

RAJIV GANDHI THERMAL POWER PLANT

(A Unit of Haryana Power Generation Corporation Limited)

(Regd. Office: C-7, Urja Bhawan, Sector-6, Panchkula)

Corporate Identity No. U45207HR1997SGC033517

Website:-www.hpgcl.org.in, Email ID: xenmp.rgtp@hpgcl.org.in

E-TENDER DOCUMENT

FOR

**Overhauling of Boiler pressure parts, High pressure valves,
Burners, Wind-Box and providing cup-lock Scaffolding
inside the Furnace installed in 600 MW Unit-1 during the
forthcoming Overhauling of 600 MW Unit-1, RGTPP, HPGCL,
Khedar, Hisar.**

NIT No. 15/M&P-674/RGTPP/2024-2025

Dated : 04.07.2024

**XEN/M&P,
FOR CHIEF ENGINEER/RGTPP,
RAJIV GANDHI THERMAL POWER PLANT,
HPGCL, KHEDAR, HISAR.
Telephone no.- 01693-250136**



HARYANA POWER GENERATION CORPORATION LIMITED

Regd. Office – C-7, UrjaBhawan, Sector-6, Panchkula

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Website: www.hpgcl.gov.in

Telephone No. 01693-250136

An ISO: 9001, ISO: 14001 and OHSAS: 18001 Certified Company

NOTICE INVITING E-TENDER

E-tenders in two parts are invited on behalf of CE/RGTPP, Haryana Power Generation Corporation Limited (HPGCL) Khedar, Hisar from eligible parties, for the work as under: -

Tender Enquiry No.	NIT No. 15/M&P-674/RGTPP/2024-2025 Dated: 04.07.2024
Description of Work	Overhauling of Boiler pressure parts, High pressure valves, Burners, Wind-Box and providing cup-lock Scaffolding inside the Furnace installed in 600 MW Unit-1 during the forthcoming Overhauling of 600 MW Unit-1, RGTPP, HPGCL, Khedar, Hisar.
Earnest Money	Rs. 3,88,300/- (Rupees Three Lakh Eighty Eight Thousand and Three Hundred only)
Start date and time of tender uploading	04.07.2024 At 13:00 hrs.
Last date for submission of online tender	05.08.2024 Upto 13:00 hrs.
Due date & time of opening of Technical bid (Part-I)	07.08.2024 At 15:00 hrs.
Cost of Tender documents (Non-refundable)	Rs. 1180/-
E-services fees (Non-refundable)	Rs. 1180/-
Instructions regarding e-tendering	Annexure-I
General Instructions to Bidders	Annexure-II
Scope of Work	Annexure-III
General Terms & Conditions of Contract	Annexure-IV
Special / Other Terms & Conditions	Annexure-V
Supervision / Quality Control of Work	Annexure-VI
Statement of bidders	Annexure-VII
Undertaking of Staff Engaged	Annexure-VIII
Rate Quoting Sheet	Annexure-IX
Check List	Annexure-X
S.O.P. regarding GST and TDS	Annexure 1 to 5

**XEN/M&P,
For Chief Engineer /RGTPP,
HPGCL, Khedar, Hisar.**

Instructions to bidder on Electronic Tendering System

These conditions will over-rule the conditions stated in the tender documents, wherever relevant and applicable.

1. Registration of bidders on e-Procurement Portal:-

All the bidders intending to participate in the tenders processed online are required to get registered on the centralized e-Procurement Portal i.e. <https://etenders.hry.nic.in>. Please visit the website for more details.

2. Obtaining a Digital Certificate:

2.1. The Bids submitted online should be encrypted and signed electronically with a Digital Certificate to establish the identity of the bidder bidding online. These Digital Certificates are issued by an Approved Certifying Authority, by the Controller of Certifying Authorities, Government of India.

2.2. A Digital Certificate is issued upon receipt of mandatory identity (i.e. Applicant's PAN Card) and Address proofs and verification form duly attested by the Bank Manager / Postmaster / Gazetted Officer. Only upon the receipt of the required documents, a digital certificate can be issued. For more details please visit the website – <https://etenders.hry.nic.in>

2.3. The bidders may obtain Class-II or III digital signature certificate from any Certifying Authority or Sub-certifying Authority authorized by the Controller of Certifying Authorities or may obtain information and application format and documents required for the issue of digital certificate from:

For support related to Haryana Tenders in addition to helpdesk you may also contact on email ID - eproc.nichry@yahoo.com , Tel- 0172-2700275

For queries on Tenders Haryana Portal, kindly contact

Note- Bidders are requested to kindly mention the URL of the Portal and Tender Id in while emailing any issue along with the Contact details. For any issues/ clarifications tender(s) published kindly contact the respective Tender Inviting Authority.

For any technical related queries please call at 24 x 7 Help Desk Number

E - mail: support-eproc@nic.in OR eproc.nichry@yahoo.com

Help Desk: 0120-4001002, 05, 0120-4200462, 0120-6277787, 0172-2700275

2.4. Bid for a particular tender must be submitted online using the digital certificate (Encryption & Signing), which is used to encrypt the data and sign the hash during the stage of bid preparation & hash submission. In case, during the process of a particular tender, the user loses his digital certificate (due to virus attack, hardware problem, operating system or any other problem) he will not be able to submit the bid online. Hence, the users are advised to keep a backup of the certificate and also keep the copies at a safe place under proper security (for its use in case of emergencies).

2.5. In case of online tendering, if the digital certificate issued to the authorized user of a firm is used for signing and submitting a bid, it will be considered equivalent to a no-objection certificate/power of attorney /lawful authorization to that User. The firm has to authorize a specific individual through an authorization certificate signed by all partners to use the digital certificate as per Indian Information Technology Act 2000. Unless the certificates are revoked, it will be assumed to represent adequate authority of the user to bid on behalf of the firm in the department tenders as per Information Technology Act 2000. The digital signature of this authorized user will be binding on the firm.

2.6. In case of any change in the authorization, it shall be the responsibility of management / partners of the firm to inform the certifying authority about the change and to obtain the digital signatures of the new person / user on behalf of the firm / company. The procedure for application of a digital certificate however will remain the same for the new user.

2.7. The same procedure holds true for the authorized users in a private/Public limited company. In this case, the authorization certificate will have to be signed by the directors of the company.

2.8. Bidders participating in online tenders shall check the validity of his / her Digital Signature Certificate before participating in the online Tenders at the portal <https://etenders.hry.nic.in>.

- 2.9. For help manual please refer to the 'Home Page' of the e-Procurement website at <https://etenders.hry.nic.in>, and click on the available link 'How to ...?' to download the file.
- 2.10. Before submitting tenders the instructions may be read carefully regarding submission of tender. If any bidder finds discrepancies or omissions in the tender documents or is in doubt as to the true meaning of any part, he shall clarify same from tender issuing office in writing before the due date of submission of the bid. No arguments on this account whatsoever shall be entertained after the last date & time of submission of tenders.
- 3. Opening of an Electronic Payment Account:**
Tender documents can be downloaded online. Bidders are required to pay the tender documents fees online using the electronic payments gateway service.
- 4. Pre-requisites for online bidding:**
In order to bid online on the portal <https://etenders.hry.nic.in>, the user machine must be updated with the latest Java. The link for downloading the latest java applet is available on the Home page of the e-tendering Portal.
- 5. Online Viewing of Detailed Notice Inviting Tenders:**
The bidders can view the detailed N.I.T and the time schedule (Key Dates) for all the tenders floated through the single portal e-Procurement system on the Home Page at <https://etenders.hry.nic.in>.
- 6. Download of Tender Documents:**
The tender documents can be downloaded free of cost from the e-Procurement portal <https://etenders.hry.nic.in>.
- 7. Key Dates: -**
The bidders are strictly advised to follow dates and times as indicated in the online Notice Inviting Tenders. The date and time shall be binding on all bidders. All online activities are time tracked and the system enforces time locks that ensure that no activity or transaction can take place outside the start and end dates and the time of the stage as defined in the online Notice Inviting Tenders.
The bidders are strictly advised to follow dates and times as indicated in the online Notice Inviting Tenders. The date and time shall be binding on all bidders. All online activities are time tracked and the system enforces time locks that ensure that no activity or transaction can take place outside the start and end dates and the time of the stage as defined in the online Notice Inviting Tenders.
If a bidder fails to complete the Online Bid Submission stage on the stipulated date and time, his/her bid will be considered as bid not submitted, and hence not appear during tender opening stage.
- 8. Bid Preparation (Technical & Financial) Online Payment of Tender Document Fee, e-Service fee, EMD fees of online Bids:**
- 8.1. The bidders shall have to pay for the Tender document fee, EMD fees & eService Fee (Rs. 1180/-) online by using the service of secure electronic payment gateway. The secure electronic payments gateway is an online interface between contractors and online payment authorization networks. The Payment for Tender Document Fee and eService Fee can be made by eligible bidders/ contractors online directly through Debit Cards & Internet Banking Accounts and the Payment for EMD can be made online directly through RTGS / NEFT. For online payments guidelines, Home page of the e-tendering portal <https://etenders.hry.nic.in> may be referred.
- 8.2. The bidders shall upload their technical offer containing documents, qualifying criteria, technical specification, schedule of deliveries, and all other terms and conditions except the rates (price bid) in the Part-I (Technical envelope). The price bid shall be submitted in separate part-II format supplied by purchasing authority online. The committee members shall open only the part-I on the scheduled date of opening of technical bid. As per system settings, part-II cannot be opened on that date.
- 8.3. The tenders shall be opened on the due date by the Tender Opening Committee composed of Executive Engineer, AE/AEE and a representative of the finance / account department not below the rank of Section Officer / Divisional Accountant. The tenders shall be downloaded and printouts taken.
9. If the tenders are canceled or recalled on any ground, the tender document fees & e-service fee will not be refunded to the agency. However, EMD shall be refunded.

10. Bidder shall ensure that payment shall be made at least 2 days prior to the last date of submission of the bid.
11. The bidder can revise his price bid any number of times but only before the last date of submission of bid. All previous quotes are deleted & only the latest price quoted is visible to the purchasing authority on the date of opening of price bid.
12. The bidders shall observe the highest standards of ethics during the submission of tender and execution of the contract. In case of evidence of cartel formation by the bidder(s) EMD is liable to be forfeited.
13. The bidder shall bear all costs of bank charges, if any, associated with the preparation and submission of his bid and the purchaser will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.

NOTE:-

- (A) If a bidder fails to complete the Online Bid Preparation & Submission stage on the stipulated date and time, his/hers bid will be considered as bid not submitted, and hence not appear during tender opening stage.

**XEN/M&P,
For Chief Engineer/RGTPP,
HPGCL, Khedar, Hisar.**

GENERAL INSTRUCTIONS TO THE BIDDERS**1. Pre-Qualifying Requirements (PQRs) / Eligibility Conditions for the tenderers: -**

The tender documents will only be accepted for those contractors who qualify the following criterion:

- A. The bidder should be an Original Equipment Manufacturer / Supplier (OEM/OES) or a registered vendor of HPGCL, as per Vendor Registration Policy for the specific category of the work / purchase.

OR

The bidder must have experience of successfully executed Work Order(s) in HPGCL/NTPC/any SEBs/any PSUs/any Corporations/Central Govt./State Govt./Semi Govt. or in any Thermal (minimum capacity of Thermal Power Station/unit shall be 110 MW or above) / Hydrel Plant and have average annual turnover and other eligibility conditions as given below:

Experience of Execution of Work Order:

Bidders must have successfully executed the work order(s) for the same or similar work(s) during last 7 years ending last day of the month previous to the month in which applications are invited having minimum order value as under :-

Single Order of the value not less than **Rs. 1,55,31,062/-**

OR

Two Orders of the value not less than **Rs. 97,06,914/- each.**

OR

Three Orders of the value not less than **Rs. 77,65,531/- each.**

Turnover:

Bidders must have an average annual turnover in last three consecutive financial years ended prior to the financial year in which applications are invited shall not be less than **Rs. 388.28 Lacs.**

- B. The contractor is registered under Contract Labour (Regulation & Abolition) Act, 1970 and possesses a valid labour license for deploying the workers on the work or will obtain the same within 15 days of issuance of work order. Contractor shall provide LIN No./Shop No. for registration.
- C. The contractor should have GST No., EPF Account No. & PAN No.
- D. The bidder should have a valid ESI no. or shall submit an undertaking to provide the same within one month of issue of work order.
- E. **The Bidder must have contractor ID on HEWP Portal (Haryana Engineering Works Portal) for participation in the tendering process failing which the firm's tender will be straight away rejected.**

Note:-

- a) If the bidder has a work order for a period of more than one year, the period and the proportionate value of the order which have been completed prior to the month in which applications are invited (duly supported by successful completion/execution certificate for such period/value) shall be taken into consideration for assessing the eligibility criteria.
- b) The firm has to submit the copy of work orders executed by them along with completion/performance certificate or copy of the repeated work orders from the same agency/enterprises/power plant etc. duly attested in support of qualifying conditions and as a proof of satisfactory execution of work.
- c) Average Annual Turnover = Sum of the Annual Turnover of preceding three years / 3 (As per audited Accounts).
- d) Other income shall not be considered for arriving at annual turnover.
- e) In cases where audited results for the last preceding financial years are not available for determining the average turnover, certification of financial statements from a practicing Chartered Accountant shall be considered acceptable.
- f) Eligibility of the black listed firms to participate in NIT: The firms who have been blacklisted by HPGCL or any other Centre or State Power Utility/ Board or Corporation/ or any other Thermal/Hydro Electricity project shall not be eligible to bid against the NIT of HPGCL, However:-
- i) In case the blacklisting of the firm is for a specific plant and not for the organization as a whole then such blacklisting will not tantamount to ineligibility of the bidder.
- ii) Blacklisting of the firm by any unit of HPGCL shall be considered as ineligibility of the firm at any other project of HPGCL.

- iii) In case any firm was blacklisted for a limited period in the past by any organization and presently such blacklisting has been removed by such organization then it will not tantamount to ineligibility of the bidder.
 - iv) Firm has to certify itself for its eligibility with supporting documents to participate in the NIT stating that it has not been blacklisted by any organization presently, however in case at a later stage such certification found wrong then it will lead to misrepresentation of the facts and the firm shall be treated as blacklisted on this ground and action shall be taken as per regulations of the corporation.
 - g) The rates will remain firm throughout the contract period irrespective of change of minimum wages etc.
 - h) The firm should fill statement of bidder's Proforma as per Annexure-VII and submit authentic supporting documents for proving its credential. Original documents may be asked for verification at the time of finalizing the tender.
 - i) Decision of the HPGCL regarding fulfillment of Pre-qualification requirement shall be final and binding upon the bidders.
2. Conditions of the contract and other information can be had from the office of XEN/M&P (E-mail:xenmp.rqtp@hpgcl.org.in, Telefax No. 01693-250136/8222023757) on any working day prior to last date of Downloading of Tender Documents & Bid Preparation.
 3. The Tender Document can also be downloaded from HPGCL website www.hpgcl.org.in.
 4. The tender will only be submitted on the centralized e-procurement portal i.e. <https://etenders.hry.nic.in>.
 5. Before submitting tenders the instructions may be read carefully regarding submission of tender. If any bidder finds discrepancies or omissions in the tender documents or is in doubt as to the true meaning of any part, he shall clarify the same from the tender issuing office in writing before the due date of submission of the bid.
 6. The "Application for Bidding" along with the "Terms and conditions of the contract and its all Annexure should be submitted in duplicate duly filled up completely and signed on each page by the tenderer. Work offered should be strictly according to the specifications of scope of work and to the terms & conditions of the NIT. Unless a deviation from the specifications and terms and conditions given in NIT is pointed out by the tenderer specifically, it will be presumed that offer/ Tender conforms to the specifications and terms and conditions as laid down in NIT.
 7. The tenderer shall submit their tender in two parts- the first part containing documents for qualifying criteria, and all other terms and conditions except the rates (price bid), and the second part containing the rates (price bid) quoted for the mentioned works.
 8. RATE QUOTING SHEET:- The tenderer will quote their rates STRICTLY AS PER THE RATE QUOTING SHEET.
 9. The application for bidding along with all the detailed terms & conditions should be submitted online. Tenders through Fax / E-mail / telegraphic tenders shall not be considered. Incomplete, obscure or irregular tender is liable for rejection. If the tenderer deliberately gives wrong information in his tender, HPGCL reserves the right to reject such tender at any stage. The tenderer will quote their rates strictly as per details of specifications.
 10. All tenders received against open tender enquiry irrespective of whether they are from the approved contractors on the registered list or others, shall be considered, provided they are on the prescribed form and in accordance with the tender conditions and specifications.
 11. Unless exempted specifically, tenders not accompanied with the prescribed EMD/Cost of Tender shall be rejected. EMD/Cost of Tender shall be in the prescribed mode of payment as asked in the NIT, otherwise the tender shall be liable to be rejected.
- The following are exempted from depositing the earnest money:-**
- i. Public Sector Undertakings of the Central / Haryana State Government.
 - ii. Firms borne on D.G.S. & D/DS&D Haryana rate contracts.
 - iii. Firms registered with the Director of Industries, Haryana or registered with National Small scale Industries Corporation, Govt. of India.
 - iv. Firms borne on the HPGCL's approved list of suppliers which may have made a permanent earnest money deposit of Rs.10.00 Lakh at the respective Project/office of HPGCL, if they quote the Registration number given by the respective project/office of HPGCL in their tender papers.
12. The rates quoted by the tenderer should be very competitive and as prevailing in the market and should be firm and lump-sum. Prices should be quoted per unit also wherever applicable and asked.
 13. The validity of the tender/offer shall be for **120 days** from the date of opening of the price bid.
 14. No deviation shall be allowed. However, in case of deviation of taxes etc., the same be loaded for comparison purpose.

15. The bidders / contractors shall observe the highest standards of ethics during the submission of tender, procurement and execution of the contract. In case of evidence of cartel formation by the bidder(s) EMD is liable to be forfeited.
16. The bidder shall bear all costs including bank charges, if any, associated with the preparation and submission of his bid and the purchaser will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.
17. The whole work against this tender shall be awarded to a single firm whose overall quoted/equated prices are lowest for the complete package.
18. The tender documents of only those bidders shall be considered who fulfill the eligibility criteria and submit documentary evidence in support of the same along with the copy of performance certificate /repeat order from the same organization, if any.
19. Tenders through Fax / E-mail / telegraphic tenders shall not be considered. Incomplete, obscure or irregular tender is liable for rejection.
20. HPGCL reserves the right to cancel the NIT or to change qualifying requirements or to reject any or all the tenders so received without assigning any reason.
21. **INSPECTION OF SITE OF WORK: -**
Before tendering, the tenderer is advised to inspect the site of work, the environment & get acquainted with the actual work & other prevalent conditions, facilities available. No claim will be entertained later, on the ground of lack of knowledge.
22. **Disqualification of The Bidders / Tenderers: -**
 - a) Even though the bidders meet the above Qualifying Criteria they are subject to be disqualified, if they have made misleading or false representations in the forms, statements and attachments submitted in the proof of the qualification requirements.
 - b) Notwithstanding anything stated above Haryana Power Generation Corporation Ltd. reserves the right to assess the tenderer's capacity to perform the contract should the circumstances warrant such assessment in the overall interest of the Haryana Power Generation Corporation Ltd. In this regard the decision of the corporation will be final.
24. **Earnest money and Earnest money declaration Form**
- 24.1. The Bidder who does not have contractor id on HEWP cannot participate in the tendering process. Bidders who have contractor ID but have not registered on HEWP can participate in the tendering process by paying the earnest money through online payment on the portal. Bidders who have contractor Id and are registered on HEWP and also have deposited one time deposit are eligible for participation in the tender by annexing bid specific Earnest Money Declaration Form generated from HEWP.
25. The rate negotiations shall be held as per Govt. Notification/Guidelines issued from time to time.

Note:-

It may please be noted that the overhauling of unit#1 of RGTPP is scheduled to be carried out tentatively in between November 2024 to April 2025. However, the schedule of overhauling of unit(s) of RGTPP may vary as per site situations. Therefore, validity of work order will be eight months from the date of issuance of L.O.I / Work Order, whichever is earlier.

**XEN/M&P,
for Chief Engineer/RGTPP,
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SCOPE OF WORK

Part-A (Main Scope of work)

DETAILED SCOPE OF WORK FOR BOILER PRESSURE PARTS

1.0 MISCELLANEOUS WORKS IN PRESSURE PARTS OF 600 MW BOILER:

1.1 INITIAL MOBILISATION :-

- 1.1.1 Shifting of all T&Ps, cutting and welding accessories etc. to work site.
- 1.1.2 Opening of all manhole & access doors.
- 1.1.3 Shifting of sufficient quantity of boiler tubes, bends and electrodes etc. to site as per site requirement.
- 1.1.4 Shifting and commissioning of sufficient quantity of electrode baking and soaking oven at site as per site requirement.
- 1.1.5 Shifting of sufficient quantity of scaffolding material and heavy T&P such as welding sets & chain blocks etc. to site and back as per site requirement.

1.2 WATER WASHING:

- 1.2.1 Shifting of sufficient quantity of fire hoses, nozzles etc. to site as per site requirement.
- 1.2.2 Erection of necessary scaffold as per requirement.

1.2.3 OUTER WATER WASHING:

Outer cleaning of boiler requires water washing of boiler structure, pent house, ducts, buck-stay, feeder floor, pipes (air, steam, oil and water pipes), valves and fitting installed on various boiler platforms, coal pipes, RAH outer and economizer hopper area etc. Shifting of ash and debris to the site within/outside the plant area as desired by EIC.

1.2.4 INTERNAL WATER WASHING

Thorough and complete cleaning of first pass water walls including goose neck, radiant roof tubes, Divisional Super Heater coils, Platen Super heater coils, Platen Re heater coils, Finish Re heaters coils, Spacer tubes, scissor tubes, Panel Re heaters etc. first by water jet and then by manual scrubbing (if required). Jet cleaning will have to be managed by contractor at his own cost. The firm has to deploy minimum three jet cleaning m/cs. each jet machine should be of tentatively 300-400 bar / 50-70 litre with hand operated nozzle. Each machine should have double jet operation. All 03 machines should be equipped with all safety features & should have sufficient hose length to reach up to first pass ceiling and RH coils. Machines are needed to be operated on continuous basis.

Water washing of heating surface of boiler horizontal & 2nd pass which includes:

- 1. Final Super heater coils.
- 2. WW screen tubes.
- 3. Water wall Hanger tubes & SCW hanger tubes.
- 4. All Steam cooled walls
- 5. Economizer with hanger tubes, LTSH, terminal tubes.
- 6. Various headers inside 2nd pass.
- 7. Any other area not mentioned above but inside boiler.

Proper cleaning of ash and slag deposited over boiler tubes of above mentioned and other accessible areas of boiler heating surface shall be done so that no deposit of ash/clinker are left out and tubes of boiler becomes absolutely clean from top to bottom without any sign of damage to boiler tubes. Cleaning of heating surface shall not be done with chemical & acids. Shifting of ash and debris to the site within/outside the plant area as desired by EIC.

1.3 BOILER ACCESS DOORS AND PEEPHOLES WORKS:

- 1.3.1 Servicing of all doors and peepholes to ensure easy opening and closing.
- 1.3.2 Minor Repair of manholes and peepholes including replacement of warped, damaged or missing components wherever required.
- 1.3.3 Removal of old asbestos ropes and gaskets, wherever required. Fixing of new gaskets after applying Holdite.
- 1.3.4 Closing of all manholes and peepholes after completion of work.

1.4 **ASSISTANCE IN INSPECTION & THICKNESS MEASUREMENT OF BOILER TUBES DURING DE-METERING:**

- 1.4.1 Inspection & ultrasonic thickness measurement (D metering) of boiler tubes is proposed to be carried out by HPGCL by engaging separate firm. However, manpower required for assistance during inspection & ultrasonic thickness measurement work will be in contractor's scope. The erection of scaffolding if required for the thickness measurement work below 1st pass manholes in z panel zone or any other place as per site requirement will be in contractor's scope. Cleaning of the boiler tube surface for necessary for carrying out ultrasonic thickness measurement will be done by suitable means so that tube metal surface does not get damaged.
- 1.4.2 Contractor shall have to arrange necessary lighting at various locations with their own cables and lamps as per site requirement for inspection & de-metering of boiler tubes which is proposed to be carried out by HPGCL by engaging separate firm.

1.5 **WORKS INSIDE BOILER SECOND PASS CONSISTING OF ECONOMIZER, LTSH, LTSH TERMINAL TUBES, STEAM COOLED WALLS, SCW HANGER TUBES, ECO HANGER TUBES AND MISC HEADERS LOCATED IN THE 2ND PASS:**

- 1.5.1 In-situ inspection of economizer coils, LTSH coils, LTSH terminal tubes, & complete inspection of steam cooled walls, SCW hanger tubes, eco hanger tubes and misc. headers located in the 2nd pass. Removal of old baffles plates, guards, sheets, refractory, etc. wherever required for the purpose of inspection. Dedicated team of about 08 persons should be engaged for inspection of complete boiler.

1.5.2 Erection of Scaffolding at Following Locations inside 2nd Pass of boiler:

- a. Below eco lower bank for inspection of 180 degree bends in front and rear, bottom bends, Eco inlet header, eco end coils & steam cooled wall bottom headers. This complete scaffold shall be made such as to seal the opening in eco hopper below the eco. Lower bank.
 - b. Necessary scaffolding for inspection of upper bank in front side for LTSH terminal tubes, SCW hanger tubes, WW hangers, screen tubes, eco hangers etc. as per site requirement.
 - c. Scaffolding at any other place if the condition of boiler demands inspection.
- 1.5.3 10 nos. identified modules of eco (upper & lower) after in-situ inspection as per 1.5.1 above are to be lowered to facilitate through/complete inspection and repair work. It is pertinent to mention that each module of eco comprises of two upper & two lower eco coils banks. The above work will also require cutting of connection tubes from inlet header, intermediate header of concerned module. Thorough inspection of lowered eco modules after cleaning etc. is required to be carried out. Identification of the eroded/damaged tubes/bends. Repair/replacement of eroded tubes/bends. Re-positioning of lowered coil modules and its connection with the headers. Alignment of repositioned modules. Cutting/repair/re-fixing of brackets, clits, supports, deflector plates etc. if required for completion of above job is also in scope of contractor. Firm has to carry out through inspection of coils adjacent to modules which are to be lowered & carry out rectification work as per site requirements. **01 no module of Eco bank is in dummied condition and will require complete replacement which is in contractor's scope.**
- 1.5.4 04 Nos identified modules of LTSH (upper & lower) after in-situ inspection as per 1.5.1 above are to be raised to facilitate through/complete inspection and repair work. It is pertinent to mention that each module comprises of two upper & two lower LTSH coils banks. Each module comprises of two upper & two lower LTSH coils banks. The above work will also require cutting of connection tubes from inlet header, hanger tubes and LTSH terminal tubes etc. of concerned module. Thorough inspection of raised LTSH modules after cleaning. Identification of the eroded / damaged tubes / bends. Repair / replacement of eroded tubes / bends. re-positioning of lifted coil modules and its connection with the header, terminal tubes & hanger tubes. Alignment of repositioned modules. Cutting/repair/re-fixing of brackets, clits, supports, etc. if required for completion of above job is also in scope of contractor. Firm has to carry out through inspection of coils adjacent to modules which are to be lowered & carry out rectification work as per site requirements.

- 1.5.5 Cutting, replacement/ repair damaged/worn out tubes of economizer, LTSH, steam cooled wall, SCW hanger tubes, eco hanger tubes etc. located in the 2nd pass identified after inspection as per 1.5.1 above. The same may include cutting of fins, support channels & skin casing etc. as applicable.
- 1.5.6 Alignment of misaligned LTSH & eco coils as per requirement.
- 1.5.7 Repair of headers inside 2nd pass by weld overlay/metal build up where ever required up to 1 sqm area on headers may be required to be repaired by weld overlay/metal build up. Proper pre-heating/post heating and stress relieving be carried out in accordance with the established procedures.
- 1.5.8 Removal of scaffolds as per instruction of engr. in charge.
- 1.5.9 Removal & shifting of all debris, scrap, old refractory and other loose material from 2nd pass and eco hoppers after Box up of 2nd pass.

NOTE:

- a. Welding joints required to carry out for above jobs are covered under 4300 Nos welding joints mentioned at 2.3 of the scope.
 - b. Economizer consists of 2 banks each bank consists of 209 coils & LTSH consists of 2 banks each bank consists of 147 coils.
 - c. Contractor shall have to arrange sufficient quantity of lights at various locations with their own cables and lamps as per site requirement but electricity will be free of cost.
- 1.6 **BUCK STAYS AND FURNACE GUIDE WORKS:**
- 1.6.1 Inspection of all buck stays & furnace guides.
 - 1.6.2 Re-fixing of missing pins / replacement of damaged pins.
 - 1.6.3 Replacement of broken bolts.
 - 1.6.4 Minor repair of buck stays, furnace guide or any other component of this system as per instruction of Engineer in charge.
 - 1.6.5 All the buck stays should be cleaned. All ash and debris lying on buck stay should be removed (whether old or fresh).
- 1.7 **SEAL PLATE WORKS:**
- 1.7.1 Scaffolding all around seal trough at furnace bottom from outside & inside scaffold for inspection of water wall bottom and wire meshes of seal trough.
 - 1.7.2 Inspection and repair/replacement work of scalloped plate, seal plate and screen wire mesh to water wall.
 - 1.7.3 Contractors shall have to arrange necessary lighting at various locations with their own cables and lamps as per requirement but electricity will be provided free of cost.
 - 1.7.4 Removal of scaffolding.
- 1.8 **WORKS ON WATER WALL, EXTENDED WW, WATER WALL REAR ARCH, SCREEN WW, EXTENDED SCW, HORIZONTAL PASS TUBES:**
- 1.8.1 Thorough Inspection of the entire subject cited tubes along with fin welding and fins.
 - 1.8.2 Cutting, replacement/ repair of identified damaged/worn out tubes of water wall, extended WW, water wall rear arch, screen WW tubes, extended SCW etc. which also includes cutting, removal & replacement of fins, support channels, skin casing, refractory etc. as applicable.
 - 1.8.3 Minor repair of casing pipe for soot blower, if required.
 - 1.8.4 Erection of scaffolding outside furnace if required for replacement of boiler tubes or any other repair as per requirement.
 - 1.8.5 Welding of peg fins, minor repair work as per direction of Engineer in charge.
 - 1.8.6 The erection of additional scaffolding if required is to be done for inspection of the horizontal pass & first pass of boiler is in contractor's scope.
 - 1.8.7 Removal of scaffold after completion of work and getting clearance from EIC.
- NOTE:
- a. Welding joints required to carry out for above jobs are covered under 4300 Nos welding joints mentioned at 2.3 of the scope.
 - b. Contractor shall have to arrange sufficient quantity of lights at various locations with their own cables and lamps as per site requirement but electricity will be free of cost.
- 1.9 **WORKS ON DIVISIONAL SUPER HEATER:**
- 1.9.1 Complete inspection of Divisional SH tubes after erection of scaffolding.
 - 1.9.2 Cutting, replacement/ repair of identified damaged/worn out tubes of divisional SH & spacer tubes which may include, removal of support channels, WW fins & skin casing etc. as applicable.

- 1.9.3 Alignment of coils and panels to maximum possible extent, welding of flexible connectors, lugs, clits, stoppers, supports, rectification of alignment bands etc.; repair of supports and brackets as per direction of engineer in charge.
- 1.9.4 Spacer tubes shall be replaced as per site requirement.

NOTE: -

- Welding joints required to carry out for above jobs are covered under 4300 Nos welding joints mentioned at 2.3 of the scope.
- Contractor shall have to arrange sufficient quantity of lights at various locations with their own cables and lamps as per site requirement but electricity will be free of cost.

Note:

- There are six nos. Divisional Panels. Each Panel comprise of 6 Nos. Sub panels. (See drawing)
-

No.	Main Panel No. in which loop is to be replaced	Sub Panel No.	Loop No. counted from outside to inner side.	No of Loops to be replaced
1	5	6	9	01
2	5	6	10	01

- Each sub panel have 10 nos. Loops except scissor tube/spacer. Loop are counted from outermost side to innermost. Detail of damaged loops are as below: Drawing pointing at damaged loops to be replaced is attached with the scope of work and is available at the last page.

All jobs required for replacement of above loops are in contractor's scope & Welding joints required to carry out for above jobs are covered under 4300 Nos welding joints mentioned at 2.3 of the scope. However loops will be provided by HPGCL. Few panels of divisional SH which are extremely misaligned needs to be aligned to maximum possible extent.

- 1.9.5 Removal of scaffolding if erected after getting clearance from EIC.

2.0 WORKS ON PLATEN SUPER HEATER:

- 2.0.1 Complete inspection of platen SH tubes after erection of scaffolding.
- 2.0.2 Cutting, replacement/ repair of identified damaged/worn out tubes of platen SH & spacer tubes which may include, removal of support channels & skin casing etc. as applicable.
- 2.0.3 Alignment of coils and panels to maximum possible extent; welding of flexible connectors, lugs, clits, stoppers, supports, rectification of alignment bands etc.; repair of supports and brackets as per direction of Engineer in charge to the extent possible from the scaffolding.

NOTE: -

- A. Contractor shall have to arrange sufficient quantity of lights at various locations with their own cables and lamps as per site requirement but electricity will be free of cost.
- B. There are 20 number Platen Super heater panels. Each panel consists of 18 number of loops. (SEE DRAWING.)

- 2.0.4 Removal of erected scaffold after getting clearance from EIC.

NOTE:

Welding joints required to carry out for above jobs are covered under 4300 Nos welding joints mentioned at 2.3 of the scope.

2.1 WORKS IN RADIANT PANEL REHEATER, PLATEN REHEATER AND FINISH/FINAL REHEATER ASSEMBLIES:

- 2.1.1 Complete inspection of Radiant Panel Re heater, Platen Re heater and Finish/Final Re heater Assemblies after erection of scaffolding.
Note: Contractors shall have to arrange necessary lighting at various locations with their own cables and lamps as per site requirement but electricity will be free of cost.
- 2.1.2 Cutting, replacement/repair of identified damaged/worn out tubes of radiant reheater, reheater front, reheater rear & spacer tubes which may include, removal of support channels & skin casing etc. as applicable.

- 2.1.3 Alignment of coils and panels to maximum possible extent; welding of flexible connectors, lugs, clits, stoppers, supports etc.; repair of supports and brackets as per direction of Engineer in charge to the extent possible from the scaffolding.
- 2.1.4 01 loops of Platen Reheater panel is dummied and will require complete replacement which is in contractor's scope. The detail of loops to be replaced is mentioned below:
- 2.1.5 There are 40 number Platen re-heater panels. Each panel consists of 20 number of loops. (SEE DRAWING.)
- 2.1.6 Loops are counted from outermost side to innermost.

No.	Main Panel No. in which loop is to be replaced	Loop No. counted from outside to inner side.	No of Loops to be replaced
1	20	5	01

- 2.1.7 Replacement of 2 nos. U bends (5 & 6) of each of the Platen reheater panel.
- 2.1.8 Removal of scaffolding after getting clearance from EIC.

NOTE:

- Welding joints required to carry out for above jobs are covered under 4300 Nos welding joints mentioned at 2.3 of the scope.

2.2 WORKS ON FINAL SUPER HEATER:

- 2.2.1 Complete cleaning & inspection of final SH tubes to the satisfaction of Engr. in charge after erection of scaffolding.
NOTE: contractors shall have to arrange necessary lighting at various locations with their own cables and lamps as per site requirement but electricity will be free of cost.
- 2.2.2 Cutting, replacement/ repair of identified damaged/worn out tubes of final SH which may include removal of support channels & skin casing etc. as applicable.
- 2.2.3 Alignment of coils to maximum possible extent, welding of connectors, lugs, supports, readymade baffles, wire mesh, fins, peg fins, rectification of alignment bends and repair of any of these or other components as per direction of Engineer in charge.
- 2.2.4 Removal of scaffold as per instruction of Engineer in charge.
NOTE:
 - Welding joints required to carry out for above jobs are covered under 4300 Nos welding joints mentioned at 2.3 of the scope.

2.3 WELD JOINTS WORKS:

- Total 4300 nos. of HP joints including build ups are to be carried out in various boiler tubes of eco, LTSH, WW, Divisional SH, Platen SH, Final SH, Panel RH, Front RH, Rear RH, screen tubes, SCW etc. Identified after inspection of boiler as per below scope.
- 2.3.1 The tubes identified as worn out/damaged shall be cut. The decision of Engineer in charge shall be final and binding for selection of method for cutting of tubes.
 - 2.3.2 All spool pieces shall be cut by SAW / CHOP SAW only. After cutting, tube is to be covered with cap wherever required.
 - 2.3.3 All the spool pieces shall be cleaned from inside.
 - 2.3.4 Preheating and post heating wherever required shall be done in accordance with the established codes for boiler.
 - 2.3.5 Cutting, grinding, fitting and welding shall be done strictly as per standard procedure.
 - 2.3.6 Proper heat treatment (Post & Pre heating), Stress relieving wherever required as per procedure shall be in the scope of contractor.
 - 2.3.7 All the welding joints must be carried out by IBR certified & approved welder having certificate duly endorsed by C.I.B., Haryana as per recommendation of welding schedule and direction of Engineer in-charge. However, if defects are noticed in weld joints during N.D.T., then the same shall be repaired and retested till the same get accepted.
 - 2.3.8 All joints should be of radiographic quality.

- 2.3.9 All attachments/clamps required to be cut for completion of welding joint shall be cut & re-welded / restored as per actual site requirement and no additional amount will be given for the same.

Note:-

1. Each build up up-to 100 mmx25mm will be considered equivalent to 1/3 of HP joints).
2. If old defective weld joint/stub joint is re welded after removal of old weld metal than it will be considered equivalent to one joint

2.4 FIN WELDING WORKS:

2.4.1 Fin welding shall be done for following:

- To replace oxidized & damaged fins of WW & SCW.
- To re-weld fins after replacement / creating access of water wall and steam cooled wall tubes.
- To re-weld fins at the places where fins are removed for cooling purpose.

2.4.2 All fin welding should be done by qualified IBR welder.

2.4.3 Fin welding shall have to be done on both the sides of fin bar / fin rod. (i.e. on left and right).

2.4.4 Payment shall be done as per the actual running meter of the fin welding done.

2.4.5 Up-to 900 mtrs of fin welding is covered in main scope.

2.4.6 Where buck stay is in the way, fin welding shall be done from inside.

2.5 SHIELDING OF TUBES:

Inspection of the pressure parts tubes & providing of 2500 Nos. New/old shield on pressure parts tubes at different location wherever required as per below scope.

2.5.1 Shifting of readymade shields from dept. / Central stores to work site.

2.5.2 Cutting of shields in required size, as per the instruction of engineer in charge.

2.5.3 Positioning the shield on the eroded / identified tube facing the direction of flue gas flow or as per instruction of EIC in such a way that there is no gap between the clamp to shield and shield to shield i.e. No portion of tube is left exposed to the flue gas flow. Welding of the same in position with clamp / tube as per procedure identified by Engineer In charge.

2.5.4 Exclusive gang to be deployed for the above job throughout the overhauling.

NOTE:-

Repositioning of twisted shields & removal of old /damaged/semi damaged shield from the tube shall be taken as half of the installation /application of new shield.

2.6 INSTALLATION OF CASSETTE BAFFLES:

Providing of 30 Nos. new cassettes baffles of various size on pressure parts coils at different location wherever required as per below procedure.

2.6.1 Shifting of cassette baffles to site.

2.6.2 Fixing of cassette baffles at the end of coils properly so as to cover the bends. The above work may require jointing of two or three cassettes baffles of various lengths by welding them.

2.6.3 Locking of cassette baffle at bottom as well as at top as per instruction of EIC and application of top cover plate on topmost cassettes baffles by welding.

2.6.4 Exclusive gang to be deployed for the above job throughout the work.

2.7 FABRICATION OF BEND

In case of non-availability of bends, the same shall have to be fabricated as per standard procedure either by hot or cold bending. Fabrication of up-to 10 nos. simple bends having single bending radius (up to 90 degree and where SR is not required) from tubes with thickness up-to 5 mm & diameter up-to 70 mm are covered in scope. In case quantity of bends to be fabricated is more than 10 Nos the same will be got fabricated by HPGCL. These bends will be visually inspected as well as hydraulically tested with stress relieving before installation by the EIC. Payment shall be made only for those bends which are of acceptable quality.

2.8 HAND HOLE WORKS:

2.8.1 Arrangement of scaffold as per requirement.

2.8.2 Cutting of seal welding of hand hole (total 25 nos.)

2.8.3 Complete inspection of all headers.

2.8.4 Fitting back removed seal welding of hand hole after material build up on it as per procedure prescribed by engr. in charge i.e., pre heating, post heating and stress relieving should be carried out.

2.8.5 Minor repair of hand hole plates, if required.

2.9 ASSISTANCE IN D.P.T./L.P.I. TEST WORKS:-

D.P.T / L.P.I test works of boiler stub joints of platen, divisional SH, RH, final SH, hand hole caps of de-super heaters headers, super heater headers and DMW joints of divisional/platen/final super heater / re-heater for checking surface cracks is proposed to be carried out by HPGCL by engaging separate firm. However, manpower required for carrying out above works and minor scaffolding erection if required for assistance of D.P.T / L.P.I test team is in contractor's scope including arrangement of necessary lighting at various locations with their own cables and lamps as per site requirement but electricity will be free of cost.

3.0 ASSISTANCE IN CORROSION MAPPING AND OXIDE SCALE MEASUREMENT:

Corrosion mapping & oxide scale thickness measurement are proposed to be carried out by HPGCL by engaging separate firm. However, manpower required for carrying out above works, minor scaffolding erection if required for assistance of Corrosion mapping & oxide scale measurement team are in contractor's scope including arrangement of necessary lighting at various locations with their own cables and lamps as per site requirement but electricity will be free of cost. Cleaning of surface of tubes is also included in contractor's scope.

3.1 ASSISTANCE IN PHASED ARRAY ULTRASONIC TESTING (PAUT): -

Phased Array Ultrasonic Testing (PAUT) is proposed to be carried out by HPGCL by engaging separate firm for 2500 Nos. welding joints carried out by the contractor in the coils or wherever possible. However, manpower required for carrying out above works and minor scaffolding erection for assistance of PAUT team is in contractor's scope including arrangement of necessary lighting at various locations with their own cables and lamps as per site requirement but electricity will be free of cost. Surface cleaning / buffing on weld regions of tube for carrying out PAUT would be within the scope of contractor. Manpower assistance and necessary tools for surface cleaning / buffing on weld regions of tube, shifting/handling of PAUT equipment and accessories would be within the scope of the contractor.

3.2 REFRACTORY WORKS:

To provide 15 MT of refractory over the manhole bends, peep hole bends, soot blower opening, pent house and other area of furnace as per direction of Engineer in-charge. As per below scope:

- 3.2.1 Removal of old refractory as per requirement.
- 3.2.2 Casting fresh refractory. Provision of temporary/permanent supports/retainers if required and fixing of wire mesh with proper locking etc.
- 3.2.3 Ramming & dressing of refractory for compacting where ever possible.
- 3.2.4 Curing of refractory as per procedure.

3.3 OVERHAULING OF DRUM INTERNALS AND BOTTOM RING HEADER.

- 3.3.1 Opening of both the manholes of boiler drum, dismantling of all the separators installed inside the drum.
 - Drum length=26500mm. Drum Id=1743mm.
 - Nos. of turbo separators inside boiler drum=114.
 - Nos. of Screen driers inside boiler drum=148.
- 3.3.2 Taking out all the separators from drum and cleaning by wire brush first and then by emery paper and finally by rustoline and air. Minor repair of separator, checking the welding of separators chamber by DPT and welding of cracks, if found any.
- 3.3.3 Checking of all drum internals from inside for any crack and welding the same. Checking the tightness of all nuts & bolts wherever provided in the drum. Carrying out any repair work required inside the drum. Covering of down comers and removal of covers before box up. Checking and removal of any foreign loose material inside drum. Collection of drum debris and handing it over to HPGCL so that the same may be got tested from a laboratory.
- 3.3.4 Installation of all boiler drum internals as per manufacturer recommendations.
- 3.3.5 Fixing of new gaskets and closing of manholes.
- 3.3.6 Attending leakage if noticed during hydraulic test.
- 3.3.7 Thorough inspection of bottom ring header .Random removal of Filters to check the position of the orifice plate/ orifice adapter and rectify the same, if required.
 - The above work includes: -
 - Opening of all four manholes of bottom ring header.
 - Visual Inspection of header for any foreign material by experienced person by experienced person – who would go inside ring header without any loose material.

- Removal of filters at random & Inspection of orifices by experienced person – who would go inside ring header without any loose material.
- Dismantling, cleaning and restoring of orifices one by one (incorporate the same in unit rates)
- restoring filters/mesh of orifices
- Checking and removal of any foreign loose material.
- Final inspection and boxing up of man holes with new gasket.

3.3.8 Flushing of ring header if required & cutting of its drain lines if required.

NOTE: - Contractor should ensure trouble free operation after completion of the job when unit is in running condition.

3.4 PENT HOUSE WORKS:

3.4.1 Cleaning of the top of pent house.

3.4.2 Cleaning of ash and insulation debris from pent house & shifting it to location inside/outside plant as per site requirements.

3.4.3 Cleaning of ash from dog house and furnace bottom dead chambers.

3.4.4 Inspection of insulation seal around hangers as well as in the sides and corners.

3.4.5 Welding of broken supports. Repair of supports, beams and stays/tie rods wherever required. Inspection and repair of crown seal plate is required.

3.4.6 Inspection of penthouse for identification of damaged area/skin casing & repair work there which includes:-

- Restoration of fins wherever required.
- Properly restoring the sagged roof tubes wherever required. Restoration of 20 nos. sagged tubes are covered under main scope & any variation as per actual site requirements will be as per quoted unit rates.
- Application of bituminous paint on tubes wherever required
- Removal & pouring/ casting of refractory where ever required
- Welding and restoration of seal plate/skin casing in the penthouse
- Repair inside the drum deck wherever required making it air tight. Repair of various trays, heat shields, crown and shrouds etc. for Divnl.SH, Platen SH, Platen/Final re heater, final super heater, LTSH, Economizer coils etc. in the main pent house.

NOTE:-

30 Sq Mtrs. of skin casing is to be replaced in penthouse.

3.4.7 Scaffolding required for inspection of header stubs headers, de SH and pipelines etc.

3.4.8 Complete visual inspection of tubes/stubs/nipples of divisional SH, PSH, FSH, PRH &FRH.

3.5 ASSISTANCE IN RADIOGRAPHY WORK:

Welding joints done by firm will be got radiographed by HPGCL by engaging separate firm. However, manpower and minor scaffolding erection if required for assistance of radiography team is in contractor's scope including arrangement of necessary lighting at various locations with their own cables and lamps as per site requirement but electricity will be free of cost. If any welding joint is found to be defective during radiography it is to be re welded by the firm free of cost.

3.6 ASSISTANCE IN FIBROSCOPY WORKS:

Fibroscope of boiler headers is proposed to be carried out by HPGCL by engaging separate firm. However, manpower and minor scaffolding erection if required for assistance of Fibroscope team is in contractor's scope including arrangement of necessary lighting at various locations with their own cables and lamps as per site requirement but electricity will be free of cost.

3.7 TUBE SAMPLE WORKS:

3.7.1 Collection of 8 nos. tube samples from different locations of boiler & replacing them with new tubes.

3.7.2 Cutting of same to length specified by EIC.

3.7.3 Marking of same, location wise.

3.7.4 Deposit the tube samples with EIC.

NOTE:

- Welding joints required to carry out for above jobs are covered under 4300 Nos welding joints mentioned at 2.3 of the scope.

- Contractor shall have to arrange sufficient quantity of lights at various locations with their own cables and lamps as per site requirement but electricity will be free of cost.

3.8 SERVICING OF SOOT BLOWERS:

Servicing & complete overhauling of wall soot blower (total qty. = 80 nos.) & LRSB (total qty. =44 nos.) shall be in the scope of contractor including replacement of damaged spare parts & replacement of oil. The servicing and the alignment of soot blowers shall be done under the strict supervision of OEM.

3.9 HANGERS INSPECTION AND SERVICING:

Repairing /repositioning/servicing of 100 nos. piping hangers (i.e. 50 nos. MS, HRH & CRH hangers) & 50 nos. auxiliaries piping such as fuel oil piping, PRDS line & drains lines) shall be in the scope of contractor. Minor setting of hangers is in scope of contractor. Cold reading & hot reading after stabilization of all hangers is to be taken by marking the same with chalk & same should be informed to EIC.

4.0 AIR TIGHTNESS TEST:

Air tightness test of boiler is to be carried out to check air leakages from man holes, peepholes, penthouse, dog house, missing /damaged fins etc. contractor must deploy his manpower for detecting the air leakages during the test and thereafter carry out repair of defective manholes/peepholes/fins etc. detected during test. Repeated Air tightness tests may be got carried out if extra time is available so as to further minimize the air leakages.

4.1 HYDRAULIC TEST:

4.1.1 After the repairs have been completed, the pressure parts circuit shall be subjected to hydraulic test.

4.1.2 Any leakage noticed in hydraulic test shall be attended by the contractor. If, for attending such leakages which is not attributable to the contractor, fresh welding joints are to be done or hand holes are to be seal welded after cutting the entire old seal welding; then the payment shall be made as per rates provided in the contract.

NO EXTRA PAYMENT SHALL BE MADE IF:

- The leakage is from the welding done by the contractor.
 - The leakage is due to poor workmanship or negligence on the part of contractor.
- 4.1.3 After attending the leakage noticed in the 1ST hydro- test, the boiler may once again be subjected to hydraulic test to check the soundness of the weld at the discretion of HPGCL. More than one internal hydraulic test may require to be carried out. If any leakage is noticed during 2nd or subsequent hydro-tests; then the repair shall be done as per conditions mentioned above for hydraulic test.
- 4.1.4 Finally, the boiler shall be hydraulically tested (external hydraulic test) in the presence of CIB, Haryana.
- 4.1.5 Contractor must deploy his manpower for detecting the leakage during hydraulic tests and attend the leakages.

NOTE:-

1. As far as possible all pressure part welding including attachment weld and fin weld shall be completed before internal hydraulic test and has to be completed before final hydraulic test. The contractor will get the permission from CIB, Haryana to carry out the repair of pressure part and will get the boiler hydraulic test/ passed successfully from CIB, Haryana. However, fee will be deposited by HPGCL.

4.2 REPLACEMENT OF METALLIC BELLOW:

The replacement of metallic bellow inside drum house at 76 mtr. shall be got carried out by the contractor. The welding electrodes required for welding work of approximately 22mtr long bellow inside the pent house shall be included in contractor's scope. The contractor should engage IBR welder for carrying out this job

1.0 DETAILED SCOPE OF WORK FOR BURNER OVERHAULING: -

1.1 DIS-ENGAGING & RE-ENGAGING OF THE BURNER TILT MECHANISM:

- A. Opening/closing of all inner & outer burner cover plates, insulation etc.
- B. Disconnection of all reach rods from burner tilt mechanism.
- C. Complete dismantling of burner tilt mechanism including removal of drive shaft after disconnecting from burner tilt power cylinder.
- D. Removal of burner tilt power cylinder from its position if required by C&I maintenance and

- refitting to same position.
- E. Ensuring free movement of coal, oil & air nozzle tips.
- F. Lubrication of pins, shafts, studs of reach rod etc.
- G. Repair/replacement of burner tilt components & freeness of jammed burner tilt mechanism shall be in contractor scope.
- H. Connection of all reach rods to burner tilt mechanism and zero setting/alignment of all 84 no. nozzle tips of coal, air & oil.
- I. Repair/ replacement of drive shaft/ bushing, o- ring, shear pin, stationary pivot pin, square head pivot pin, collar and bell cranks, inner arm / outer arm and their clevis and pins etc.
- J. Tilting trial of burner tilt. Ensure trouble free operation of burner tilt up-to +/- 30 degree connecting with power cylinder.
- K. Any other work required for disengaging & re-engaging of the burner tilt mechanism is also included in the scope of work.

1.2 REMOVAL & REFITTING OF FUEL INLET ELBOW ALONG WITH ITS ISOLATING GATE & GASKETS. (QTY. =32 NOS). AT ELEVATION A to H:

- A. Locking of all PC pipes before removal of burners and removal of locking after completion of burner replacement work.
- B. Opening of Victaulic couplings (32 nos.) and split collars and removal of Victaulic coupling, gasket, fuel inlet gates and fuel inlet elbows.
- C. Cleaning of Victaulic coupling split collar; coupling nut & bolts, fuel inlet elbow, inlet gate etc.
- D. Inspection of removed fuel inlet elbows & identification of damaged elbows requiring replacement/repair.
- E. Shifting of fuel inlet elbows from store to site as per requirement.
- F. Cutting out new gaskets from 3.0 mm non-metallic gasket sheets provided by HPGCL.
- G. Refitting back all fuel inlet gates & fuel inlet elbows after gaskets/Victaulic coupling etc. Minor repair work of gates by welding is also included in the scope of work.
- H. To make leak proof joint & final tightening after zero setting.
- I. Any other work required for removal & refitting of the fuel inlet elbow with its isolating gate is also included in the scope of work.

1.3 Removal of all 32 nos coal compartment assemblies (coal nozzle & coal tips) from burner panel.

1.4 Thorough inspection of burner panel to work out internal damages to burner panel i.e. Burner plates, tie/links rods, pins etc. Repair by filling the worn out portion & replacement wherever required.

1.5 Installation of all 32 nos new/pre-repaired coal compartment assembly provided by HPGCL.

1.6 SS tips provided by RGTTP shall be installed with the old or new coal compartment assemblies.

Note: - Shifting of above 32 nos new/repaired coal compartment assemblies from store/site to installation site on boiler is also in contractor's scope.

1.7 Proper alignment of replaced coal compartment assemblies & connection of all the reach rods to burner tilt mechanism and ensure free movement of nozzle tips.

1.8 Repair/replacement of guide pipes of scanners, igniters & oil guns wherever required & checking their free movement with tilting mechanism

1.9 Removal, servicing, repair/ replacement & refitting of all 24 nos oil gun assemblies for elevation AB, BC, CD, EF, FG & GH and ensure their movement with burner tilt mechanism.

1.10 Inspection of fuel air nozzle tips at elevations,AB,BC,CD,EF, aux air nozzles tips at elevation AA, BC, DE, FG, HH & over fire nozzles tips at CCOFA1, CCOFA2, CCOFA3, CCOFA4. Removal, repair/ replacement & refitting of above nozzles tips wherever required and ensure their free movement with burner tilts mechanism. Checking of aux air/fuel air nozzles positions w.r.t drawing & inter changing their positions if not found as per drawing.

1.11 Checking of burner tilt movement of all coal nozzles & oil gun assemblies, oil nozzles, air nozzles simultaneously at all four corner freely(+/-30°) with power cylinder & ensure smooth and trouble free operation in cold as well as hot condition of furnace. Replacement of any damaged spare parts and bearing /bush is also including in the scope of work

- 1.12 Servicing/Repair & checking of all secondary air dampers (inside wind box) for opening/closing & ensure free movement of dampers during operation of unit. Replacement of any damaged spare parts and bearing /bush is also including in the scope of work.
- 1.13 Re-fixing of all inner & outer cover plates etc. of burner zone after application of ceramic tape.
- 1.14 Replacement of burn out/damaged seized nuts, bolts, studs of burner panel & cover plate etc. Is to be carried out by contractor.
- 1.15 Removal/cutting of any platform and its normalization, if causing obstruction during removal/assembly of gates, coal compartment assembly, fuel inlets elbow etc. Is also in the scope of contractor.
- 1.16 Any other work & minor scaffolding required for completion of subject cited work is also in the scope of contractor.

Note: - Contractor shall have to arrange necessary lighting at various locations with their own cables and lamps as per requirement but electricity will be free of cost.

5. DETAILED SCOPE OF WORK FOR WIND BOX OVERHAULING:

- 5.1 Through cleaning of wind-box RHS & LHS.
- 5.2 Contractor shall have to arrange necessary lighting at various locations with their own cables and lamps as per requirement but electricity will be free of cost.
- 5.3 To erect scaffolding in wind box up to its top in such a way that through inspection & repair of both wind boxes, SADC dampers etc. can be carried out. Staircases should be installed in order to avoid monkey climbing.
- 5.4 Through inspection of wind-box RHS & LHS.
- 5.5 Removal of chequered plates & other attachments etc. from outside on top of both wind boxes for their inspection & repair as per site requirement.
- 5.6 Shifting of material from main store to site is in the scope of contractor.
- 5.7 Repair work of LHS wind-box which involves.
 - i. Removal of insulation as per site requirement
 - ii. Repair of damaged MS sheet to make wind box air tight.
- 5.8 Repair work of RHS wind-box which involves.
 - i. Removal of insulation as per site requirement
 - ii. Repair of damaged MS sheet to make wind box air tight.
- 5.9 Fabrication/cutting/welding of channels/clits (as required at site) for strengthening both wind-box by providing support/l-clits at upper and lower sides of support beam of wind-box.
- 5.10 Inspection of wind box expansion joint in both wind boxes during shut down of boiler by removing insulation from top and bottom expansion bellow of wind box, to identify the leakages. To repair the wind box metallic expansion joints/ bellow as per requirement to make it air tight and ensure no leakage when unit is in running condition.
- 5.11 Replacement/providing of asbestos rope/cloth wherever required in the wind box, flange joint of burner panel and manholes/peepholes to make it air tight and their servicing if required.
- 5.12 Carrying out repair of air guide plates, bracings, worn out area around SADC dampers etc. by patch work & material build-ups as per directions of EIC.
- 5.13 Attending of leakages between flange joints of burner panel & wind box by inserting asbestos ropes.
- 5.14 AIR TIGHTNESS TEST:
 - a. Air tightness test of wind boxes is to be carried out to check air leakages from man holes, expansion joints, fins etc. Contractor must deploy his manpower for detecting the air leakages during the test and thereafter carry out repair of expansion joints, fins etc. detected during test.
 - b. In case of improper erection of scaffolding inside the wind-box at all four corners, a penalty of Rs. 25,000/- per instance shall be levied up on the contractor subject to ceiling of Rs. 1,00,000/-.
 - c. Any other activities to complete the subject cited job is also in the scope of contractor.

6 DETAILED SCOPE OF WORK FOR HIGH PRESSURE VALVE:

- 6.1** Total 180 nos. Of valves (manual/motor operated) detailed below are to be serviced/replaced and gland packing/gaskets, damaged spares are to be replaced wherever required. The new sets of gland packing, gasket and Complete valve shall be provided by H.P.G.C.L: -

Sr. No.	Size of valves, steam traps, NRV	Quantity (Nos.)
1	Up-to 25 mm	20
2	25mm to 50 mm	70
3	50 mm to 100 mm	60
4	100 mm to 150 mm	20
5	150 mm to 350mm	10

6.2 Servicing of following safety valves:-

Sr. No.	Description of Safety Valves	Quantity (Nos.)
1	Drum Safety valve	6
2	Super Heater Safety valves	4
3	HRH Safety valves	2
4	CRH Safety valves	6
5	ERV Safety valves	3

6.3 Servicing of following pneumatically operated control valves:-

Sr. No.	Description of pneumatic control Valves	Quantity (Nos.)
1	SH&RH spray valves (50mm &100mm)	12
2	CBD control valves (50mm)	2
3	Soot blower extraction line valves (50mm)	2
4	Feed water by-pass line control valve (150mm)	1
5	Fixed blow down valves (IBD drain valves) (50mm)	2

6.4 REPLACEMENT OF VALVES / BENDS / 1 MTR. LENGTH PIPELINE BY CUTTING, WELDING, GRINDING AND FIT-UP WORK FOR EACH JOB (For VALVES & BENDS) / PER MTRS (for PIPELINE) BY CERTIFIED IBR WELDER: -

Sr. No.	Size of Pipeline/valves	Quantity EACH JOB(For VALVES & BENDS) / PER MTRS (for PIPELINE)
1	Up-to 25 mm	50
2	25mm to 80 mm	20
3	80 mm to 200 mm	10

6.5 Servicing of 600 NB motor operated 1 No main feed line valve & its actuator.

NOTE: SERVICING OF HIGH PRESSURE VALVES MENTIONED ABOVE AT 6.1 TO 6.5 INCLUDES:

- I. Dismounting the valve actuator wherever required failing which the contractor shall be penalized with Rs. 5,000/- per instance subject to ceiling of Rs. 1,00,000/-.
- II. Dismantlement of the valve. Its complete cleaning & inspection. Identification of damaged. Replacement of the parts/complete valve found damaged.
- III. Repair of any kind in the valve is in the scope of the firm which is possible at site.
- IV. Lapping of valve seat with the plug/wedge and blue matching of the same to avoid any passing from the valve.
- V. To adjust the valve disc in case of stop valve and to give proper wedge action if required.
- VI. To replace gasket/gland and sealing ring of valves and other damaged spares as per requirement.
- VII. To show mechanical operation of valve with least resistance after servicing of valve.

- VIII. To box up the valve after servicing and tighten up the flange/bonnet bolts wherever necessary and re-tightening in hot conditioning when unit is synchronized. Any steam/water leakages observed from the valve will be attended by contractor.
- IX. Dismantlement of valve actuator. Servicing of actuator including replacement of damaged parts and oil. Actuator is to be serviced in presence of HPGCL engineer.
- X. Remounting the actuator after servicing of valves.
- XI. Adjustment of the safety valves pressure & blow down as per design after lighting up the boiler.
- XII. To adjust the control valve setting in case of pneumatically operated valves to avoid any passing through the valves.
- XIII. Contractor have to make his own arrangement of lapping tools and other T&P required for servicing of high pressure valves. Any temporary fixture required to be made for removal of wall bonnet etc. is also in contractor's scope.
- XIV. Safety Valve testing/setting shall be got carried out by TRIVEST method by HPGCL at their own cost however, assistance of man power including required wrenches shall be provided by contractor.
- XV. For valves exceeding/reducing from above scope, additional payment/deduction will be done as per quoted unit rate.
- XVI. All Welding works are to be carried out by IBR approved welder.
- XVII. The contractor should engage minimum 03 nos. of HP valve fitters for carrying out the servicing of HP valves.

7 PROVIDING CUP LOCK SCAFFOLDING INSIDE THE FURNACE

Erection and dismantlement of cup locks scaffolding in the furnace (first pass) for carrying out the various activities of overhaul works of boiler pressure parts as per the scope of work. All men and material for erection and dismantlement of scaffolding including scaffolding material, TO and FRO transportation of scaffolding material etc. shall be in the scope of the contractor. Scaffolding must be erected in such a way so that inspection/repair of heating surface up to roof may be carried out properly including radiant RH /panel RH, divisional SH, front pendant RH, rear pendant RH, platen SH, final SH, spacer tubes, DMW joints, soot blower area tubes etc.

THIS SCHEDULE CONSISTS OF TWO PARTS

PART-1. ERECTION AND DISMANTLING OF CUPLOCK FROM Z PANEL TO SEALING PLATFORM AT 57 MTRS

PART- 2. ERECTION AND DISMANTLING OF SCAFFOLDS FROM SEALING PLATFORMS TO RADIANT ROOF.

PART-1: ERECTION OF CUPLOCK SCAFFOLDING (UPTO SEALING PLATFORM AT 57 METER)

- 1.1. Placement of channel section of suitable size after cutting it in required shape so that it is properly supported on fin welding of water wall z panels. This channel shall be leveled accurately (0-0) as it will form the base for 'verticals'.
- 1.2. Fixing of typical support bases on inclined water wall z panels by welding with fins. These will be the base for all other verticals except those supported on channel fixed at sl.no.1. Leveling of these supports is extremely important to ensure the verticality of the uprights.
- 1.3. Fixing of adjustable base plates with jack on all the supporting bases erected above.
- 1.4. Erection of cup-lock type scaffold using components like cup-lock standard, ledgers etc. *Mashaali, dori etc.* should not be used.
- 1.5. Erection of staircase with the help of staircase coupler.
- 1.6. Erection of platform at required elevations. Steel board shall be used as planks. Platforms shall be provided along all 4 water walls. Peripheral working platform steel batons must be properly clamped/fixed to exact size and there should be side railings at all platforms for safe working. After every 2 mtr. interval strictly after z-panel, i.e. from 21 mtr. elevation approximately to 57 Mtrs, platforms should be erected in such a manner that no corner of the furnace should remain inaccessible. Platforms at side corners of the furnace should be strictly touching the side water wall tubes.
- 1.7. Staircase shall be connected with every platform through landing for easy approach to reach at various platforms. Every staircase should be equipped with side railing. Staircases used should not be defective and no step should be missing in any staircase. If any staircase is found with any step missing/damaged/defective then the same should be replaced immediately.

- 1.8. Scaffolding must be erected in such a way so that inspection/repair of heating surface up to radiant roof level should be carried out.
- 1.9. Near goose neck elevation (i.e. 57 mtr. in 600MW boiler), full platform shall be made with boards. This platform shall cover entire cross section of the furnace (21.082mtr x17.829mtr) in 1st pass).
- 1.10. The complete scaffold should be stable & its rigidity must be ensured.
- 1.11. Provide safety nets for safety purpose in the boiler first pass as per the direction of engineer in charge. Any other work required to erection of scaffolding system is in the scope of contractor.
- 1.12. The contractor should strictly complete the erection of scaffolding up to 57 mtr elevation within 08 days from getting clearance from Engineer-in-charge (AEE/AE concerned).

PART 2:- ERECTION OF CUPLOCK SCAFFOLDING UPTO RADIANT ROOF AT 79 MTR ELEVATION APPROX:

Making scaffolding arrangement for cleaning inspection and repair works in all sides of water walls, divisional super-heater and platen SH, radiant/panel RH, platen RH, final RH, final SH etc. using cup-lock scaffolding material etc. Working platforms at various elevations as per requirement are to be erected with steel boards etc. Staircase & ladders etc. are also to be erected as per requirement for complete inspection & repair of water walls, divisional super-heater, platen SH, radiant/panel RH, platen RH, final RH, final SH etc. The contractor should complete the erection of scaffolding from 57 Mtrs to 79 mtr elevation within 06 days from getting clearance from Engineer-in-charge (AEE/AE concerned).

PART 3:- ERECTION OF CUPLOCK SCAFFOLDING UPTO ROOF OF WIND-BOX:

Proper Scaffolding shall be erected inside each wind-box for the inspection of SADC dampers, expansion joints etc. Proper platform should be provided with steel planks in such a manner that the inspection by touching the roof of wind-box with hand becomes possible and the EIC or HPGCL representative can walk from one corner to the other corner.

Note:-

1. Scaffolding must be erected in such a way so that inspection/repair of heating surface up to radiant roof level should be carried out.
2. Scaffolding must be erected after every 2mtr interval from 57mtr elevation onwards. Steel planks should be provided without any gap to avoid any mis-happening at height.
3. Staircases should be mandatorily provided for inspection in Platen Reheaters, Final Reheaters and Platen Superheaters. Scaffolding must be erected in such a way so that inspection/repair of heating surface up to roof level of Platen Reheaters, Final Reheaters and Platen Superheaters should be carried out.
4. In accordance with above assessment the material should be shifted on respective floors and stacked properly to avoid hindrance in the movement.
5. Suitable lighting arrangement shall be made in entire scaffolding by the contractor.
6. Erection will be done round the clock by experienced staff with proper safety protective equipments.
7. After successful completion of internal hydro test, this scaffold shall be dismantled.
8. **Penalty for Poor workmanship in erection of scaffolding, welding works and any other works as per detailed scope of work:**

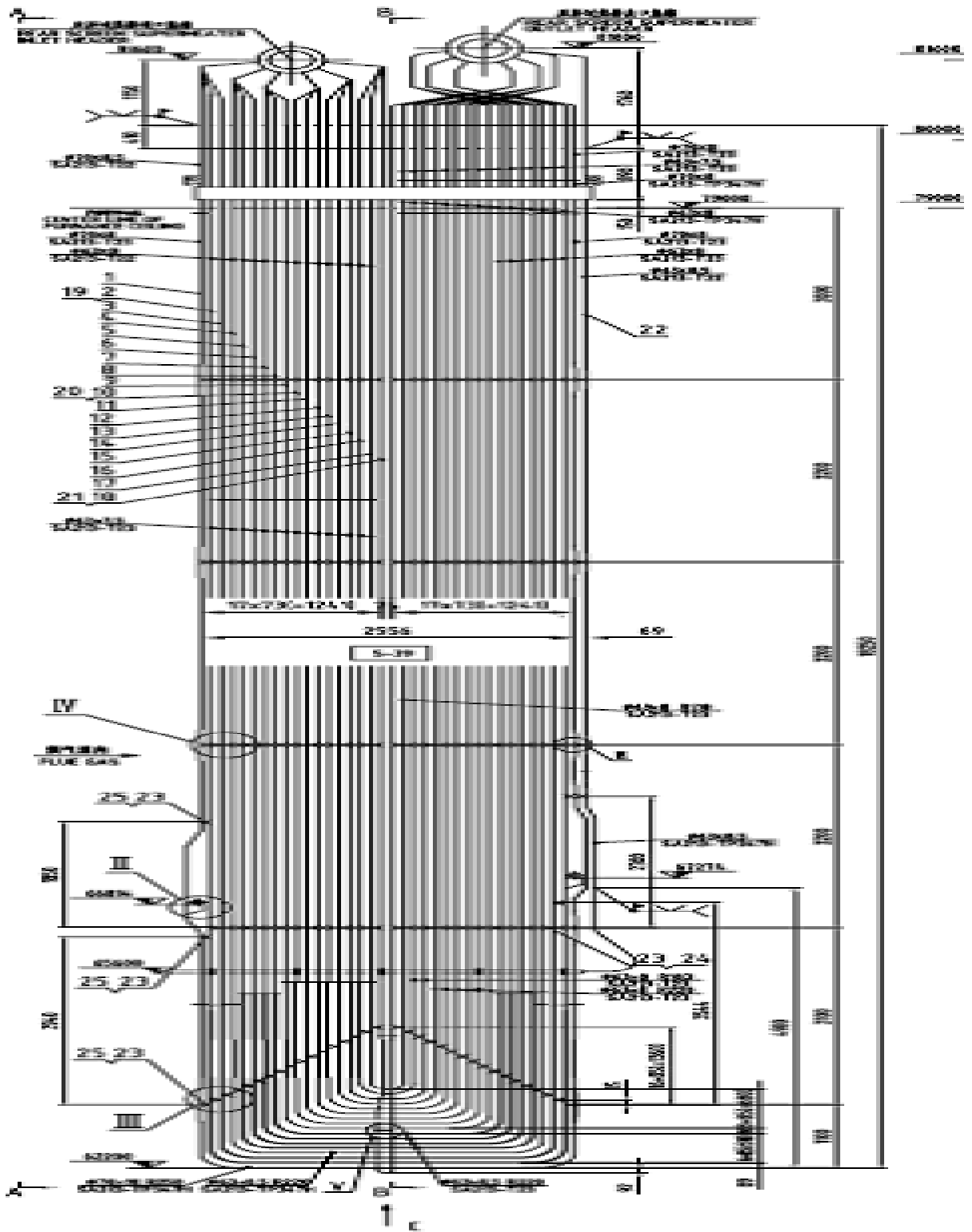
A penalty of Rs.10,000/- shall be imposed on the contractor for each default or instance of poor workmanship during erection of scaffolding, welding works and any other works as per detailed scope of work, subject to a maximum ceiling of Rs.3,00,000/-. Poor workmanship during erection of scaffolding, welding works and any other works as per detailed scope of work includes:

- a. All spool pieces shall be cut by SAW/CHOP SAW only
- b. Not providing platform at every 2 mtr interval.
- c. Not providing sufficient manpower assistance as per scope of work as per direction of EIC
- d. Providing platform away from corner side water wall tubes.
- e. Providing structure which is not firm and rigid.
- f. Not providing safety nets.

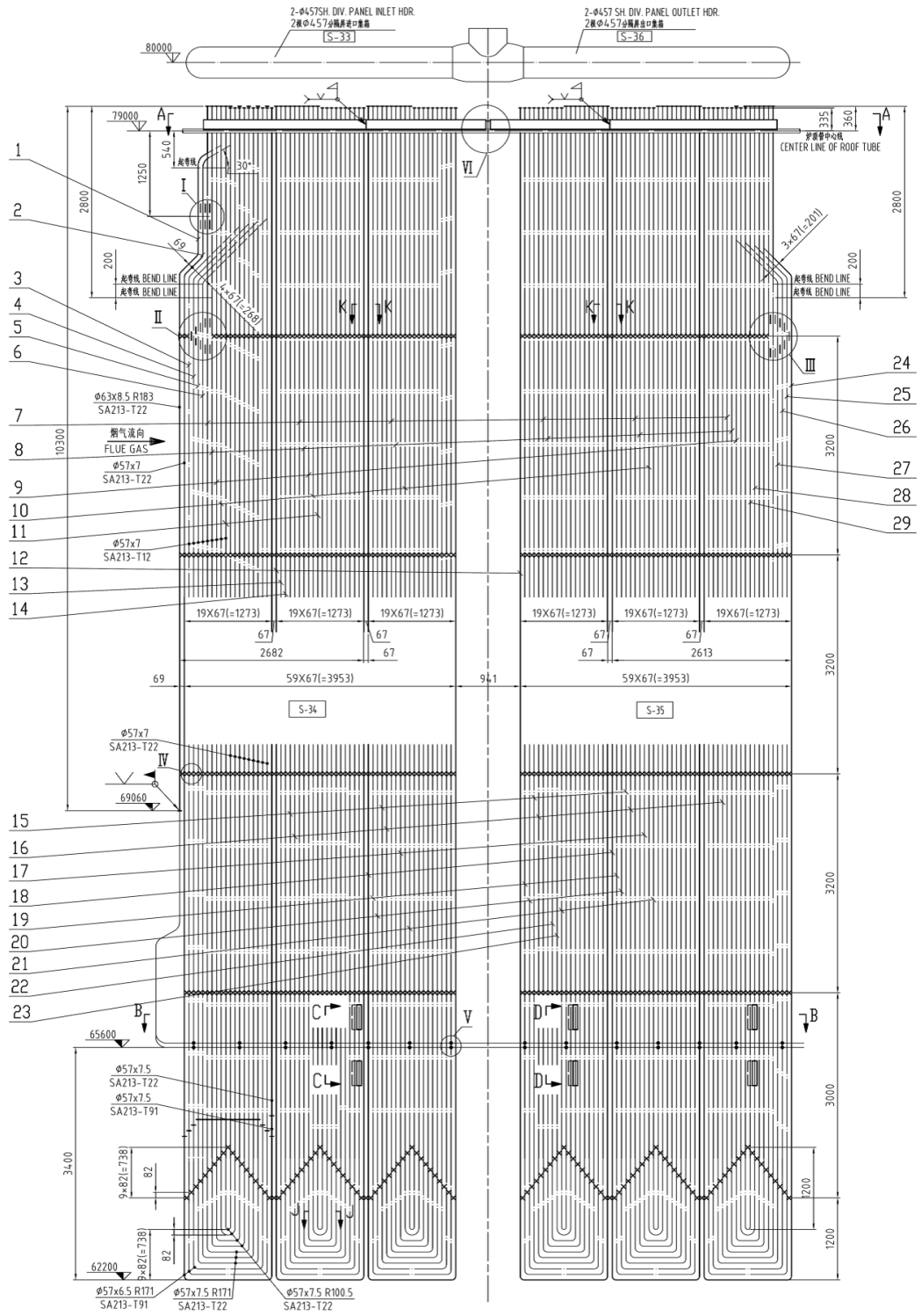
- g. Not providing sufficient number of staircases in areas mentioned in Part 1, Part 2 and Part 3 mentioned above under the heading "Providing cup lock scaffolding inside the furnace".
- h. Not providing sufficient number of planks, batons etc.
- i. Providing staircases without railings.
- j. Providing defective staircases.
- k. Using *mashaali* in place of clamps, GI wire etc.
- l. Leaving gaps at floors used for inspecting divisional super-heater and platen SH, radiant/panel RH, platen RH, final RH, final SH, SCW hanger etc.
- m. Not providing proper platform with steel planks in such a manner that the inspection by touching the roof of wind-box with hand becomes possible and the EIC can walk from one corner to the other corner shall also attract penalty.
- n. All the scaffolding material required will be assessed by the contractor. However, the contractor should use 4700-5000 nos. planks for erection of cup-lock scaffolding in first pass of furnace. Minimum 35 nos. of staircases each of rise 2 mtr should be used in boiler up-to radiant roof & in case of lesser/higher rise the quantity will increase/decrease accordingly. Both the above quantities will be inspected by concerned AEE/AE or his representative. Insufficient quantity of these two items shall attract penalty. The quantity of staircases mentioned above is solely for erection of cup-lock scaffolding inside the furnace. The quantity of staircases required for erection of scaffolding inside the wind box is not included in above mentioned 35 nos. staircases.
- o. Other items such as standard verticals, standard horizontals, ledgers, base jacks, brackets, clamps, batons, planks, staircases, C-channels of 2mtr and 4mtr, spigots (connecting pins) etc. should be as per site requirements. Insufficient quantity of above mentioned these items shall attract penalty of Rs.10,000/- for each instance till the deficiency of material is not being attended.

Contractor is advised to visit RGTPP for assessing quantity of these items. Boiler drawing has also been attached along with the scope of work for reference of the contractor. This penalty is over and above the other penalties for completion period mentioned in Penalty clause & Terms of payments.

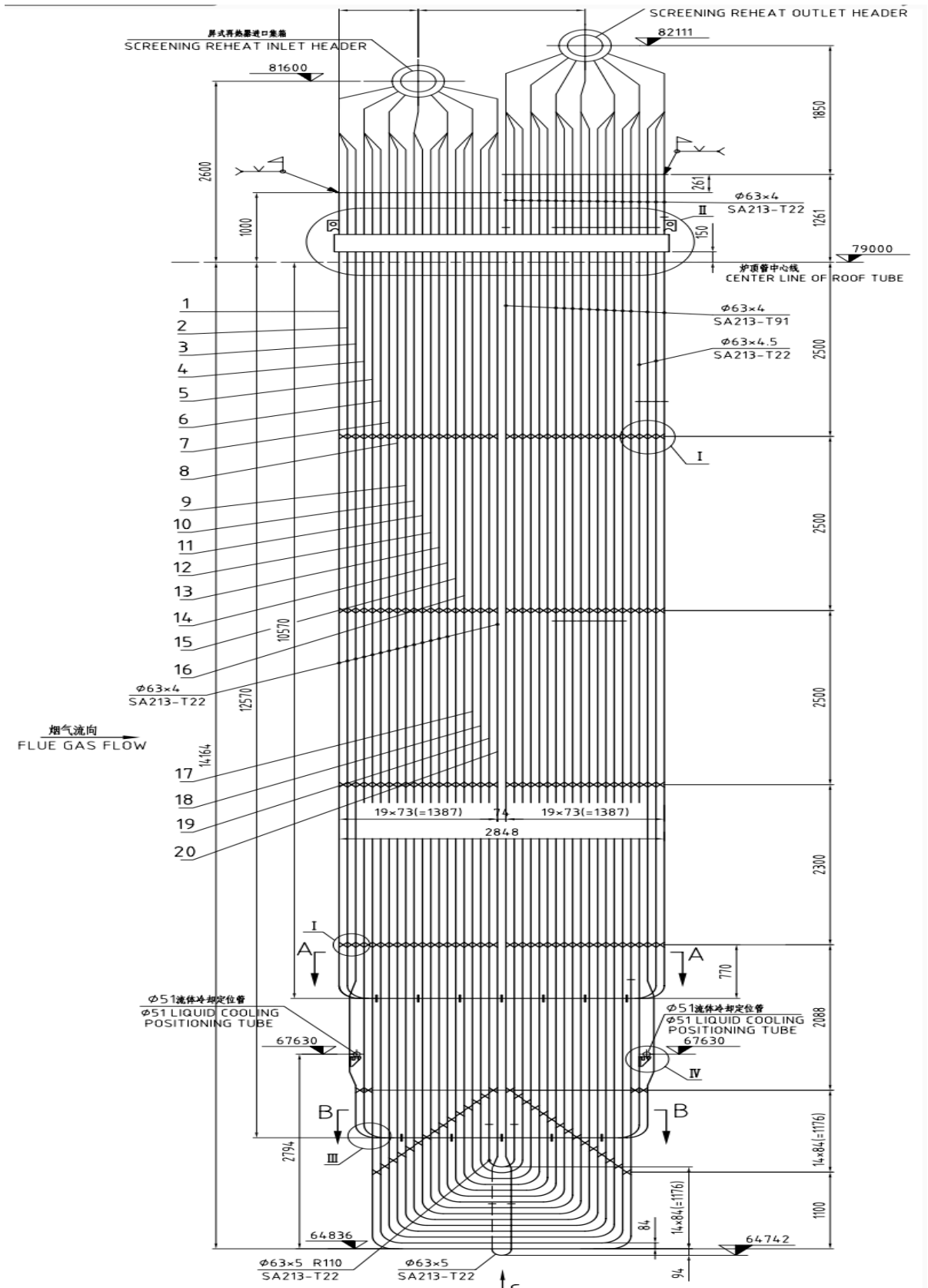
Platen Super Heater Drawing



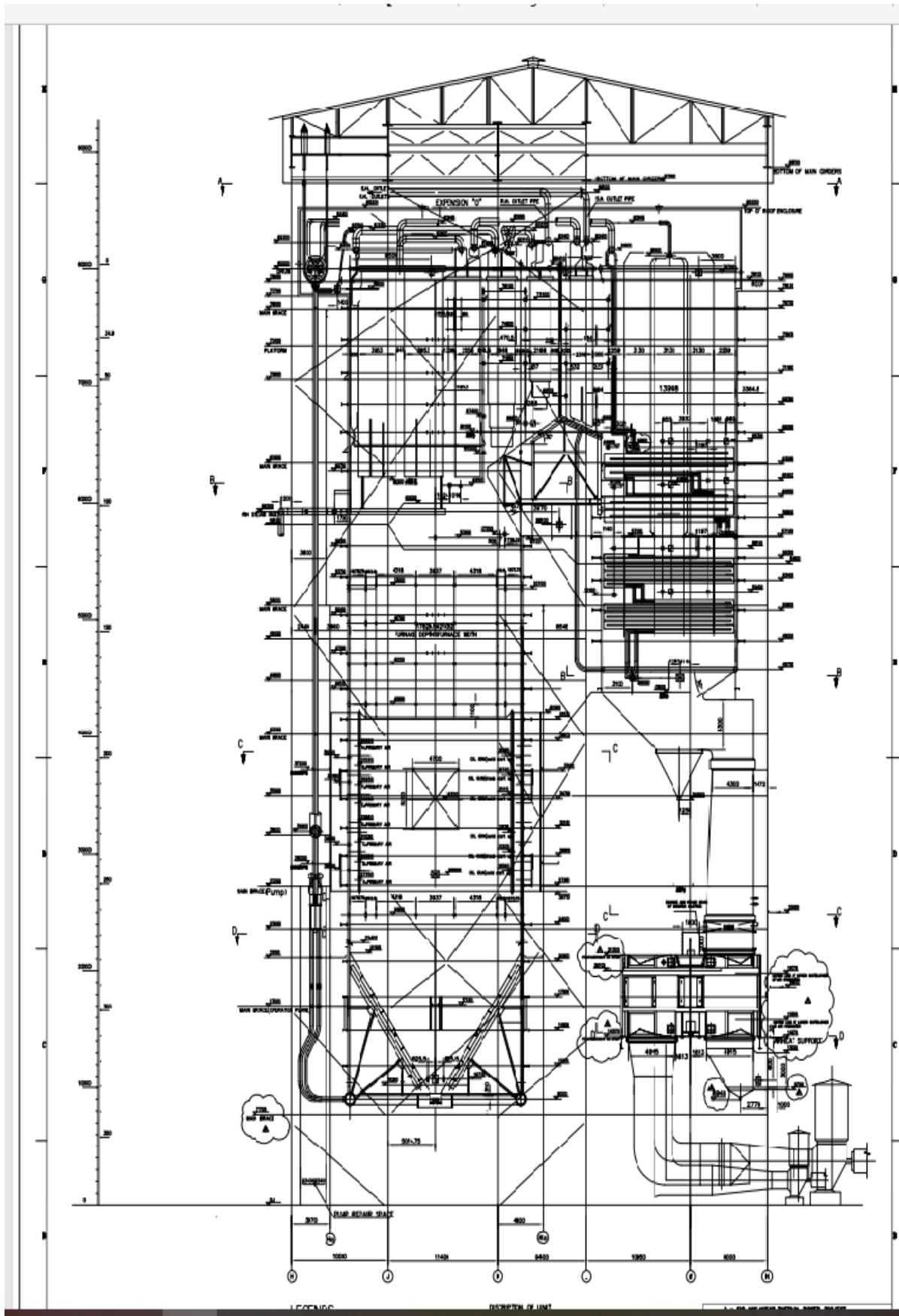
Divisional Super Heater Drawing



Platen Re-heater drawing



Boiler arrangement drawing



PART-B
(Unit rates for purpose of variation in SOW)

Sr. No.	Description of activities	Unit	Tentative Qty.
1	HP joint including cutting, edge preparation etc. up to 80 mm	Nos.	1000
2	Lowering of any eco coil (upper & lower) repositioning after carrying out work/replacement wherever required. HP joints excluded.	Nos.	4
3	Lifting of any LTSH coil (upper & lower) repositioning after carrying out work/ replacement wherever required. HP joints excluded.	Nos.	2
4	Replacement of damaged skin casing /welding	per sq. meter	15
5	FIN welding	per meter	200
6	Repair/replacement of high pressure piping hangers. (MS, HRH & CRH)	each	20
7	Repair/replacement of auxiliaries piping hangers.	each	20
8	Fabrication of high pressure bends with diameter up to 70 mm & thickness up to 5 mm	each	10
9	Making space in 01 no. LTSH coils in order to facilitate/To Carry out in build-ups/joints in these coils by pulling the adjacent LTSH coils with pulling & lifting machine after cutting the hanger tubes if required	each.	15
10	Servicing of wall soot blower including lance replacement if required.	Each	1
11	Servicing of long retractable soot blower	each	1
12	Complete servicing & commissioning of long retractable soot blower which includes replacement of burnt out lance & other spares and its alignment.	Each	1
13	Casting of refractory	per MT	2
14	Providing shields on tubes	Nos.	50
15	Providing of cassettes baffles for Economizer.	Each	10
16	Providing of cassettes baffles for LTSH.	Each	10
17	Cutting of hand hole plate & its re-welding	No.	2
18	Repair of header by weld overlay/metal build-up	sqr. Meter	2
19	Replacement of Steam cooled spacer tubes as per scope mentioned in main scope of work	No.	1
20	Replacement of complete loop of divisional SH panels as per scope mentioned in main scope of work	No.	1
21	Replacement of complete loop of platen RH panels as per scope mentioned in main scope of work	No.	1
22	Replacement of bellow	No.	1
23	Restoration of sagged tubes in radiant roof	No.	30
24	Servicing of Drum Safety valves	No.	1
25	Servicing of Super Heater Safety valve	No.	1
26	Servicing of H.R.H. Safety valve	No.	1
27	Servicing of C.R.H. Safety valve	No.	1
28	Servicing of ERV Safety valve	No.	1
29	Servicing of Pneumatic Control Valve	No.	1
30	Servicing of LP Valves, Size Up-to 15 mm.	No.	20
31	Servicing of LP Valves Size 25 mm to 40 mm	No.	15
32	Servicing of LP Valves, Size 50 mm to 100 mm	No.	5
33	Servicing of LP Valves, Size 150 mm to 200 mm	No.	5

34	Servicing of High Pressure valves up to 25 mm	No.	2
35	Servicing of High Pressure valves 25 mm to 50 mm	No.	2
36	Servicing of High Pressure valves 50 mm to 100 mm.	No.	2
37	Servicing of High Pressure valves 100 mm to 150 mm	No.	1
38	Servicing of High Pressure valves 150 mm to 350 mm	No.	1
39	Servicing of 600 NB motor operated 1 No. main feed line valve & its actuator	No.	1
40	Servicing of peep holes / manholes	No.	10
41	Replacement of valves/bends/ 1mtr. Length pipeline by cutting, welding, grinding and fit-up work for each job (for valves & bends)/per mtrs (for pipeline) by certified IBR welder upto 25 mm	each job / per mtr.	5
42	Replacement of valves/bends/ 1mtr. Length pipeline by cutting, welding, grinding and fit-up work for each job (for valves & bends) / per mtrs (for pipeline) by certified IBR welder, 25 mm to 80 mm	each job / per mtr.	5
43	Replacement of valves/bends/ 1mtr. Length pipeline by cutting, welding, grinding and fit-up work for each job (for valves & bends) / per mtrs (for pipeline) by certified IBR welder, 80 mm to 200 mm	each job / per mtr.	5
44	Repair/servicing of oil Burner valve and replacement if required.	No.	1
45	Removal of oil tip & its refitting including alignment.	No.	1
46	Removal of air tip & its refitting including alignment.	No.	1
47	Replacement of wind box expansion joints	No.	1
48	Retention /early removal of cup lock Scaffolding (kindly refer Note 5 of point No. 7 in main scope of work)	days	10
49	Man hour rates (including T&P, gas, consumables) Skilled labour/welder	Hrs.	60
50	Man hour rates (including T&P, gas, consumables) semi-skilled	Hrs.	60
51	Man hour rates (including T&P, gas, consumables) Un skilled	Hrs.	100

for **XEN/BMD-1,**
Chief Engineer/RGTPP,
HPGCL, Hisar.

GENERAL TERMS AND CONDITIONS OF CONTRACT**1) CONTRACT AGREEMENT:-**

The contractor shall execute a contract agreement with HPGCL on a Non Judicial Stamp Paper of appropriate value within 7 days of receipt of the work order.

2) RATE/ CONTRACT PRICE: -

Rate shall be quoted by the bidder, strictly as per rate quoting sheet and the agreed contract price shall remain firm during the currency of the contract. Any statutory taxes/levies, if to be charged extra, should be clearly indicated by the tenderer in their offer separately, failing which it will be presumed that the quoted prices are inclusive of all such statutory taxes/levies.

3) EARNEST MONEY AND SECURITY DEPOSIT: -

3.1. Every tenderer, while submitting his tender, should online deposit an amount of Rs. 3,88,300/- (Rupees Three Lakh Eighty Eight Thousand and Three Hundred only) as the earnest money.

3.2. The earnest money furnished by the successful tenderer on whom the work order is placed shall be converted into security deposits as a guarantee for faithful and satisfactory execution of the work order. (The EMD of the unqualified bidders will be returned without any interest, as promptly as possible, within 30 days after declaration of qualification result and that of unsuccessful bidder within 15 days of the execution of the contract with the selected bidder).

3.3. **The security deposit shall be 05% of the contract value. Firm has to deposit the Security Deposit amount upfront before start of work and Security Deposit Amount will not be adjusted from Firm's Bill.**

3.4. The security deposit of the contractor shall be retained by HPGCL for faithful execution of the contract.

3.5. Security deposit shall be released only after completion of the entire period of the contract and after 30 days of Guarantee / Warrantee period, on the certificate of Engineer-In-charge / EIC for successful completion of Guarantee / Warrantee period and submission of requisite documents like last EPF / ESI return by the contractor.

3.6. No interest shall be paid on EMD / Security Deposit for the period it remains deposited with HPGCL.

3.7. The earnest money/security deposit shall be forfeited in part or in full under the following circumstances:-

- a. If the tenderer withdraws his tender at any stage during the currency of validity period.
- b. If the W.O. has been issued but the contractor refuses to comply with it irrespective of the fact that HPGCL sustains any loss on account of such default or not.
- c. In the event of a breach of contract in any manner.
- d. In case of evidence of cartel formation by the bidder(s).
- e. If the contractor fails or neglects to observe or perform any of his obligations under the contract, it shall be lawful for the HPGCL to forfeit either in whole or in part, in its absolute discretion, the EMD/security deposit furnished by the contractor.
- f. The forfeiture of EMD/security deposit shall be without prejudice to the right of HPGCL to recover any further amount or any liquidated and/or other damages as admissible under the law, under payments or over payments made to the contractor under this contract or any other contract as well as to take such administrative action against the contractor as blacklisting etc.

4) PAYMENT TERMS: -

- **50% payment of contract value** will be paid as stage payment against appropriate bill of contractor and on certification by Engineer-in-charge that 60% work stands completed.
- **Next 30% of contract value** against appropriate bill of the contractor and on the certification by Engineer-in-charge that 100% work stand completed.
- **Next 15% of contract value** against appropriate bill of the contractor on submission of jointly accepted protocols.
- **Balance 05% of contract value** after completion of warrantee period against appropriate bill of the contractor.

5) **MODE OF PAYMENT: -**

The Payment shall be made through RTGS in favour of contracting firm by the Sr. Accounts Officer, RGTPP, HPGCL, Khedar, Hisar. No Bank charges etc. of any kind shall be paid by HPGCL.

6) **COMPLETION PERIOD: -**

The completion period of the work as specified below shall be the essence of the contract:

Work shall be started within 7 days of issue of LOI / Work Order, whichever is earlier unless otherwise directed by the issuer of tender. The work shall be carried and completed to match with other activities in progress of the unit.

Work shall be completed within **60 days (Bar to Bar)** from the date of issue of LOI / Work Order unless otherwise directed through written communication.

The Quantum of any item of the scope of work may increase or decrease to any extent, as per the site requirement, subject to the limit that total contract value shall not exceed by 10% of the contract value. Payment shall not be made for work not done. In case of increase of quantum of work, the completion period of work will not change and contractor will have to complete the job within the stipulated period unless the completion period is extended in writing.

7) **RISK AND COST: -**

In case the contractor fails to fulfill the contractual obligation, the work shall be got done from some other agency at the risk and cost of the contractor. It shall be without prejudice to the right of HPGCL to recover any further amount or any liquidated and/or other damages.

8) **PENALTY: -**

Part-A: Penalty for delay in execution of work:

Time is the essence of the contract. The contractor shall ensure timely completion of the job as per stipulated completion period.

- i) In case of delay in completing the work/job, the penalty for delay will be imposed @ 1% of the total contract value per day or part thereof subject to maximum of 10% of the contract value. Contract value means basic value of the contract exclusive of taxes and duties, if charged separately.

Part-B: Penalties for Poor Workmanship:

a. In case of improper erection of scaffolding inside the wind-box at all four corners, a penalty of Rs. 25,000/- per instance shall be levied up on the contractor subject to ceiling of Rs. 1,00,000/-.

b. Dismounting the valve actuator wherever required failing which the contractor shall be penalized with Rs. 5,000/- per instance subject to ceiling of Rs. 1,00,000/-.

c. A penalty of Rs.10,000/- shall be imposed on the contractor for each default or instance of poor workmanship during erection of scaffolding, welding works and any other works as per detailed scope of work, subject to a maximum ceiling of Rs.3,00,000/-. Poor workmanship during erection of scaffolding, welding works and any other works as per detailed scope of work includes:

- i) All spool pieces shall be cut by SAW/CHOP SAW only.
- ii) Not providing platform at every 2 mtr interval.
- iii) Not providing sufficient manpower assistance as per scope of work as per direction of EIC.
- iv) Providing platform away from corner side water wall tubes.
- v) Providing structure which is not firm and rigid.
- vi) Not providing safety nets.
- vii) Not providing sufficient number of staircases in areas mentioned in Part 1, Part 2 and Part 3 mentioned at Sr. No. 07 of Scope of Work under the heading "Providing cup lock scaffolding inside the furnace".
- viii) Not providing sufficient number of planks, batons etc.
- ix) Providing staircases without railings.
- x) Providing defective staircases.
- xi) Using *mashaali* in place of clamps, GI wire etc.

- xii) Leaving gaps at floors used for inspecting divisional super-heater and platen SH, radiant/panel RH, platen RH, final RH, final SH, SCW hanger etc.
- xiii) Not providing proper platform with steel planks in such a manner that the inspection by touching the roof of wind-box with hand becomes possible and the EIC can walk from one corner to the other corner shall also attract penalty.
- xiv) All the scaffolding material required will be assessed by the contractor. However, the contractor should use 4700-5000 nos. planks for erection of cup-lock scaffolding in first pass of furnace. Minimum 35 nos. of staircases each of rise 2 mtr should be used in boiler up-to radiant roof & in case of lesser/higher rise the quantity will increase/decrease accordingly. Both the above quantities will be inspected by concerned AEE/AE or his representative. Insufficient quantity of these two items shall attract penalty. The quantity of staircases mentioned above is solely for erection of cup-lock scaffolding inside the furnace. The quantity of staircases required for erection of scaffolding inside the wind box is not included in above mentioned 35 nos. staircases.
- xv) Other items such as standard verticals, standard horizontals, ledgers, base jacks, brackets, clamps, batons, planks, staircases, C-channels of 2mtr and 4mtr, spigots(connecting pins) etc. should be as per site requirements. Insufficient quantity of above mentioned these items shall attract penalty of Rs.10,000/- for each instance till the deficiency of material is not being attended.

This penalty is over and above the other penalties mentioned in Part-A of Penalty clause.

9) DOCUMENTATION: -

The contractor and the executive in-charge of the work shall ensure the following document before forwarding the bill of the contractor to the accounts wing for pass and payment to avoid delay in payment of the contractor:-

- i) Contractor shall submit bill for the work done, in duplicate to the executive in-charge along with the followings: -
 - a) The bill should be on the contractor's bill book duly serially numbered and bearing date of issue, contractors EPF code, ESI code (whenever applicable), GST number, PAN etc. A photo copy of the EPF code, ESI code (whenever applicable), GST number, Labour license, PAN etc. shall be attached with the 1st running bill for reference and record.
 - b) Self attested copy of the deposit challan of EPF & ESI (whenever applicable) contribution, labour welfare fund deposited by the contractor for the labour engaged for the work duly validated with dossier of workers and their account number in the appropriate prescribed Performa.
 - c) Self attested copy of the attendance sheet, wages register and evidence of wage payment through bank.
- ii) The bill of contractor along with annexure submitted by contractor as mentioned above should be approved and verified by the officer-in-charge for gross value as well as net payable value and accompanied with the certificates/documents as mentioned at iii and iv below.
- iii) Certificate from the Engineer In Charge that, **a)** Work has actually been done as per the contract and to the entire satisfaction of EIC. **b)** The copy of the EPF challan, ESI challan etc. submitted by the contractor pertain to the labour deployed at site and none of the worker has been excluded there from. **c)** The record entry of the work done has been taken in the SMB at page no. _____ on dated _____. **d)** No penalty is leviable on the contractor on any account as per the contract, if leviable; the amount of penalty is _____. **e)** Copy of protocol and certificate for stage payment, if required.
- iv) Certificate from Labour Welfare Officer / Factory Manager stating that contractor has complied with all labour laws and safety clearance certificate from Safety Officer. In case of non-availability of Labour Welfare Officer / Safety Officer, from EIC.

Note: Documents attached along with the contractor bill should be referred in the forwarding letter of the executive office forwarded the bill for pass and payment.

10) PERFORMANCE BANK GUARANTEE – Firm have to submit bank guarantee of the nationalized bank equivalent to **05% of the contract value in the prescribed proforma valid up to one month after completion of warrantee period.**

11) WARRANTY / GUARANTEE :

- i) The contractor shall provide warranty for the workmanship of the work done for a period 90 days from completion of work/date of commissioning of equipment(s) after overhauling whichever is earlier.
- ii) During this period if some equipment(s), which has been attended by the contractor, is found to be defective, the same will have to be attended again without any

additional charges to HPGCL. In such cases, warranty period shall start from the date of such repair/rectification. In case the contractor fails to respond within a reasonable time, the job will be got done from any other agency at the risk and cost of the contractor.

12) FORCE MAJEURE: -

The delay in completion of work may be treated as force majeure to the contractor only if: -

- a) "The delay is resulted from any causes arising out of compliance with regulations, orders or instructions of the Central or State Governments, acts of God, acts of Civil & Military authority, fires, floods, strikes, lock-outs, freight embargoes, war risk riots and civil commotion" and
- b) The contractor's request for extension of the delivery period along with all necessary evidence comes, before the expiry of the scheduled date(s) of delivery.

13) IDLE LABOUR CHARGES: -

No idle labour charges will be admissible in the event of any stoppage caused in the work resulting in contractor's labour being rendered idle due to any cause.

14) OVER RUN CHARGES: -

No overrun charges shall be paid in the event of the completion period being extended for any reasons.

15) WATCH & WARD: -

The watch and ward of vehicles and other material will be the responsibility of the contractor.

16) FACILITIES TO BE ARRANGED BY CONTRACTOR: -

The contractor shall make his own arrangement for providing all facilities like lodging, boarding and transportation etc. for his supervisors/staff engaged by him for the job.

17) STATUTORY DEDUCTIONS:- Statutory deduction on account of Income Tax including surcharge shall be made at source from the bills of the contractor at the prevailing rates.

18) FACTORY ACT/MINIMUM WAGES ACT/INSURANCE ACT/ EPF ACT etc.:-

Strict adherence of various applicable laws likes the Factories Act, Minimum Wages Act, ESI Act, Payment of Wages Act, the workmen's Compensation Act, EPF Act, Contractor labour (Regulation & Abolition) Act, 1970 and all other statutory requirements as amended from time to time to the entire satisfaction of Central/State Govt. Authorities, shall be the responsibility of the Contractor and he shall have to make good loss, if any, suffered by HPGCL on account of default in this regard by the contractor. EPF/ESI contributions will be deposited by the contractor in his own EPF/ESI code no. in the respective account of the workers. The contractor will submit the copy of EPF/ESI challan along with ECR to the Factory Manager with the corresponding list of workers. The contractor shall make the payment of wages to its labour in their saving account only. Documentary evidence thereof shall be submitted along with the running bills.

19) INSURANCE OF WORKERS: -

The contractor will be solely responsible for any liability for his workers in respect of any accident, injury arising out and in course of contractor's employment. To meet his aforesaid obligation under the workman compensation Act, The contractor may obtain W.C policy from the Insurance Company for the persons employed by him for carrying out the work. The premium payable for aforesaid insurance policy shall be borne by the contractor. The contractor shall ensure that the said insurance policy of this insurance cover is required to be submitted by the contractor to Engineer-In-charge of work immediately after issue of L.O.I, but before the start of work.

20) SAFETY RULES: -

A firm shall have to comply with all the provisions of safety rules. The Chief Safety Officer may impose penalty of **Rs. 200/- per day per head** if the workers of the contractor are found to be working carelessly without proper protective equipments in unsafe conditions. Against violation of any other clause, a penalty of Rs. 500/- per violation (minimum) shall be levied. In case of repeated violation of serious nature resulting in various serious accidents or direct loss to the corporation/ threatens to cause severe consequences, higher penalty rates may be imposed including suspension/termination of the contract. If any action is initiated by Chief Inspector of Factories, Chandigarh or any other authority against occupier/factory manager or any other authority of HPGCL in case of any fatal/non fatal accident or any other violation of factory act, 1948, Pb. Hr. Factory rules, 1952 or any other industrial or labour act, the contractor shall be liable for the same and also to deposit the amount of fine/penalty if any. In case of default action as deem fit shall be initiated against the contractor.

A safety clearance certificate from the Safety Officer/RGTPP shall be obtained by the contractor and has to be attached along with the bill.

This office reserves the right to claim adequate compensation from the contractor on account of any damage caused to the plant & equipment handed over to him for execution of the work, due to careless handling or negligence on the part of the contractor.

21) ARBITRATION:-

All the matters, questions, disputes, differences and/or claims arising out of and/or concerning and /or in connection with and /or in consequence of, and /or relating to the contract whether or not obligations of either or both the contractor and the corporation under this contract be subsisting at the time of such dispute and whether or not the contract has been terminated or purported to be terminated or completed, shall be referred to the Sole Arbitrator of Managing Director/ HPGCL or an officer appointed by the MD, HPGCL as his nominee. The Award of the Arbitrator shall be final and binding on both the parties to the contract.

22) LAWS GOVERNING CONTRACTS: -

All contracts shall be governed by the laws of India for the time being in force. Irrespective of the place of delivery, place of performance or place of payment under the contract, the contract shall be deemed to have been made at the place from which the acceptance of tender has been issued.

JURISDICTION OF COURTS:- The courts of the place from where the acceptance of tender has been issued shall alone have exclusive jurisdiction to decide any dispute arising out of or in respect of the contract.

23) SET OFF: -

Any sum of money due and payable to the supplier under the contract (including security-deposit returnable to the supplier) may be appropriated by the HPGCL and set-off against any claim of the Corporation for the payment of a sum of money arising out of under that or any other contract entered into by the contractor with the HPGCL.

24) SUBLETTING AND ASSIGNMENT: -

The Supplier shall not, sublet, transfer or assign the contract or any part thereof or interest therein or advantage thereof in any part thereof in any manner whatsoever without prior consent of the HPGCL.

Note: -

1. Unless agreed otherwise the above terms & conditions of the contract will form the part of the work order after finalizing the award of work proposal. The word tenderer wherever used above shall be read as contractor / firm.
2. The term "Bid" and "tender" and their derivatives ("bidders/Tenderers" "Bidding / Tendering") are synonymous. Singular also means plural.

**XEN/M&P,
for Chief Engineer/RGTPP,
HPGCL, Hisar.**

SPECIAL / OTHER TERMS & CONDITIONS

01. Schedule for completion of activities:

The work should be carried out/completed to match with the other activities in progress of the Unit-1. The work is to be commenced/ started as per direction through written communication by the concerned user division. The entire work is to be completed within 60 days from the date of commencement of work (as notified by XEN/BMD-1).

- I. The contractor should strictly complete the erection of cup lock scaffolding including all accessories e.g. staircases, ladders etc. **up to 57 mtr elevation within 08 days** from getting clearance from user division (XEN/AEE/AE concerned).
- II. Subsequently, the contractor should complete the erection of scaffolding including all accessories e.g. staircases, ladders etc. **from 57 Mtrs to 79 mtr elevation within 06 days.**
- III. Internal hydraulic test of boiler to be carried out by **50th day.**
- IV. Hydraulic test of boiler in presence of CIB, Haryana by **52nd day.**
- V. Boiler to be made ready for light up in all respect including dismantlement of cup lock scaffolding on **60th day.**

Note:

- a) The contractor shall be given a mobilization period of up to 7 days only.
 - b) If there will be any delay on account of HPGCL such as non-availability of material/spares, non-availability of lift for more than 05 days in a month etc. then the completion period will be extended by HPGCL accordingly without levy of penalty for the period attributable to HPGCL.
 - c) The quantum of any item of the scope of work may increase or decrease to any extent, as per the site requirement, subject to the limit that total contract value shall not exceed by 10% of the contract value. Payment shall not be made for the work not done. In case of increase of quantum of work, the completion period of the contract will not change and the contractor will have to complete the job within stipulated period unless the completion period is extended in writing
 - d) The work shall be started immediately from the date of notice. However, the actual date of commencement for the purpose of completion period and imposition of penalty clause shall be notified by XEN/In-Charge of work (i.e. XEN/BMD-I). The work shall be carried out/completed to match with other activities in progress of the Unit.
02. Loss of HPGCL property during the contract period :- The contractor shall ensure that no damage or loss is done to HPGCL's property or human being in the jurisdiction of work site. In case it is found that, there is any loss to HPGCL's property or human being due to negligence of any labour/ worker of the contractor, then the same shall be made good by the contractor at his own cost.
03. The personal protective equipments (PPEs) for the safety of workers i.e. safety belt, safety shoes, hand gloves, safety helmets, safety goggles etc. shall have to be arranged by the contractor at his own cost.
04. The transportation of spares & other material from O&M store to site store or place of work & transportation of scrap/dismantled material to store yard will be in the scope of contractor. The contractor will assist the loading/unloading of spares, if the same are to be got repaired from any private workshop.
05. Water, electricity, compressed air will be provided by the RGTPP, HPGCL free of cost at the nearest point available. Further connections of the same shall, however, be made by the contractor up to the site of works at his cost.

06. The existing facilities available in the Departmental Workshop shall be provided by HPGCL free of cost, wherever available; otherwise, the contractor shall be responsible for carrying out the job by making his own arrangement without affecting the completion schedule in any way.
07. Contractor shall fully associate with trial run, commissioning and balancing of the equipments, if required, up to the full load and keep sufficient manpower to attend fault etc., if any.
08. After attending the job, the area will have to be got cleaned/cleared and scrap etc. to be removed from site. In case Engineer-in-Charge feels that the area has not been cleaned/cleared properly, HPGCL has the right to get the above work done from other agency at the risk and cost of the contractor.
09. In case spares are not available at site or in store and same are required to be removed from other equipments i.e. boiler & its auxiliaries etc., the contractor is bound to do same without any extra cost.
10. The dismantled spares, new spares, kept at site for emergency use should be properly stacked, kept cleaned and covered properly in safe custody.
11. If the grating of platform/stairs, railings, etc. gets damaged while carrying out the repair work, same shall be rectified/repared by the contractor.
12. Any short coming, defect/deficiencies noticed during testing & commissioning shall have to be rectified by the contractor immediately at his own risk and cost to avoid any delay in the overall commissioning of the unit, irrespective of any reason whatsoever may be.
13. Contractors shall have to arrange necessary 24 volt lighting at various locations with their own cables and lamps as per requirement but electricity will be free of cost.
14. The work will be carried out round the clock with full strength of technicians and supervisors.
15. The contractor will deploy parallel groups who will work simultaneously in parallel round the clock in full strength.
16. Isolation of area of work by warning tape shall be in the scope of contractor
17. The spares parts for the work shall be provided free of cost by the concerned user division (BMD-I) of RGTTP, HPGCL, if required.
18. If there will be any delay on account of HPGCL such as non-availability of material/spares etc. then the completion period will be extended by the HPGCL accordingly without levy of penalty on the contractor for the period attributable to HPGCL.
19. The tax Invoice shall be raised by the firm which should contain invariably their GST number, SAC code, PAN number, place of business with address & GST No. of HPGCL.
20. The contractor has to arrange all the T&P (whether heavy or light) required for smooth execution of the complete job including welding sets, gas cutting sets, winch machines, hydraulic jack, chain-pulley blocks, All the scaffolding material, winding ropes, steel ropes and wires, wooden planks, stairs, temporary lighting, hydraulic testing pumps, spanners, hydraulic jacks as per site requirement, portable grinding machine, hoisting arrangement, etc.
21. Sufficient lighting arrangement should be made in boiler for inspection & carrying out the work. However, special lights in furnace (1st pass) shall be supplied to

contractor by HPGCL and same are to be handed over back to HPGCL in healthy condition after completion of work.

22. The pressure part welding will be carried out by the certified IBR welder whose IBR certificates duly approved by the C.I.B. Haryana is required to be submitted before start of work. All the pressure part work will be carried out as per manufacture recommendation/IBR regulation/welding schedule as per direction of Engineer In-Charge. All welding electrodes/filler wire required to complete the above said is in the scope of contractor. Cutting set with gas, general purpose welding electrodes and other T&P required shall be in the scope of contractor. Also contractor should ensure trouble free operation after completion of the job when plant is in running condition.
23. All consumables like welding electrodes (general purpose & special) including TIG wire, TGSM, TGS-1cm-2cm, Enconel I-02, welding & cutting gasses, Argon gas, waste cotton, emery paper, holdite, kerosene oil, diesel, rustoline, petrol, hexa-blades, grinding wheel & all small items required for handling & maintenance jobs cleaning agents, Oxygen, DA Gas cylinder etc. shall be arranged by the contractor at his own cost. Welding electrodes will be of following make and will be got approved from Engineer-in-charge: (i) L&T (ii) D&H (iii) Advani, Ador (iv) ESAB.
24. All the spare parts & consumables like gaskets, grease, oil for final filling, nuts, paint & jointing materials, seals, 'O' rings etc which are the part of the equipments shall be provided by HPGCL free of cost.
25. Contractor has to make his own arrangement for TIG & ARC welding set and welding leads, wire brush, welding torch, gloves, bulbs, wires and holders for temporary lighting etc. at work place.
26. Baking Oven, Mother Oven and Portable Oven shall have to be arranged by the contractor.
27. EOT Crane, wherever provided/available at site shall be provided by HPGCL free of cost. If during the use, any damage occurs on account of mishandling on their part, the same shall be got repaired by the contractor. Otherwise, the contractor will make his own arrangement for the same at his own risk and cost without affecting the schedule of overhauling. However, if EOT hoist is not available due to any reason, the contractor shall make his own arrangement for completion of the work.
28. The contractor shall arrange all testing equipments such as dye penetration test kit, etc. as per the job requirement. Arrangement of radiography set/source is in the scope of the firm engaged by HPGCL.
29. The contractor shall abide by all the clauses of the Boiler Acts, as applicable. The HPGCL will deposit the inspection fees of the Boiler with Chief Boiler Inspector, Haryana. But the contractor shall be responsible for getting the Boiler passed from CIB, Haryana. In case Boiler needs to be re-inspected, charges for the same will be deposited by the contractor. Permission to carry out repair works from CIB, Haryana and all requisite documents will be arranged by the contractor.

30. Jet water washing is to be carried out as per clause 1.2. of scope of work. The temporary pipes etc. if required from nearest point of source of water, will be in the scope of contractor.
31. Safety Valve Testing/Setting shall be got carried out by TRIVEST method by HPGCL at their own cost however assistance of man power including required wrenches shall be provided by contractor.
32. All men and material for erection and dismantlement of scaffolding including scaffolding material, to and fro transportation of scaffolding material etc. shall be in the scope of the contractor.
33. All required components & accessories for the job e.g. cup lock standard, ladders, staircase, staircase coupler, safety net etc. will be in the scope of the contractor.
34. Suitable lighting arrangement shall be made in entire scaffolding.
35. Tractor trolleys, hydra machines etc. required for transportation of material from stores or other sites to the site of work will be in the scope of the contractor.
36. The contract will lift the garbage/scrap from the site and dispose off the same to designated area and make the site neat and clean.
37. Advance Planning :-
- (i) Immediately after receipt of work order but not later than 07 days, the contractor will submit the Bar Charts/Pert Charts/Schedule i.e. Planning for completion of work within the stipulated period, to concerned Mtc. Division i.e. BMD-I & same will also be submitted to SE/O&M-I for appraisal of CE/RGTPP. This will be prepared in consultation with the concerned Mtc. Division in-charge of the work i.e. XEN/BMD-I.
 - (ii) Before commencement of work, contractor will give the details of all qualified & experienced manpower to the concerned XEN (i.e. XEN/BMD-I) so as to ensure completion of the total job safely and well within the stipulated completion period. However XEN/BMD-I, RGTPP can refuse to deploy any staff/manpower of contractor at commencement of work or any time during execution of work, who are not found suitable/fit as per job requirement.
38. **GST:** GST, if charged, separately shall be said as per actual within delivery period on production of following certificates:
- a) Certified that transaction on which tax has been claimed will be included in the return to be submitted to the GST authorities for the assessment of GST and the amount claimed from HPGCL shall be paid to the GST authorities.
 - b) Certified that the goods on which GST has been charged have not been exempted from GST under Haryana / Central GST Act or rules made there under. The charge on account of the GST on these goods is correct under the provisions of the relevant act or rules made there under.
 - c) Certified that we shall indemnify to HPGCL in case it is found at a later stage that incorrect payment has been recovered on account of GST by us.
 - d) Certified that we are registered as dealer and our Haryana / Central GST No. is _____

*HPGCL GST No. is: 06AABCH4536J1ZM

Note: - Any increase in taxes and duties after the delivery period shall be on supplier's account and shall not be borne by HPGCL.

The firm has to submit the duly filled performa (as per Annexure-1 to 5) for compliance of SOPs of GST and TDS.

**XEN/M&P,
For Chief Engineer/RGTPP,
HPGCL, Khedar, Hisar.**

Supervision / Quality Control of Work

1. 100% checking/supervision of the work will be done by the concerned Mtc. Division i.e. office of XEN /BMD -1, RGTPP.
2. The contractor will submit the advance programme/list of jobs/activities proposed to be done to the concerned Mtc. Division. This programme shall be chalked out by the contractor/firm in consultation with the concerned Mtc. Division.
3. The contractor shall also submit the details and report of the work done on a regular basis to the concerned Mtc. Division.
4. After completion of the job/work and successful commissioning of the equipments to place on record that the work has been done by the contractor as per scope of work of the work order, Protocols will be prepared by the contractor in consultation with concerned Mtc. Division (executing agency i.e. BMD -I) and got signed from : -
 - a) JE, AE/AEE & XEN of the concerned Mtc. Division i.e. **BMD -I**.
5. On these Protocols, a certificate will be recorded by the contractor that all the observations pointed out during supervision by HPGCL were attended.

XEN/M&P, RGTPP,
HPGCL, Khedar, Hisar.

STATEMENTS OF BIDDERS

- 1. Name of Bidder _____
- 2. Address of Head Office _____
- 3. Correspondence Address _____

Phone No. _____

Email ID : _____

- 4. Legal status _____
- 5. PAN & TIN Number of the Bidder (attached self attested photocopies)
PAN _____ TIN _____
CST No. _____.

- 6. Bank Details (attached signed canceled cheque)
 - i) Bank Name & Address
 - ii) Bank Account Number
 - iii) Bank Branch Code
 - iv) IFSC Code of Branch
 - v) Nature of account (current/saving/OD/CC)

- 7. Main Lines of Business
 - i. _____ since _____
 - ii. _____ since _____
 - iii. _____ since _____

- 8. Annual Turnover of past three year
 - i. _____
 - ii. _____
 - i. _____

9. Past Experience:-

Name of Organization	Period	Reference of Contract	Order Value contract wise

- 10. Any other: -

Signature & Stamp of Bidder

UNDERTAKING OF STAFF ENGAGED

I _____ S/O Sh _____

R/O _____ working with

M/s _____ hereby give

Undertaking that I will not claim any service in HPGCL in lieu of service render to the

Firm M/s _____ against work order

No. _____ dated _____.

Signature & Stamp of Contractor

Signature of worker

PART-II - RATE QUOTING SHEET (PRICE BID)

(Only for demonstration not to be filled. Rates to be quoted online portal only)

Item Rate BoQ

Tender Inviting Authority : XEN / M&P, RGTPP, HPGCL, Khedar, Hisar.
 Name of Work :Overhauling of Boiler pressure parts, High pressure valves, Burners, Wind-Box and providing cup-lock Scaffolding inside the Furnace installed in 600 MW Unit-1 during the forthcoming Overhauling of 600 MW Unit-1, RGTPP, HPGCL, Khedar, Hisar.

Contract No: e-NIT No..... /M&P-674/RGTPP/2024-2025 ; Dated -06.2024

Note :-

1. Evaluation of tender i.e. L1,L2,L3...etc. bidders will be based on overall total rates quoted by the bidder in rate quoting sheet.
2. The work as a whole will be allotted to a single firm whose overall quoted/equated prices are lowest for the complete work.
3. Read scope of work and visit site before quoting the rate.
4. The quoted rate should be inclusive of all taxes except GST.
5. GST will be paid extra as per applicable rates against the documents proof.

Name of the Bidder/ Bidding Firm / Company :		PRICE SCHEDULE						
		(This BOQ template must not be modified/replaced by the bidder and the same should be uploaded after filling the relevant columns, else the bidder is liable to be rejected for this tender. Bidders are allowed to enter the Bidder Name and Values only)						
Sl. No.	Item Description	Quantity	Unit	Basic Rate (without GST) in Figures To be quoted by the Bidder in Rs. P	Total Amount (without GST) in Rs. P	TOTAL AMOUNT With Taxes	Total Amount with GST (in words)	
1	Part-A (Main scope of work) Lump-sum rate for Overhauling of boiler pressure parts, high pressure valves, burners, wind-box and providing cup-lock scaffolding inside the furnace installed in Unit-I, RGTPP, HPGCL, Khedar, Hisar.	1	Lump Sum	0.00	0.00	0.00	INR Zero Only	
2	Part-B (Unit rates) HP joint including cutting, edge preparation etc. up to 80 mm	1000	Nos.	0.00	0.00	0.00	INR Zero Only	
3	Lowering of any eco coil (upper & lower) repositioning after carrying out work/replacement wherever required. HP joints excluded.	4	Nos.	0.00	0.00	0.00	INR Zero Only	
4	Lifting of any LTSH coil (upper & lower) repositioning after carrying out work/ replacement wherever required. HP joints excluded.	2	Nos.	0.00	0.00	0.00	INR Zero Only	
5	Replacement of damaged skin casing /welding	15	per sq. meter	0.00	0.00	0.00	INR Zero Only	
6	FIN welding	200	per meter	0.00	0.00	0.00	INR Zero Only	
7	Repair/replacement of high pressure piping hangers. (MS, HRH & CRH)	20	each	0.00	0.00	0.00	INR Zero Only	
8	Repair/replacement of auxiliaries piping hangers.	20	each	0.00	0.00	0.00	INR Zero Only	
9	Fabrication of high pressure bends with diameter up to 70 mm & thickness up to 5 mm	10	each	0.00	0.00	0.00	INR Zero Only	
10	Making space in 01 no. LTSH coils in order to facilitate/To Carry out in build-ups/joints in these coils by pulling the adjacent LTSH coils with pulling & lifting machine after cutting	15	each.	0.00	0.00	0.00	INR Zero Only	
11	Servicing of wall soot blower including lance replacement if required.	1	Each	0.00	0.00	0.00	INR Zero Only	
12	Servicing of long retractable soot blower	1	each	0.00	0.00	0.00	INR Zero Only	

13	Complete servicing & commissioning of long retractable soot blower which includes replacement of burnt out lance & other spares and its alignment.	1	Each		0.00	0.00	INR Zero Only
14	Casting of refractory	2	per MT		0.00	0.00	INR Zero Only
15	Providing shields on tubes	50	Nos.		0.00	0.00	INR Zero Only
16	Providing of cassettes baffles for Economizer.	10	Each		0.00	0.00	INR Zero Only
17	Providing of cassettes baffles for LTSH.	10	Each		0.00	0.00	INR Zero Only
18	Cutting of hand hole plate & its re-welding	2	No.		0.00	0.00	INR Zero Only
19	Repair of header by weld overlay/metal build-up	2	sqr. Meter		0.00	0.00	INR Zero Only
20	Replacement of Steam cooled spacer tubes as per scope mentioned in main scope of work	1	No.		0.00	0.00	INR Zero Only
21	Replacement of complete loop of divisional SH panels as per scope mentioned in main scope of work	1	No.		0.00	0.00	INR Zero Only
22	Replacement of complete loop of platen RH panels as per scope mentioned in main scope of work	1	No.		0.00	0.00	INR Zero Only
23	Replacement of below	1	No.		0.00	0.00	INR Zero Only
24	Restoration of sagged tubes in radiant roof	30	No.		0.00	0.00	INR Zero Only
25	Servicing of Drum Safety valves	1	No.		0.00	0.00	INR Zero Only
26	Servicing of Super Heater Safety valve	1	No.		0.00	0.00	INR Zero Only
27	Servicing of H.R.H., Safety valve	1	No.		0.00	0.00	INR Zero Only
28	Servicing of C.R.H., Safety valve	1	No.		0.00	0.00	INR Zero Only
29	Servicing of ERV Safety valve	1	No.		0.00	0.00	INR Zero Only
30	Servicing of Pneumatic Control Valve	1	No.		0.00	0.00	INR Zero Only
31	Servicing of LP Valves, Size Up-to 15 mm.	20	No.		0.00	0.00	INR Zero Only
32	Servicing of LP Valves Size 25 mm to 40 mm	15	No.		0.00	0.00	INR Zero Only
33	Servicing of LP Valves, Size 50 mm to 100 mm	5	No.		0.00	0.00	INR Zero Only
34	Servicing of LP Valves, Size 150 mm to 200 mm	5	No.		0.00	0.00	INR Zero Only
35	Servicing of High Pressure valves up to 25 mm	2	No.		0.00	0.00	INR Zero Only

36	Servicing of High Pressure valves 25 mm to 50 mm	2	No.		0.00	0.00	0.00	INR Zero Only
37	Servicing of High Pressure valves 50 mm to 100 mm.	2	No.		0.00	0.00	0.00	INR Zero Only
38	Servicing of High Pressure valves 100 mm to 150 mm	1	No.		0.00	0.00	0.00	INR Zero Only
39	Servicing of High Pressure valves 150 mm to 350 mm	1	No.		0.00	0.00	0.00	INR Zero Only
40	Servicing of 600 NB motor operated 1 No. main feed line valve & its actuator	1	No.		0.00	0.00	0.00	INR Zero Only
41	Servicing of peep holes / manholes	10	No.		0.00	0.00	0.00	INR Zero Only
42	Replacement of valves/bends/ 1mtr. Length pipeline by cutting, welding, grinding and fit-up work for each job (for valves & bends)/per mtrs (for pipeline) by certified IBR welder	5	each job / per mtr.		0.00	0.00	0.00	INR Zero Only
43	Replacement of valves/bends/ 1mtr. Length pipeline by cutting, welding, grinding and fit-up work for each job (for valves & bends) / per mtrs (for pipeline) by certified IBR welder.	5	each job / per mtr.		0.00	0.00	0.00	INR Zero Only
44	Replacement of valves/bends/ 1mtr. Length pipeline by cutting, welding, grinding and fit-up work for each job (for valves & bends) / per mtrs (for pipeline) by certified IBR welder.	5	each job / per mtr.		0.00	0.00	0.00	INR Zero Only
45	Repair/servicing of oil Burner valve and replacement if required.	1	No.		0.00	0.00	0.00	INR Zero Only
46	Removal of oil tip & its refitting including alignment.	1	No.		0.00	0.00	0.00	INR Zero Only
47	Removal of air tip & its refitting including alignment.	1	No.		0.00	0.00	0.00	INR Zero Only
48	Replacement of wind box expansion joints	1	No.		0.00	0.00	0.00	INR Zero Only
49	Retention /early removal of cup lock Scaffolding (kindly refer Note 5 of point No. 7 in main scope of work)	10	days		0.00	0.00	0.00	INR Zero Only
50	Man hour rates (including T&P, gas, consumables) Skilled labour/welder	60	Hrs.		0.00	0.00	0.00	INR Zero Only
51	Man hour rates (including T&P, gas, consumables) semi-skilled	60	Hrs.		0.00	0.00	0.00	INR Zero Only
52	Man hour rates (including T&P, gas, consumables) Un skilled	100	Hrs.		0.00	0.00	0.00	INR Zero Only
Total in Figures					0.00	0.00	0.00	INR Zero Only
Quoted Rate in Words		INR Zero Only						

Check List

Sr. No.	Documents	Bidder Response (Yes or No)
1	The Bidder must have contractor ID on HEWP Portal (Haryana Engineering Works Portal) for participation in the tendering process failing which the firm's tender will be straight away rejected.	
2	<p>The bidder should be an Original Equipment Manufacturer / Supplier (OEM/OES) or a registered vendor of HPGCL, as per Vendor Registration Policy for the specific category of the work / purchase.</p> <p style="text-align: center;">OR</p> <p>The bidder must have experience of successfully executed Work Order(s) in HPGCL/NTPC/any SEBs/any PSUs/any Corporations/Central Govt./State Govt./Semi Govt. or in any Thermal (minimum capacity of Thermal Power Station/unit shall be 110 MW or above) / Hydel Plant and have average annual turnover and other eligibility conditions as given below:</p> <p>Experience of Execution of Work Order: Bidders must have successfully executed the work order(s) for the same or similar work(s) during last 7 years ending last day of the month previous to the month in which applications are invited having minimum order value as under :- Single Order of the value not less than Rs. 1,55,31,062/-</p> <p style="text-align: center;">OR</p> <p>Two Orders of the value not less than Rs. 97,06,914/- each.</p> <p style="text-align: center;">OR</p> <p>Three Orders of the value not less than Rs. 77,65,531/- each.</p> <p>Turnover: Bidders must have an average annual turnover in last three consecutive financial years ended prior to the financial year in which applications are invited shall not be less than Rs. 388.28 Lacs.</p>	
3	The contractor is registered under Contract Labour (Regulation & Abolition) Act, 1970 and possesses a valid labour license for deploying the workers on the work or will obtain the same within 15 days of issuance of work order. Contractor shall provide LIN No./Shop No. for registration.	
4	The contractor should have GST No., EPF Account No. & PAN No.	
5	The bidder should have a valid ESI no. or shall submit an undertaking to provide the same within one month of issue of work order.	
6	Submission of signed copy of tender document as an acceptance to all the terms & conditions of the e-NIT	
7	EMD deposited or provided proof for exemption.	
8	Firm should submit a certificate to the effect that the tenderer is not presently blacklisted from any Public Sector undertakings of Central Govt. / State Govt. / SEBs / Corporations / any other reputed Thermal / Hydel Plant etc.	

Stamp and Signature of Authorized signatory

Undertaking from the vendor (on vendor's letter head for not generating e-invoice)

We M/s. having PAN and GSTIN Registration Numberhereby undertake that our Aggregate Turnover (as per Section 2(6) of Central Goods and Services Tax Act, 2017) for FY 2019-20 does not exceed the prescribed threshold (as on the date of this declaration) for generation a Unique Invoice Registration Number (IRN) and QR code as per the provisions of Central Goods and Services Tax Act, 2017 and rules thereunder ("GST Law"). Further, we also undertake that if the aggregate turnover of M/s. exceeds the current threshold or revised threshold notified by Government of India at any future date, then we shall issue invoice and credit note in compliance with the required provisions of GST Law. In case of any queries from the any state or centre Goods and Services Tax authorities, M/s.will be solely responsible.

Yours Truly,

For M/s.....

Authorized Signatory Name: Designation:

Undertaking from the vendor (on vendor's letter head) regarding validation of GST registration (for each GST number separately)

1.1.1. GST registration of GST no..... in name of m/s.....is valid as on date.....

1.1.2. No default has ever been made by me/my firm in name of in filing the various GST returns and deposit of GST dues with the department with respect to GSTN.....

Yours Truly,

For M/s.....

Authorized Signatory Name: Designation:

Undertaking cum declaration from the vendor (on vendor's letter head)

1.2. I undertake to submit a CA certificate regarding validity of GST registration on every six months during the tenure of contract.

1.3. I undertake to submit copies of GSTR I and GSTR 3B/challans as evidence to deposit of GST with certification that GST collected from HPGCL, to be specified in exact rupees, has been paid to Govt. vide this challan (specifying the challan no. & date of deposit) and returns filed (date of filing of return) includes the transaction of supply of Good or/and services to HPGCL.

1.4. I undertake to inform immediately the HPGCL about initiation of any proceeding (if any) against me/my firm under the GST laws which may result in suspension or cancellation of GST number of the Vendor.

Yours Truly,

For M/s.....

Authorized Signatory Name: Designation:

Undertaking cum indemnity bond from the vendor (on vendor's letter head) regarding timely deposition of GST

- a) *Certified that we are registered as taxable person under GST Act, our GST no. is ----- and which is active as on-----.*
- b) *Certified that bill for the month of-----in which GST has been claimed, is included in all the GST returns submitted by us to the GST authorities.*
- c) *Certified that we shall deposit the amount of GST collected from RGTPP/HPGCL to the Government exchequer within the time specified under the GST Law.*
- d) *Certified that the goods/services on which GST has been charged have not been exempted from GST under GST Act. The rate/amount of GST in these goods/services is correct under the provisions of the GST Act.*
- e) *We give Undertaking-cum-indemnity bond to RGTPP/HPGCL that we shall indemnify to RGTPP/HPGCL for any loss sustained in case we does not deposit the GST to the government exchequer, which it has recovered from the M/s HPGCL as tax.*

Yours Truly,

For M/s.....

Authorized Signatory Name: Designation:

Annexure-5

Performa for declaration under Section 206AB/Section 206CCA

DECLARATION

I, _____, _____ (Designation) of _____ (Name of the Corporation/Company/Board/Trust), having PAN _____ (here in after referred as the Corporation/Company/Board/Trust), hereby declare and affirm a under:

- 1. That the Corporation/Company/Board/Trust is a regular income tax assessee.
- 2. That the Corporation/Company/Board/Trust has been filing its return of income tax regularly.
- 3. That the Corporation/Company/Board/Trust has filed returns of income tax for the financial years 2020-21 and 2021-22 under the provisions of section 139(1) of the Income Tax Act, 1961 as per details given below:

Assessment Year	Acknowledgement Number	Date of filing

- 4. That the new provisions of Section 206AB/Section 206CCA which require deduction/collection of tax at source at higher rates are not applicable to our Corporation/Company/Board/Trust and hence tax may not be deducted / collected at source at higher rates.

(Deponent)

That whatever stated above in the above stated para (s) are true to my knowledge and belief.

(Deponent)