pent House after due repairing of support channel beam etc.
 33. Thorough repair for proper sealing of boiler pent house, dog house, dead chamber with skin casing, Expansion joints, SH/RH crown plates, roof support, etc. so that there should not be any leakage.
 34. Inspection of dead space for structural stability and any deformations, if any, will have to be rectified as much as possible.
 35. During air tightness test if any leakage is found it is to be rectified as per requirement.
 36. Cleaning of economizer hoppers and APH hoppers, and complete repairing with new plates of hoppers including supports. Repairing /Replacement of economizer / air preheater flushing apparatus, associated pipe lines. Thorough repairing of economiser ash trench and its drain pipe.
 37. External cleaning of Boiler by water washing and transportation of accumulated ash /debris from work site to ash disposal area.
 38. Cleaning/repair/replacement of steam line, drain line, vent line (any where in boiler) etc as required.
 39. Cleaning/repairing/replacement of oil & steam line associated with oil heating station, oil firing station.
 40. Servicing /Fitting /alignment/replacement (if required) of wall deslaggers and long retractable soot blowers. Wall dislaggers – 48 Nos. and LRSB - 4 Nos.

B. REPLACEMENT OF COMPLETE BANK OF LTSH COILS (UPPER & LOWER)

1. Making of opening and erection of temporary platform in the rear steam cooled wall to facilitate dismantling & erection of LTSH coils.

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Chapter-II Scope of Work (Package –B-U# 9)

2. Making arrangements for Locking/supporting of Economiser coils, LTSH inlet header & other parts as required.
3. Dismantling and lowering of complete banks of LTSH coils to ground.
4. Inspection of header stubs by DPT/UT and replacement if required.
5. Edge preparation of header stubs and terminal tubes.
6. Steam cleaning of new coils before lifting to position.
7. Fitting of Cassette baffle and various shielding at ground before lifting coils.
8. Erection, alignment, fitting & HP welding.
9. Fitting of scalloped bar at top of LTSH top bank. If scalloped bar is not available with MPPGCL, same has to be fabricated at site by material given by MPPGCL.
10. Closing of opening made for dismantling/Erection and dismantling of temp. platforms after completion of replacement.
11. 100% radiography of welded joints and heat treatment as per IBR.
12. Restoration of Insulation & refractory.

C. REPLACEMENT OF COMPLETE SET OF REHEATER COILS (RH 1: 59 & RH 2:89 coils)

1. Removal of accumulated ash and water cleaning of complete pent house area.
2. Cut & removal of skin cladding, refractory of complete roof tubes.
3. Arrangement of temporary platforms/scaffolding. Also necessary arrangement/shielding should be provided near roof (inside boiler) to prevent accident from falling material in boiler.
4. Cut & removal of complete set of roof tubes from header to header
5. Edge preparation of header tubes.
6. Cleaning of new tubes, erection, alignment, fitting and HP welding of new tubes.
7. 100% radiography, heat treatment of weld joints as required
8. Replacement of worn out platen coil seal box, tie rods / supports, crown plates & seal plates and connected supports.
9. Complete repairing of Pent House and its roof as per requirement, this includes through repairing of structure/trusses / Beams above pent house roof. If any assembly is not available, it is to be fabricated at site. Material for fabrication will be made available by MPPGCL. The pent house and roof to achieve Zero leakage.
10. Application of Refractory on roof tubes and complete roof areas and fitting & seal welding of skin cladding plates.
11. Replacement of damaged corrugated G.I. sheet above the pent house and other area like AB/CD/EF elevation after due repairing of support channel beam etc.
12. Through inspection of hanger supports of headers in pent house and adjustment and rectification as required and repair.

Note:

1. Any activity required to be carried out for completion of work and not mentioned above is in the scope of sub-contractor. Also if there is a necessity of fitting spool piece during coil replacement or boiler overhauling, same should be done by contractor without any extra payment.

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Chapter-II Scope of Work (Package –B-U# 9)

2. All the material scrap, insulation wool, ash & refractory muck generated during the overhauling to be disposed on regular basis to a specified area as per the directions of Engineer Incharge, MPPGCL.
3. All mechanical scrap that generated during overhaul has to be weighed as per instruction of Engineer Incharge, MPPGCL before its disposal.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-III Time Schedule

3.0. Expected date of commencement:

The tentative shutdown of Boiler is scheduled in the **third week of May' 2014** and work on all fronts to be started immediately thereafter.

3.1 Mobilization of site:

The requisite manpower, consumables, T&P, etc. have to be mobilized accordingly so that the work can be started from day one with full force.

It may be noted that mobilization of man power, consumables and T&P is not done as per the agreed terms by contractor then a penalty of 25% as specified in terms of payment will be imposed by BHEL.

BHEL decision will be final and binding regarding penalty to be imposed for the delay of work.

3.2 PERIOD OF COMPLETION

Entire works are to be completed within the following stipulated period from the date of start of work. It is to be noted that time is essence of the contract and the job should be completed to the fullest satisfaction of BHEL within the specified time period. In the event of delay in completion of the job, action will be taken as per relevant clauses of contract.

UNIT -6 50 DAYS

UNIT -7 45 DAYS

UNIT-9 – 50 DAYS

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-IV T&P, Manpower & Consumables to be provided by Contractor

4.0. MAN POWER:

- a. Adequate manpower, T&P along with consumables should be deployed at site and should reach the site one week before the shutdown of the unit. All the lifting tools /measuring instruments shall be duly tested /calibrated and valid certificate to that effect should be submitted to BHEL Site In-charge before start of the work.
- b. 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.
- c. Successful bidder has to arrange a LAPTOP at site with latest configuration, USB Modem for Internet connectivity, DVD/CD writer, multimedia and its peripherals including printer.
- d. One office boy to be provided for BHEL site office.

e. Special Man power :

Successful bidder has to engage well experienced ex-BHEL Engineers one for each area (i.e. Sl. No. a to e), who have experience in erection and overhaul of Boiler pressure parts & auxiliaries during entire overhauling period in consultation with BHEL. In case of failure of deployment of above engineers, a deduction of Rs.4,000/- per day for each engineer shall be made from the bills by BHEL. The above engineers are required three days before start of work and three days after full load operation of the machine.

4.1.1 LIST OF MANPOWER TO BE DEPLOYED FOR UNIT-6

| Sl. No. | Description | Numbers |
|---------|------------------------------|---------|
| 1. | Site In charge | 01 |
| 2. | Supervisor | 4 |
| 3. | MW Fitters | 02 |
| 4. | General Fitters | 15 |
| 5. | LP Welders | 8 |
| 6. | Gas Cutters / Grinders/ | 15 |
| 7. | Electricians | 04 |
| 8. | HP Welders | 12 |
| 9. | Storekeeper | 03 |
| 10. | Insulation /refractory lager | 15 |
| 11. | Unskilled workers | 60 |
| 12. | Riggers | 8 |
| 13. | Junior Fitters | 30 |

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TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-IV T&P, Manpower & Consumables to be provided by Contractor

This is an indicative list; the sub-contractor shall deploy manpower as per requirement of the site during execution.

4.1.2 LIST OF MANPOWER TO BE DEPLOYED UNIT-7

| Sl. No. | Description | Numbers |
|---------|------------------------------|---------|
| 1. | Site In charge | 01 |
| 2. | Supervisor | 4 |
| 3. | MW Fitters | 02 |
| 4. | General Fitters | 12 |
| 5. | LP Welders | 8 |
| 6. | Gas Cutters / Grinders/ | 14 |
| 7. | Electricians | 03 |
| 8. | HP Welders | 10 |
| 9. | Storekeeper | 02 |
| 10. | Insulation /refractory lager | 15 |
| 11. | Unskilled workers | 60 |
| 12. | Riggers | 8 |
| 13. | Junior Fitters | 22 |

This is an indicative list; the sub-contractor shall deploy manpower as per requirement of the site during execution.

4.1.3 LIST OF MANPOWER TO BE DEPLOYED FOR UNIT-9

| Sl. No. | Description | Numbers |
|---------|-----------------|---------|
| 1. | Site In charge | 01 |
| 2. | Supervisor | 4 |
| 3. | MW Fitters | 02 |
| 4. | General Fitters | 10 |

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-IV T&P, Manpower & Consumables to be provided by Contractor

| | | |
|-----|------------------------------|----|
| 5. | LP Welders | 8 |
| 6. | Gas Cutters / Grinders/ | 15 |
| 7. | Electricians | 03 |
| 8. | HP Welders | 12 |
| 9. | Storekeeper | 02 |
| 10. | Insulation /refractory lager | 15 |
| 11. | Unskilled workers | 60 |
| 12. | Riggers | 8 |
| 13. | Junior Fitters | 20 |

This is an indicative list; the sub-contractor shall deploy manpower as per requirement of the site during execution

4.2 TOOLS AND TACKLE:

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.

4.2.1 LIST OF T& P AND MEASURING INSTRUMENTS TO BE DEPLOYED FOR UNIT-6

| Sl.No. | Description | Quantity |
|--------|--|-------------------------|
| 01. | Welding Generator / Rectifier | 15 nos. |
| 02. | Portable Grinding Machines of assorted sizes / types | 10 nos. |
| 03. | Welding cable | 800 Mtr. |
| 04. | Gas cutting set | 12 sets |
| 05. | Chain pulley blocks 3MT/5MT/10MT cap. | 20 nos./10 nos./10 nos. |
| 06. | Lifting tackles including slings of assorted sizes | As per requirement |
| 07. | Pulling Machines / Hook chooks | 06 nos. |
| 08. | 24V lamps with cable and plug tops | 10 nos. |
| 09. | Crane 8 T/15 T | 01 no. each |
| 10. | Tractor / Trailor 10 T cap. | 01 no. |
| 11. | Electric Winch 5T/10T cap. | 02 no. each |
| 12. | Cup lock scaffolding materials | Complete set |
| 13. | High Pressure water jet pump | 01 No |
| 14. | Master Level of 0.02 mm LC | 02 nos. |

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Chapter-IV T&P, Manpower & Consumables to be provided by
Contractor

| | | |
|-----|---|------------------------------|
| 15. | Vernier calipers 0-150 m 0-300 M 0-600 M | 02 nos. 02 nos. 01 no. |
| 16. | Inside Micrometer upto 600 mm | 01 no. |
| 17. | Outside Micrometer upto 600 mm range | 01 no. |
| 18. | Measuring Tape upto 15 M length | 04 nos. |
| 19. | Dial Gauges | 03 nos. |
| 20. | Grinding Machine AG-7 & GQ 4 | 8 nos. / 4 nos. |
| 21. | Diesel grinders | 2 nos. |
| 22. | TIG welding sets | 10 nos |
| 23. | | |

4.2.2 LIST OF T&P AND MEASURING INSTRUMENTS TO BE DEPLOYED FOR UNIT-7

| Sl.No. | Description | Quantity |
|--------|--|------------------------------|
| 01. | Welding Generator / Rectifier | 15 nos. |
| 02. | Portable Grinding Machines of assorted sizes / types | 10 nos. |
| 03. | Welding cable | 800 Mtr. |
| 04. | Gas cutting set | 8 sets |
| 05. | Chain pulley blocks 3MT/5MT/10MT cap. | 20 nos./10 nos./10 nos. |
| 06. | Lifting tackles including slings of assorted sizes | As per requirement |
| 07. | Pulling Machines / Hook chooks | 06 nos. |
| 08. | 24V lamps with cable and plug tops | 10 nos. |
| 09. | Crane 8 T/15 T | 01 no. each |
| 10. | Tractor / Tractor 10 T cap. | 01 no. |
| 11. | Electric Winch 5T/10T cap. | 02 no. each |
| 12. | Cup lock scaffolding materials | Complete set |
| 13. | High Pressure water jet pump | 01 No |
| 14. | Master Level of 0.02 mm LC | 02 nos. |
| 15. | Vernier calipers 0-150 m 0-300 M 0-600 M | 02 nos. 02 nos. 01 no. |
| 16. | Inside Micrometer upto 600 mm | 01 no. |
| 17. | Outside Micrometer upto 600 mm range | 01 no. |
| 18. | Measuring Tape upto 15 M length | 04 nos. |
| 19. | Dial Gauges | 03 nos. |
| 20. | Grinding Machine AG-7 & GQ 4 | 8 nos. / 4 nos. |
| 21. | Diesel grinders | 2 nos. |
| 22. | TIG welding sets | 10 nos |

BHEL-PSWR

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Contractor

| | | |
|-----|--|--|
| 23. | | |
|-----|--|--|

4.2.3 LIST OF T & P AND MEASURING INSTRUMENTS TO BE DEPLOYED FOR UNIT-9

| Sl.No. | Description | Quantity |
|--------|--|------------------------------|
| 01. | Welding Generator / Rectifier | 15 nos. |
| 02. | Portable Grinding Machines of assorted sizes / types | 10 nos. |
| 03. | Welding cable | 800 Mtr. |
| 04. | Gas cutting set | 12 sets |
| 05. | Chain pulley blocks 3MT/5MT/10MT cap. | 20 nos./10 nos./10 nos. |
| 06. | Lifting tackles including slings of assorted sizes | As per requirement |
| 07. | Pulling Machines / Hook chooks | 06 nos. |
| 08. | 24V lamps with cable and plug tops | 10 nos. |
| 09. | Crane 8 T/15 T | 01 no. each |
| 10. | Tractor / Tractor 10 T cap. | 01 no. |
| 11. | Electric Winch 5T/10T cap. | 02 no. each |
| 12. | Cup lock scaffolding materials | Complete set |
| 13. | High Pressure water jet pump | 01 No |
| 14. | Master Level of 0.02 mm LC | 02 nos. |
| 15. | Vernier calipers 0-150 m 0-300 M 0-600 M | 02 nos. 02 nos. 01 no. |
| 16. | Inside Micrometer upto 600 mm | 01 no. |
| 17. | Outside Micrometer upto 600 mm range | 01 no. |
| 18. | Measuring Tape upto 15 M length | 04 nos. |
| 19. | Dial Gauges | 03 nos. |
| 20. | Grinding Machine AG-7 & GQ 4 | 8 nos. / 4 nos. |
| 21. | Diesel grinders | 2 nos. |
| 22. | TIG welding sets | 10 nos |

NOTE

- 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.

4.3 CONSUMABLES:

Please refer clause 3.6 of 'General & Special condition of contract.

List of anticipated consumables are as indicated vide Annexure IV of this enquiry letter.

LIST OF CONSUMABLES

Kerosene/Diesel

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Contractor

Rustolene
CTC
Waste cloth/Cotton
Marking cloth
Cutoff wheels / Grinding wheels
Mounted wheels/ rotary cutters
Insulation tape / Johnson tape
Sander discs and wheels
Polyethylene sheets
Electric fuse wire and cables
Cutting Electrodes
Welding Electrodes (E7018,8018,9018 & filler wire as per requirement)
Argon, DA and Oxygen gases

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 Payment Terms

5.0. RATES:

Refer Important Instructions

Following percentages shall be operated for various parts of work.

RATES FOR UNIT-6

| SNo. | Description | Percentage |
|------|--|------------|
| 1. | OH of Pressure Parts of Boiler | 8% |
| 2. | Replacement of complete set of Reheater (Front & Rear) Coils. | 14% |
| 3. | Replacement of complete set of Burner Panel Assy. | 5% |
| 4. | Replacement of balance 13 number Platen Super Heater Coils. | 4% |
| 5. | Replacement of RH Heater (No.1) (CRH Header). | 5% |

RATES FOR UNIT-7

| SNo. | Description | Percentage |
|------|--|------------|
| 1. | OH of Pressure Parts of Boiler | 8% |
| 2. | Replacement of complete set of Radiant Roof Superheater tubes. | 8% |
| 3. | Replacement of complete 'Z' panel. | 15% |

RATES FOR UNIT-9

| SNo. | Description | Percentage |
|------|--|------------|
| 1. | OH of Pressure Parts of Boiler | 8% |
| 2. | Replacement of complete bank of LTSH Lower & Upper coils. | 11% |
| 3. | Replacement of complete set of Reheater (Front & Rear) Coils. | 14% |

Rates quoted by the bidder should be exclusive of Service Tax on applicable scope of work and the Service Tax shall be reimbursed on submission of the following documentary evidence:

1. Claim for reimbursement of service tax.
2. The claim should indicate clearly the serial number of document, date of issue, description and value of the service on which service tax is claimed
3. The service tax paid along with challan copy.
4. Service tax registration no.

Note:

- a. Certain deficiencies may get revealed only after dismantling of components and may not be detailed in the scope of work of tender enquiry. Any work arising out of such site requirement and for successful completion

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of the work shall have to be taken up by the contractor without any extra cost subject to a maximum of 10% of the main contract value.

- b. **If any work / activity mentioned in the scope of work is not carried out due to any reason like non-availability of materials/spares, time, etc., appropriate deduction mentioned against that activity shall be effected from contractor's bill.**

5.1 EXTRA/ ADDITIONAL WORKS:

In case BHEL decides to do any additional work by engaging your manpower, then average man-hour rate (inclusive of your profit, overhead, supervision, normal T&P and consumables) @Rs.60/- will be paid. The same rate is applicable for overtime hours also. Alternatively BHEL may also offer to carry out the extra/additional work on lump sum rate basis, the discretion of operating the basis of man-hr rate or lump sum rates lies with BHEL. The lump sum rate will be decided on mutual agreement between the subcontractor and BHEL.

5.2 Payment Terms

Clause 3.4.1 of General and Special Conditions of Contract stands amended as below:

Invoice may be claimed mentioning all activities and percentage allotted to the each activity as per price schedule:

- 1.0 15% after the mobilization site with adequate deployment of man power, T & P and consumables, submission of Insurance & Labour License and completion of IBR formalities.
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 the bill.
- 2.0 30% after completion of dismantling activities including removal of drum internals.
- 3.0 35% after completion of erection activities and hydraulic test.
- 4.0 10% after Boiler light up with application of insulation/cladding/sheeting, clearance of site with disposal of all cut materials / scrap to the scrap yard and submission of overhauling report to BHEL/MPPGCL.
- 5.0 Final 10% after completion of defect liability period and invoice to be submitted along with documents like no dues certificate from Engineer Incharge/ MPPGCL, EPF Challan, Insurance, Labour License, Labour Payment sheets etc).

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

5.3 Retention money:

1% of the total contract value will be retained while releasing the first RA bill as a security for observing Safety measures at site and the same will be released after completion of work on certification by Site In charge after effecting recovery, if any towards violation of safety norms as per tender enquiry.

Bills 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.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-VI General Terms & Conditions

GENERAL SCOPE OF WORK (APPLICABLE FOR EACH UNIT):

1. Successful bidder to deploy minimum two nos. of 12 T/15T Hydra-Cranes with operator & minimum one Trolley Tractor / Truck /Trailer and minimum 04 nos. of Electrical Winches – 5 T cap.
2. Transportation of materials / spares from Satpura TPS/MPPGCL stores /yard to work site and removal of ash / debris / scrap materials from work site to ash disposal area / scrap yard / stores engaging contractors own vehicle.
3. Fabrication of site store near work site.
4. Fabrication / repair of spares.
5. Fabrication of fixtures and illumination of work zone.
6. Removal and relaying of insulation wherever applicable.
7. Cleaning of work area during and after execution of work.
8. All tools and tackles, measuring instruments including Welding Generators (15 nos. minimum) and Transformers (10 nos. minimum), Gas cutting sets- 15 Nos, Bevel Proctors, 24 Volt electrical hand lamps, lifting hoist etc., OPT kits as required are to be provided by the contractor. Contractor has to use only 24 Volt hand lamps with protective cage in the enclosed area of work to ensure safety of workmen.
9. Minimum 10 curie Radiography sources- 2 sources along with qualified personnel are to be arranged.
10. Successful bidder should have running IBR Registration for Pressure Parts Repair work in Madhya Pradesh and has to obtain necessary works & HP welders approvals under section 392 of IBR from the Boiler Directorate / Madhya Pradesh. Co-ordination with boiler inspector is the responsibility of the contractor.
11. Successful bidder has to arrange for necessary labour licence, insurance etc. for their workmen at the start of work and other necessary statutory requirements are to be fulfilled.
12. Successful bidder has to provide necessary skilled, semiskilled and unskilled manpower and supervision for the total job under the technical guidance of BHEL. Contractor has to provide minimum 15 nos. of HP Welders and 10 nos. of attachment Welders and 15 nos of gas cutters to complete the job in time. Contractor has to mobilize HP welders well in advance for their site test. Contractor has to provide minimum 15 nos. of experienced supervision staff for the job, excluding Site-in -charge for close supervision of work as well as providing inputs for un-interrupted progress of work.

NOTE: Lack of supervision / resource mobilization will be viewed seriously.

13. Successful bidder has to follow necessary safety regulations and Safety equipment/ accessories to be used and provided to the workers..
14. Illumination of working area is the responsibility of the contractor.
15. Cleaning, housekeeping and security arrangement for the equipment, T&P and materials/ spares is the responsibility of the contractor.
16. The contractor has to sign "INDEMNITY BOND" for obtaining From -V (required for labour licence) from the Principal Employer M/s Satpura TPS / MPPGCL on non-judicial stamp paper as per format provide by BHEL.
17. Necessary workforce, tools and tackles, welding machines, cutting accessories, grinding machines, argon gas with all accessories/cutting accessories, TIG welding kits, TIG welding wires, etc. required for the job shall be arranged by the contractor at their own cost. Consumable, hacksaw blades, grinding/cutting wheels, emery paper, marking cloth, cotton waste ,petrol, kerosene, wire brushes, etc. shall be arranged by Successful bidder.
18. All technological wastes generated during execution of overhauling works at various places shall be removed by Contractor to a place identified by the Engineer in charge.
19. The work details are brief & for knowledge only and Successful bidder will have to do all the related works as per requirement.

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Chapter-VI General Terms & Conditions

6.1 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. 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.
- 3.0. 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.
- 4.0. All the works shall be carried out as per the instructions and to the satisfaction of the Engineer In-charge.
- 5.0. The contractor will attend contributory to faulty and poor workmanship during commissioning and trial run of the equipment.
- 6.0. Guarantee / Warrantee: The work carried out shall be guaranteed for the **Twelve months** from date of commissioning towards performance of the machine. Subcontractor will have to give guarantee for the work carried out under the scope of work. Subcontractor will attend any failure on account of poor workmanship free of cost on priority. The sub-contractor has to mobilize and attend the work as per customer shutdown programme.
- 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. Successful bidder is 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 the commissioning of boiler.
- 11.0. Successful bidder should mobilize the site in full strength immediately on placement of LOI to carry out site activities.
- 12.0. Work distribution sheet for all the workers/supervisors deployed shall be submitted to BHEL one day in advance on daily basis.

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Chapter-VI General Terms & Conditions

- 15.0. Successful bidder 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.
- 16.0. Successful bidder should get registered under relevant sales tax and or work contract Act (VAT) where the jobs are executed.
- 17.0. Scrap and insulation etc. is to be shifted to scrap disposal area as indicated by the Engineer-in-charge on regular basis.
- 18.0. One administrative personnel to control the resources and attendance of the workers to be ensured.
- 19.0. Adequate quantities of consumables like Argon, Oxy- Acetylene gases and welding electrodes as required along with cutting/welding set / argon welding sets shall be arranged by the contractor.
- 25.0. If the duration of work continues beyond stipulated period due to any reason, no claim for compensation will be entertained.
- 26.0. The work details are brief & for Subcontractor knowledge only. Subcontractor will have to do all the related works as per requirement.
- 26.0. 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.
- 27.0. No compensation claimed for idle labor for any reason will be entertained by BHEL.
- 28.0. All general tools and plants for execution of the work will have to be arranged/ maintained by the contractor at his own cost & risk.
- 29.0. 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.
- 30.0. Successful bidder is to obtain necessary "No Dues" certificate before de-mobilization from site.
- 31.0. Successful bidder has to arrange 03 copies of overhauling reports which will include various protocols with necessary data/ MOMs / important correspondences / log sheets ect. 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.
- 32.0. Accommodation for the sub-contractor's manpower will be provided if made available by the customer as per the applicable charges.

6.2 Statutory Inspection

Please refer cl. 2.8.3 of '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.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Chapter-VI General Terms & Conditions

6.3. Safety:

Strict Safety measures have to be followed at Site.

Ref. Annexure VII, 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.

6.4 Defect liability period:

The defect liability period shall be three months from the date of commissioning of the unit. Clause 2.13 of general and special conditions of contract stands modified to that effect, keeping remaining portion of the clause unchanged. Full gang consisting of supervisor, HP welder, fitter, rigger, cutter & helpers (min 10 persons) with adequate T&P should be engaged fulltime during DLP to attend any emergency/tube failure in the boiler.

6.5 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-VII Quality Requirements

7.0 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/ 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 All the lifting, electrical equipment and 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 welders' 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 authorized 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 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.

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Chapter-VII Quality Requirements

7.1. LAISON WITH ALL STATUTORY AUTHORITIES :

- a) Compliance of IBR & other statutory provisions as required at site, 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.

7.2. 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.

- 1.0 Test certificates of Pulling and Lifting machines / appliances.
- 2.0 Details of workers to be deployed with name, address and category.
- 3.0 Details of supervisory staff to be deployed.
- 4.0 Authorization for receipt of materials and for signing of Measurement Books etc,
- 5.0 Approval from IBR to work in MP.
- 6.0 Details of approved HP Welders with certificate copies.
- 7.0 Labour license specific to the contract.
- 8.0 List of T&P brought into plant premises along with their serial numbers and dates/years of purchase.
- 9.0 List of consumables brought into plant premises along with their serial numbers and dates/years of purchase, along with test certificates wherever applicable.
- 10.0 Insurance policy for the workers to be deployed in this contract.
- 11.0 Safety undertaking.

The contractor shall submit following documents in report form within 15 days from commissioning of unit after erection work is completed

- 1.0 Details of work executed.
- 2.0 Measurements against different schedules in compiled form.
- 3.0 Material issue details.
- 4.0 Material consumption details.
- 5.0 Material return details.
- 6.0 Copies of pay sheets to workmen.
- 7.0 Details and proof of remittance of PF to workmen (before final bill).
- 8.0 No dues clearance from MPPGC

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Chapter-VIII Taxes & Duties

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

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 pricebid.

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Chapter-IX Special Inputs to be provided by Contractor

SPECIAL INPUTS TO BE DEPLOYED AT SITE ALONGWITH SITE MOBILISATION BY SUCCESSFUL BIDDER AS ESSENTIAL PART OF THE CONTRACT CONDITION FULFILMENT. (REQUIRMENTS PER UNIT)

1. Furnishing of quarters/ Field Hostel issued by Satpura TPS/MSPGCL at their township for temporary stay of BHEL personnel as per following details:
 - a. Mattresses for cots of 2.5' coir topped with 1"soft foam : 10 Nos.
 - b. Bed linen (new Bombay dyeing)
(10 Nos. in use and 10 Nos. stand by) :20 Nos.
 - c. Pillow (M foam or equivalent) standard size :10 Nos.
 - d. Woolen blanket of Raymond make or equivalent : 10Nos.
 - e. Pillow cover for above(Bombay 10 Nos. : 20 Nos
In use and 06 Nos. in standby)
 - f. Chairs (costing not less than Rs 250/-) : 10Nos.
 - g. Glass tumblers for drinking water : 02 dozens
 - h. Plastic jugs for drinking water (2 liter capacity) : 10 Nos.
 - i. Aqua guard/water filter for drinking water : 02Nos
 - j. Plastic buckets 2 Nos. per bathroom with suitable plastic mugs : 15Nos.
 - k. New mosquito nets to suit sl no (a) above of nylon fabric : 10Nos.
 - l. Door mats at entrance of the main door and bathroom door : 10 Nos.
 - m. Messing arrangement with (tables & chairs) cook & helper, utensils including gas burner & cooking gas for 16 Nos. personnel throughout overhauling period.
 - n. Cleaning of rooms regularly including bathrooms etc. must be arranged one person to be deployed for the above.
 - o. Bed sheets, pillow covers must be changed with washed ones at least once in 4 days.
 - p. Cleaning, washing of bed sheets and pillow covers regularly.
 - q. All aforesaid furnishing items are to be removed after the work is completed at site by the contractor at his own cost.
 - r. Contractor to hand over the quarters to Sapura TPS/MPPGCL authorities with the help of BHEL representative.
 - s. Initial quantity bulbs (60w/100w) as required is to be arranged by the contractor and also subsequent replacement of fused bulbs.
 - t. Arrangement of locking the rooms if not existing and provision of suitable locking the rooms if not existing and provision of suitable locks with 2 keys min. per lock (Godrej) naval 6 levers or equivalent.
 - u. Color TVs (21 inch.) with cable connection to be provided as per instructions

NOTE: Any shortage in the above amenities may be made up from time to time.