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## **TENDER SPECIFICATIONS**

**TENDER NO.- NDA/HDJ-7/TG-MACHINING/11\_109**

**FOR**

**IN - SITU MACHINING OF HP, IP & LP TURBINE CASINGS FOR R&M  
AND UPRATING OF UNIT-7 (110 MW) HARDUAGANJ TPS**

### **PART I – TECHNICAL BID**



**Bharat Heavy Electricals Limited**  
(A Govt. Of India Undertaking)  
**Power Sector – Northren Region,**  
Plot No. 25 , Sector - 16A ,  
Distt. Gautam Budh Nagar, NOIDA – 201 301.INDIA



ISO 9001-2000, ISO 14001  
and OHSAS 18001  
certified company

**Bharat Heavy Electricals Limited**  
(A Govt. Of India Undertaking)  
**Power Sector – Northern Region,**  
Plot No. 25 , Sector - 16A ,  
Distt. Gautam Budh Nagar, NOIDA – 201 301.INDIA  
Phone: 0091-0120-2515410 / 2515441 / 2515449  
Fax 091-0120- 2416527  
Email: [ssr@bhelpsnr.co.in](mailto:ssr@bhelpsnr.co.in)/[yogender@bhelpsnr.co.in](mailto:yogender@bhelpsnr.co.in)

## **TENDER NO.- NDA/HDJ-7/TG-MACHINING/11\_109**

### **IMPORTANT NOTE**

PURCHASER OF THIS TENDER DOCUMENT IS ADVISED TO CHECK AND ENSURE COMPLETION OF ALL PAGES OF TENDER DOCUMENT AND REPORT ANY DISCREPANCY TIMELY FOR CORRECTIVE ACTION, IF ANY, TO THE ISSUING AUTHORITY BEFORE THE BIDS ARE SUBMITTED. ORIGINAL COPY OF TENDER DOCUMENT COMPLETE IN ALL RESPECTS MUST BE SUBMITTED BACK AS PART OF THE BID WITHOUT WHICH THE SAME IS LIABLE TO BE REJECTED BY BHEL.

THIS TENDER SPECIFICATION ISSUED TO:

M/s-----

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ISO 9001-2000, ISO 14001  
and OHSAS 18001 certified  
company  
SubContract and Purchase  
Deptt.

**Bharat Heavy Electricals Limited**  
(A Govt. Of India Undertaking)  
Power Sector – Northern Region,  
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## DOMESTIC NOTICE INVITING TENDER

LAST DATE OF SALE OF TENDER DOCUMENT: 11/11/2011 (1200 HRS IST)

LAST DATE SUBMISSION OF TENDER DOCUMENT: 11/11/2011(1500 HRS IST)

NIT NO. / NAME OF WORK

**TENDER NO.- NDA/HDJ-7/TG-MACHINING/11\_109**

Sealed tender are invited from the contractors fulfilling qualifying requirements for **“IN - SITU MACHINING OF HP, IP & LP TURBINE CASINGS FOR R&M AND UPRATING OF UNIT-7 (110 MW) HARDUAGANJ TPS”**

### NOTE:

1. Please visit our website at [www.bhel.com](http://www.bhel.com) and [www.bhelpsnr.co.in](http://www.bhelpsnr.co.in) for details of NIT including Qualifying requirement.
2. Tenders Not Accompanied with full Earnest Money Deposit of Rs.1,00,000.00 By pay order or Demand Draft will not be considered. However, tenderers who have already deposited one time EMD of Rs.200000.00 with SCT-BHEL-PSNR OR 'One Time EMD' of Rs. 1,00,000/- with RSC, BHEL-PSNR, NOIDA are exempted from depositing EMD with this tender.

RSM/NOIDA



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## TENDER NOTICE

### **SUB: IN - SITU MACHINING OF HP, IP & LP TURBINE CASINGS FOR R&M AND UPRATING OF UNIT-7 (110 MW) HARDUAGANJ TPS**

#### **TENDER NO.- NDA/HDJ-7/TG-MACHINING/11\_109**

Offers are invited from the Vendors in sealed envelopes as per terms and conditions enclosed and GCC (given as General Conditions of Contract and Special Condition of contract) and Q.R (Qualifying Requirements) indicated in the following paras, clauses of this notice.

#### **NOTES:**

- (i) The Tender Documents comprise of following;
  1. Tender Notice
  2. Technical Bid (Part-I) and Price bid (Part-II)
  3. General Instructions to Tenderers (Section-I), General Terms and Conditions (Section-II), Specification for Health, Safety and Environment (HSE).
  4. Scope of work (Annexure-A).
  5. Qualifying Criteria (Annexure-D)
- (ii) Tender Documents with complete details are hosted in this web page. Bidder(s) intending to participate may download the tender document from the web site. Bidder(s) downloading the tender documents from the web site, shall remit Rs.1000/- (Rupees One thousand only) in the form of crossed demand draft (non-refundable), in favour of BHEL, NOIDA along with their offer.
- (iii) Bidder(s) can also purchase hard copy of tender documents from this office. Tender documents (non transferable) will be issued on all working days between 09.30 Hrs. to 12.30 Hrs within the sale period i.e **upto 11/11/2011** on payment of Rs.1,000/- (non-refundable) either in cash or by crossed demand draft in favour of BHEL, NOIDA. Request for issue of tender document should clearly indicate Tender No. and work.
- (iii) Tenders must be submitted to the undersigned **latest by 15:00 Hrs. on 11/11/2011**. Technical bids shall be opened at **15.30 Hrs. on 11/11/2011**.
- (iv) Earnest Money Deposit (EMD) : Refundable, Non-interest bearing **EMD of Rs 1,00,000/-** shall be deposited by Account Payee Pay Order 'OR' Demand Draft in favour of " Bharat Heavy Electricals Limited" payable at Delhi/NOIDA . Those bidders who have already deposited ' One Time 'EMD' of Rs. 2,00,000/- with BHEL, PSNR, NOIDA OR ' One Time 'EMD' of Rs. 1,00,000/- with RSC, BHEL-PSNR, NOIDA need not submit EMD with the present tender.
- (v) Tenders not accompanied with Full Earnest Money Deposit, as indicated above, will not be considered.

- (vi) All corrigenda, addenda, amendments and clarifications to this Tender will be hosted in this web page and not in the newspaper. Bidders shall keep themselves updated with all such amendments.
- (vii) BHEL reserves the right to accept or reject any or all tenders without assigning any reason whatsoever.
- (viii) BHEL takes no responsibility for any delay/loss of documents or correspondences sent by courier/post.
- (ix) Contractor shall ensure use of only calibrated Inspection, Measuring & Testing equipment confirming traceability to national standards. Valid calibration certificates shall accompany these IMTEs.
- (x) The rates should be valid for a period of six months from the date of opening tender. The rates should be quoted both in figures and words. Please note that if there is mismatch between price given in figures and in words BHEL reserves its right to accept maximum of the two for evaluation, and minimum of the two for award and BHEL's decision in this regard should be acceptable to the party.
- (xi) It is requested that only authorised representative of the tenders attend the tender opening. They should further be available on the same day for any further clarification in the matter, in the office of undersigned.
- (xii) Successful tenderer will have to submit Security deposit as calculated below before start of work :

Order value	SD Amount (Rs)
Upto Rs 10 Lakh	10%
Above Rs 10 Lakhs and upto Rs 50 Lakhs	Rs 1 Lakh + 7.5% of the amount exceeding Rs 10 Lakhs
Above Rs 50 Lakhs	Rs 4 Lakh + 5 % of the amount exceeding Rs 50 Lakhs

The Successful contractor shall deposit 50% of SD amount as worked out above through Bank Guarantee before start of work. EMD-amount shall not be adjusted against Bank guarantee.

- (xiii) **BHEL reserves the right to go for a Reverse Auction instead of Opening the submitted sealed bid, which will be decided after technical evaluation. As such, the bidders should submit their best prices in the 'Sealed Price Bid'. However, bidders are required to confirm their acceptance of "General terms and conditions" governing RA specifically in their technical bid. The "General terms and conditions" governing RA are given below.**

#### **GENERAL TERMS AND CONDITIONS OF REVERSE AUCTION (RA)**

Against this NIT for the subject work, BHEL may resort to "REVERSE AUCTION PROCESS" i.e., **ON LINE BIDDING ON INTERNET**. The General Terms and Conditions of the RA shall be as follows;

1. For the proposed reverse auction, technically and commercially acceptable bidders only shall be eligible to participate.
2. BHEL will engage the services of a service provider who will provide all necessary training and assistance before commencement of on line bidding on internet.
3. BHEL will inform to the vendor in writing, in case of reverse auction along with the details of Service Provider to enable them to contact & get trained.
4. '**Business rules**' like event date, time, Start price, bid decrement; extensions etc. also will be communicated through service provider for compliance.



5. Vendors have to fax the Compliance form in the prescribed format (provided by Service provider) before start of Reverse auction. Without this, the vendor will not be eligible to participate in the event.
6. BHEL will provide the calculation sheet (e.g., EXCEL sheet) which will help to arrive at "Total Cost to BHEL".
7. Reverse auction will be conducted on scheduled date & time.
8. At the end of Reverse Auction event, the lowest bidder value will be known on the network.
9. The lowest bidder has to Fax the duly signed Filled-in prescribed format as provided on case-to-case basis to BHEL through Service provider within 24 hours of Auction without fail.
10. During Reverse Auction, if no bid is received within the specified time, BHEL at its discretion, may decide to revise opening price/scrap the reverse auction process/proceed with conventional mode of tendering.
11. **Sealed bid Reverse Auction:** The opening bid (In the initial auction) of the bidders shall be same as that quoted in their Final Sealed price submitted to BHEL. **The bidders shall confirm in writing to BHEL that their opening bid (In both cases) shall be same as that quoted in their final sealed price bids submitted to BHEL against this NIT along with Technical Bid (Part-I).**
12. BHEL reserves the right to cancel Reverse Auction (RA) without assigning any reasons and resort to considering the sealed bids submitted by vendor for processing and finalizing the tender.
13. Any variation between the on-line bid value and the signed document will be considered as sabotaging the tender process and will invite disqualification of vendor to conduct business with BHEL as per prevailing procedure.
14. In case BHEL decides not to go for Reverse Auction procedure for this tender enquiry, the Price bids and price impacts, if any, already submitted and available with BHEL shall be opened as per BHEL's standard practice.
15. Bids-given by the bidders during the Reverse Auction process will be taken as an offer to execute the work. Bids once made by the bidder, can not be cancelled/withdrawn and bidders shall be bound to execute the work as mentioned above at the final bid price. Should be bidder (Lowest) back out and not execute the contract as per the rates quoted, BHEL shall take action as appropriate.

**Bidders are also required to furnish following details in their techno-commercial bid, for this purpose (RA).**

Authorization of representative who will participate in the on line Reverse Auction Process;

- a. Name and Designation of official
- b. Postal Address (Complete)
- c. Telephone Nos. (Land line & Mobile both)
- d. FAX No.
- e. E-mail address
- f. Name of Place/State/Country, wherefrom he will participate in the RA.

(xiv) **Unsolicited rebate / discount shall not be accepted after bid opening.**

(xv) **Offers of only those bidders shall be considered for Price Bid opening/RA who will approved by UPRVUNL customer.**

  
RSM/NOIDA



ISO 9001-2000, ISO 14001  
and OHSAS 18001  
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Email: [ssr@bhelpsnr.co.in](mailto:ssr@bhelpsnr.co.in)/[yogender@bhelpsnr.co.in](mailto:yogender@bhelpsnr.co.in)

## PROCEDURE FOR SUBMISSION OF SEALED TENDERS:

The tenderers must submit their tenders as required in **two parts** in separate sealed covers **prominently super-scribed as Part-I Technical bid and Part-II, Price bid** (also indicating on each of the cover tender specification no. date and time as mentioned in tender notice

### TECHNICAL BID (COVER-I)

Except **Price bid Part-II**, complete set of tender document consisting of General conditions of Contract, "Technical specifications & Special terms and conditions" (Part-I) issued by BHEL shall be enclosed in **Part-I Technical Bid only**. All schedules, data sheets and details called for in the specification shall be submitted along with Technical bid. All details/Data/Schedules including offer letter duly signed and stamped are to be **submitted in duplicate**.

### PRICE BID (COVER-II)

Tenderers may please note that Price bid is **to be submitted only in original copy** of Tender i.e. Price bid (Part-II) issued by BHEL and no duplicate copy of same is required.

These Two separate covers i.e. cover-I & II shall together be enclosed in a **Third envelope (Cover-III)** and this sealed cover shall be superscripted with Tender specification No., due date, time and submitted to officer inviting as indicated in tender notice on or before due date as indicated.



ISO 9001/14001/27001,  
OHSAS18001 & SA8000

**भारत हेवी इलेक्ट्रिकल्स लिमिटेड**  
(भारत सरकार का उपक्रम)  
**Bharat Heavy Electricals Limited**  
(A Govt. of India Undertaking)  
**पावर सेक्टर-उत्तरी क्षेत्र, नोएडा**  
**Power Sector - Northern Region, NOIDA**

## NOTICE INVITING TENDER

To

M/s

BY REGISTERED POST/COURIER/HAND

Ref. No.: NDA/HDJ-7/TG-MACHINING/11\_109

Date: 20/10/2011

**Sub: IN - SITU MACHINING OF HP, IP & LP TURBINE CASINGS FOR R&M AND UPRATING OF UNIT-7  
(110 MW) HARDUAGANJ TPS**

Dear sir,

- Offers, are invited as per terms and conditions enclosed and GSCC (given as General and Special conditions for Services page www.bhelpsnr.co.in at Service Tender)
- Offer should be sent in Separate envelopes for Techno-commercial and Price bids. Offerers distinctive identification (Company Name), tender no. NDA/HDJ-7/TG-MACHINING/11\_109 due on 11/11/2011 'Techno-commercial' and 'price bid' should be mentioned clearly on cover of each envelope. In case it is holiday on 11/11/2011 the tenders will be opened on next working day.
- Offer should be free from overwriting. Corrections and additions, if any should be attested. The rates should be quoted for scope as per Annexure A and in line with Annexure B&C Price quoted should be exclusive of SERVICE TAX and after considering CENVAT credit. The service tax, as legally leviable & payable by the contractor under the provisions of applicable law/act, shall be paid by BHEL as per contractor's bill. However, contractor shall have to submit proof of service tax deposited by them immediately after the deposit but not later than the next bill submitted after the due date of deposit. The contractor shall furnish proof of Service Tax registration with Central Excise Division covering the services covered under this contract. Registration should also bear endorsement for the premises from where the billing shall be done by contractor on BHEL for this project.
- The rates should be valid for a period of six months from the date of opening tender. The rates should be quoted both in figures and words. Please note that if there is mismatch between price given in figures and in words BHEL reserves its right to accept maximum of the two for evaluation, and minimum of the two for award and BHEL's decision in this regard should be acceptable to the party.
- The offer should reach this office on or before 15:00 on 11/11/2011. The offer will be opened at 15:30 on same day (In case it is holiday on 11/11/2011 the tenders will be opened on next working day) in presence of such tenderers or their authorised representatives as may be present.
- Earnest money of Rs. 1,00,000 is to be sent (in cash, Pay Order/ DD) along with the offer in favour of BHEL NOIDA. Adjustment of earnest money submitted with any earlier offer will not be considered.  
However, bidders who have already deposited "One Time 'EMD'" of Rs. 1,00,000/- with SAS-Noida, BHEL-PSNR, or "One Time 'EMD'" of Rs. 2,00,000/- with SCT-Dept., PSNR, BHEL-NOIDA shall be exempted for the same against this tender.
- The enclosed scope of work, details out the major activities only. However as per general maintenance requirement and site conditions certain related activities may have to be carried out without any extra cost.
- BHEL reserves the right to process the tender on reverse auction basis and also the right to award the job to one or distribute the job among one or more contractors. In case it is not agreeable, the party need not quote.
- It will be in interest of the contractor to visit site before submitting offer to have clear idea about the site conditions.

S-211



- 10 Time period for completion of job will be 60 DAYS from the date of commencement of work. However in case inputs for the critical path are not provided by BHEL in time, the completion period shall be extended for the period for which the inputs are not provided. Decision of BHEL in this regard shall be final. Penalty for delay will be AS PER GSCC
- 11 Terms of Payment:- **Payment shall be made as per Clause No. A-5 of scope of work attached with this tender**. The bills will be verified by BHEL site engineer and certified by BHEL Resident Engineer for arranging payment. All payments are subject to Income-tax deduction at source as per Central Government laws and compliance to all statutory requirements indicating in the NIT.
- All payments shall be made through E-payment system. Contractor has to give Bank name, Branch & Account number alongwith the bills as these shall be incorporated in the system.
- 12 BHEL reserves the right to reject a bidder based on their unsatisfactory past performance at any other project in any centre/region
- 13 BHEL is not responsible for tenders/offers lost/delayed in transit/ by post etc. The offers reaching this office after due date and time and/or without earnest money as per item no. 6 above, will not be considered. The offer should also accompany all documents as per clause no. 1 of General And Special terms and conditions of contract.
- 14 The selected contractor will have to mobilise for the job with in **21 DAYS** of the issue of the letter of intent/ work order/work instruction from RSC.
- 15 Offers not received in line with the tender enquiry are liable to be rejected
- 16 It is requested that only authorised representative of the tenders attend the tender opening. They should further be available on the same day for any further clarification in the matter, in the office of undersigned.
- 17 Successful tenderer will have to submit Security deposit as calculated below before start of work :

Order value	SD Amount (Rs)
Upto Rs 10 Lakh	10%
Above Rs 10 Lakhs and upto Rs 50 Lakhs	Rs 1 Lakh + 7.5% of the amount exceeding Rs 10 Lakhs
Above Rs 50 Lakhs	Rs 4 Lakh + 5 % of the amount exceeding Rs 50 Lakhs

- 18 The contractor has to ensure that the staff/ workmen deployed for execution of work uses necessary safety appliances. Surprise checks shall be done by BHEL and in case of non-compliance of above penalty of RS 500/= (five hundred) may be imposed for each case on each occasion of surprise check.
- 19 Contractor shall ensure use of only calibrated Inspection, Measuring & Testing equipment confirming traceability to national standards. Valid calibration certificates shall accompany these IMTEs.
- 20 "Code for Safety Management at Services Sites" as detailed in letter no PSNR/RSC-NOIDA/SAFETY dtd 24/12/2001 will have to be accepted by the party for qualifying in Techno-Commercial bid.
- 21 The contractor shall ensure compliance to all statutory requirements including but not limited to EPF deposition, Labour Licence, Insurance under applicable WC act & ESI failing which shall be liable for penal action as deemed by relevant act.
- 22 May see "General & Special conditions of contract(GSCC)- for Services jobs" on web page [www.bhelpsnr.co.in](http://www.bhelpsnr.co.in) at Service Tender.
- 23 All payments shall be made through E-payment system. Contractor has to give Bank name, Branch & Account number alongwith the bills as these shall be incorporated in the system.
- 24 Tentative date for start of work is **02/12/2011**. However the date may change based on shutdown given by customer and this shall not entail the party to revise their price or any other condition of their offer. This factor may be kept in view while quoting.
- 25 PRICE BID OF ONLY THOSE PARTIES WILL BE OPENED WHO QUALIFY IN TECHNO-COMMERCIAL BID.

Encl.

Thanking you,

Yours truly,

1. Scope of work - Annexure A
2. Schedule of rates - Annexure B & C
3. Qualifying Criteria for bidder-D

  
Regional Service Manager(Noida)

**TECHNICO-COMMERCIAL BID FOR :**

Tender NDA/HDJ-7/TG-MACHINING/11\_109 dated 20/10/2011

Sub: IN-SITU MACHINING OF HP, IP & LP TURBINE CASINGS FOR R&M AND UPRATING OF UNIT-7  
(110 MW) HARDUAGANJ TPS

NAME & ADDRESS	:	
PAN NO.	:	
Provident Fund	:	
OFFER NO	:	
EMD	:	
VALIDITY OF OFFER	:	6 Months
COMPLETION PERIOD	:	60 DAYS
MOBILISATION PERIOD	:	21 DAYS
GUARANTEE PERIOD	:	1 Months

**Following are enclosed/ certified/accepted as part of Technical bid.**

- Signed copy of NIT along with scope of work. Technical bid (annex. B) and Price bid (annex. C) are enclosed.
- Code for Safety Management at Services Sites as detailed in letter no PSNR/RSC-NOIDA/SAFETY dtd 24/12/2001 safe work practices issued by PSNR are accepted.
- Even though offer has been given for a particular unit, it is valid for any Unit of same rating in the same PowerHouse, provided there is no change in activities listed in scope of work.
- Activity- wise percentage breakup has been indicated against each activity in the scope of work as per Annexure –‘A’. In case of reduction in quantum of work at site, payment shall be released only for the activities actually carried out as per the percentage allotted
- All documents as required in “DOCUMENTS TO BE ATTACHED WITH BILLS” given in web page [www.bhelsnr.co.in](http://www.bhelsnr.co.in) “Service Tender” of BHEL PSNR shall be submitted along with bills.
- Use of all necessary safety appliances by all the staff/ workmen deployed for execution of work will be ensured. If during surprise checks done by BHEL any non-compliance is observed penalty of RS 500/= (five hundred) may be imposed for each case on each occasion of surprise check.
- It is certified that all statutory requirements including but not limited to payment of wages, deposition EPF, Labour Licence, Insurance etc governed by the provisions of applicable acts shall be our liability without any extra cost to BHEL. Further without limiting obligations and liabilities provided elsewhere in the contract, BHEL shall be kept harmless and indemnified against all claims, damages and compensations, as well as breach of such requirements. Release of progressive payments shall be subject to, inter alia, compliance to such statutory requirements.
- If there is mismatch between price given in figures and in words BHEL shall have right to accept maximum of the two for evaluation, and minimum of the two for award.
- There are no deviations from the NIT and all Terms & Conditions of NIT including those given in “General & Special conditions of contract(GSCC)– for Services jobs” on the web page [www.bhelsnr.co.in](http://www.bhelsnr.co.in) of BHEL PSNR are accepted.

Sign of contractor: \_\_\_\_\_

Date:

Seal

**PRICE BID FOR :     SAMPLE PRICE BIDS**

Tender No.    NDA/HDJ-7/TG-MACHINING/11\_109 dated    20/10/2011

Sub:   IN-SITU MACHINING OF HP, IP & LP TURBINE CASINGS FOR R&M AND UPRATING OF  
UNIT-7 (110 MW) HARDUAGANJ TPS

NAME & ADDRESS	:	
OFFER NO.	:	
OFFER DATE	:	

Rate are quoted as below and are exclusive of Service Tax and after considering CENVAT

1.	Lumpsum (LS) price for the entire scope of work as per Annexure-A (inclusive of all consumables, inputs, materials and supervision)	(Amount In Figure) Rs. : (Amount in Words) Rupees :
2.	Extra work rate on per man-hour basis (inclusive of supervision, T&P, consumables and all other costs)	Rs. 60.0 Only

Sign of contractor: \_\_\_\_\_

Date:

Seal

**SCOPE OF WORK FOR IN-SITU MACHINING OF HP, IP & LP TURBINE CASINGS FOR  
R&M AND UPRATING OF UNIT No. 7 (110 MW) HARDUAGANJ TPS**

**INTRODUCTION**

BHEL has been awarded Renovation & Modernization (R&M) and up-rating from 110 MW to 120 MW work of Unit-7 at Harduaganj TPS, (Aligarh) by UPRVUNL.

Harduaganj Thermal Power Station (HTPS) belonging to Uttar Pradesh Rajya Vidyut Utpadan Nigam Limited (UPRVUNL) is located about 20 kms from Aligarh railway station, Uttar Pradesh and about 140 kms from New Delhi. Unit-7 of HTPS is a 110 MW coal fired Thermal Power Plant which is in operation since May 1978. This unit has clocked more than 200000 hrs of operation.

The R&M work covers Boiler, fans, milling system, steam turbines, generators, boilers feed pumps, piping along with the associated auxiliaries, Pumps and Accessories, Electrical system equipment, Cable and cable support system, control and Instrumentation system equipments etc. These materials will be supplied from our manufacturing units located all over the country as well as our vendors located both in India and abroad.

For attaining 120 MW, machining of HP outer casing, LP outer casing & IP outer casings will be carried out. New HP, LP & IP inner casings and other internals will be supplied, which will be fitted into these old machined outer casings.

**BHEL, POWER SECTOR NORTHERN REGION, NOIDA NOW INVITES  
TENDERS SEPARATELY FOR IN-SITU MACHINING OF HP, LP & IP  
TURBINE CASINGS FOR R&M AND UPRATING OF UNIT No. 7 (110  
MW) HARDUAGANJ TPS**

THE TENDERERS ARE, HOWEVER, ADVISED TO ACQUAINT THEMSELVES WITH THE SITE CONDITIONS, BEFORE SUBMITTING THEIR OFFER. NO COMPLAINTS WHATSOEVER, ON ACCOUNT OF NON-FAMILIARISATION WITH THE SITE CONDITIONS, WILL BE ENTERTAINED.



**SCOPE OF WORK FOR INSITU MACHINING OF HP, IP & LP TURBINE CASINGS FOR  
R&M AND UPRATING OF UNIT No. 7 (110 MW) HARDUAGANJ TPS**

SL No.	ACTIVITY DESCRIPTION
<b>A</b>	<b>In situ machining of HP, IP &amp; LP turbine casing as per annexure-I.</b>
1	<b>The total work includes machining of HP, IP &amp; LP turbine casing as per annexure-I including making necessary arrangements for machining at site.</b>
2	<b>Completion Period: 60 days</b> The work of in-situ machining of HP, IP & LP turbine casing is to be completed in <b>60 days</b> . It may require working in 2 or 3 shifts at works to achieve completion of job
3	<b>Mobilization Period: 21 days</b> The vender shall mobilize the site within 21 days with all necessary arrangements for in situ machining from date of intimation by BHEL.
4	<b>Defect Liability Period: 01 Month</b>
5	<b>Terms of Payment:</b>
a	<b>9% of contract value on receipt of all required tools, fixtures and machinery at site as per annexure-III and on completion of preparatory works for machining and start of machining works at site on certification of BHEL engineer.</b>
b	<b>27% of contract value on completion of machining of first casing on certification of BHEL engineer.</b>
c	<b>27% of contract value on completion of machining of second casing on certification of BHEL engineer.</b>
d	<b>27% of contract value on completion of machining of third casing on certification of BHEL engineer.</b>
e	<b>10% of contract value after signing of last acceptance documents along with BHEL site.</b>
f	<b>All payments shall be subject to statutory deduction as per rule.</b>
g	<b>Security Deposit shall be released only on completion of warranty period of 01 Month and fulfillment of all contractual obligations.</b>
h	<b>Necessary documents as specified in GSCC shall be submitted with bill. All payments shall be subject to statutory deduction as per rule.</b>
i	<b>All payment shall be made by Electronic Fund Transfer and necessary Bank Details shall be furnished by the sub-contractor.</b>
<b>B</b>	<b>GENERAL CONDITIONS</b>
1.1	<b>Overrun Charges:</b> The work to be carried out on turnkey basis and on firm price. <b>No additional or overrun charges shall be entertained at any stage.</b>
1.2	Party is advised to visit site and understand work. HP, IP & LP Casings are in dismantled condition at site and machining scope clarifications can be given at site or BHEL SAS office at Noida. <b>7 nos. of drawings are enclosed for reference however soft copy may be obtained from BHEL SAS office at Noida on request through email or from the office of BHEL-PSNR-RSC-Noida, Plot No. 25, Sector 16A, Noida (III Floor).</b> These are to be signed and submitted along with the technical bid.
1.3	For retrofitting of new items on to the old design outer casings, machining of outer casings from inside and outside by boring and milling operations is required including drilling of holes for temperature measurement, facing of inlet flanges/surfaces etc. and fixing of new attachments /instruments and new seal glands. All efforts have been made to cover maximum points However any job to be carried out to accommodate new internals, new attachments /instruments , and new inlet pipes, thermocouples etc. is to be carried out and are included the scope of contractor. Dimensions in the drawing are subject to change. Any other work like: handling of turbine items, reaming of holes in casing, fixing of thermocouples etc. to meet the technical requirement as per drawing shall be in scope of vender.

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**SCOPE OF WORK FOR IN-SITU MACHINING OF HP, IP & LP TURBINE CASINGS FOR  
R&M AND UPRATING OF UNIT No. 7 (110 MW) HARDUAGANJ TPS**

(a)	All the required equipments and tooling for machining are included in the scope of contractor. Welding electrodes for material built-up as per drawing (ENiCrFe3) is included in the scope.
(b)	The party should have all the required equipments and tooling capable to carry out the machining works of the required sizes as per attached drawings. The party should submit all the relevant documents detailing the equipments and tooling for machining, boring, milling and drilling etc.
(c)	Maximum sizes to be machined at works in different casings are as below: HP outer casing:       Maximum dia. = 1145 mm, IP outer casing:       Maximum dia. = 1830 mm LP casing:           Maximum dia. = 2850 mm. (approx.)
(d)	Accuracy should be is 0.05 mm with surface finish of 3.2 microns and the tolerances as mentioned in the attached drawings.
1.4	Repair like re-drilling and threading of existing holes, removal of broken studs, re-drilling & threading etc. is included in the scope of vender.
1.5	The job has to be carried out to the specifications. Any kind of setting of equipment and for measurement of dimensions etc. required as per drawing is to be carried out by the party.
1.6	The fitting of internals their axial and radial locations will be checked and any rectification required in machining is included in the scope and will have to be carried out by the party.
1.7	The work is to be taken up immediately as unit is already shut down and casings have been dismantled and accordingly the party has to prepare required tooling in advance along with all resources as men, machine and material.
1.8	<b>Validity of offer – 3 months.</b>
1.9	The price quoted for the job should include all charges like charges like arrangements of machining, tools, jigs & fixtures etc. The sub-contractor shall arrange accommodation, transport, medical, sanitary, safety and other arrangements for all Manpower at their own cost.
1.10	Power supply at one point during in-situ machining for machining equipments shall be given by BHEL. However all necessary arrangements i.e. extension switch boards with MCBs of required capacity for tapping power shall be arranged by sub-contractor.
1.11	Compressed air at one point shall be provided by UPRVUNL subject to availability however all necessary arrangement required for tapping compressed air shall be made by sub-contractor at his own cost. It may be noted that compressed air shall be provided subject to availability. As the UPRVUNL's system is not reliable, alternate arrangement for compressed air required for successful completion of work including arrangement for source of compresses air shall be carried out by sub-contractor at his own cost.
1.12	The Sub-contractor has to obtain other statutory clearances and permissions from concerned authorities as required for the work and they must observe and strictly adhere to all labor & industrial laws, and other statutory laws, acts & regulations as applicable for the contract.
1.13	The Sub-contractor has to provide all required skilled & semi-skilled <b>labors &amp; technicians</b> , experienced <b>engineers &amp; supervisors</b> , qualified <b>personnel for machining, etc.</b>
1.14	Proper Arrangement of House Keeping, strict compliance of Health Safety & Environment norms of BHEL, Day to Day cleaning of the entire working area and final area cleaning on completion of work including arrangement of water washing equipments and accessories is included in the Scope of Work of the Sub-contractor.
<b>C</b>	<b>SPECIAL CONDITIONS OF CONTRACT</b>
1.0	<b>Quantum of work</b>
1.1	The scope of work given in the tender specification is only approximate and is liable to variation and alterations at the discretion of BHEL Engineer. No compensation on this account shall be payable to the contractor unless specifically recommended by BHEL Engineer as the variation forming major additions to the original scope of work. All repair / rectification work arising out of normal wear and tear, seizure of parts etc. have to be done by the contractor and the same be deemed to be covered by the scope of work of the contract.

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**SCOPE OF WORK FOR IN-SITU MACHINING OF HP, IP & LP TURBINE CASINGS FOR  
R&M AND UPRATING OF UNIT No. 7 (110 MW) HARDUAGANJ TPS**

1.2	The scope of work details out the major activities only. However as per the general maintenance requirement and site condition, certain related activities may have to be carried out by the contractor without any extra cost.
2.0	<b>Commencement and completion of work</b>
2.1	The starting time and completion time is the essence of the tender. As the time bound program is firmly committed to customer, the starting time and completion time should be strictly adhered. It will not be possible to grant extension in completion time except in extraordinary circumstances, which will be decided entirely at the discretion of BHEL Engineer. Work should normally be carried out in two shifts and sometimes also in three shifts in consultation with the BHEL Engineer.
2.2	A detailed program of the various activities covered under this contract with specific time periods to fall in the overall frame work of the above dates should be prepared and got approved by BHEL Engineer. The progress against this program shall be reviewed with BHEL Engineer at the end of each day and critical areas identified and suitable steps taken in time.
2.3	If during the review at any stage of machining work, BHEL Engineer feels that the delays are not likely to be made up, BHEL reserves the right to take corrective steps as considered necessary by BHEL Engineer to complete work in schedule time and debit the cost incurred thereon to the contractor. This does not however absolve the contractor of own efforts in consultation with BHEL Engineer. Every endeavor will be made to see that work proceeds uninterruptedly.
2.4	The tenderer should indicate the time required for starting the work once the letter of intent is issued along with the time required for completion. The work may have to commence immediately after opening of the tenders. Hence, preference may be given to those tenders who can commence the work earlier and also ensure early completion.
2.5	The contractor shall ensure completion of the job in all respects within the days from the date of commencement of work as given in contract.
3.0	<b>Penalty for delay :</b>
3.1	If not mentioned otherwise in the notice inviting tender, in the event of failure to complete the work in given time, an amount equal to ½% of the contract value per day subject to maximum of 10% of the contract value will be levied as penalty, in case in case the balance work is allowed to be completed by the contractor beyond the scheduled time of completion, which is at the discretion of BHEL. In case of delays on contractor's part, at any stage during the scheduled period or after, BHEL shall have the option of ensuring completion of the job by any other means at its disposal and the charges on this account shall be levied on the contractor. These shall be adjusted against contractor's bills or Security Deposit.
4.0	<b>Inspection and completion of work:</b>
4.1	The work being carried out by the contractor will be supervised and inspected by our Site Engineers under the overall supervision of BHEL Engineer Incharge.
4.2	The work will be deemed as complete when BHEL Engineer finally accepts it and job completion certificate is issued. No extra payment will be made for any rework carried out by the contractor to rectify any defective work.
4.3	The contractor shall not be entitled for labour idling charges under any circumstances.
5.0	<b>Tools, Tackles, Test Equipments &amp; Consumables:</b>
5.1	Unless otherwise mentioned in the notice inviting tender, all tools and tackles and consumables required for day to day working like gases, gas cutting sets with accessories, AC /DC welding sets, TIG welding kits, welding cables, electrodes, etc., all temporary electrical connection boards required for the work shall be arranged by the contractor at his own cost.
5.2	The contractor shall provide inspection measuring and test equipments duly calibrated against international standards. In case of any erratic behavior of these items, the same shall be immediately withdrawn and got recalibrated by the contractor. The contractor shall submit copy of test certificates in respect of T&P, electrodes and instrument as detailed above.
6.0	<b>TAXES, DUTIES AND OCTROI CHARGES</b>
6.1	<b>TDS under Income Tax, Sales Tax, Vat etc</b> , if any, shall be deducted at prevailing rates on gross invoice value from the running bills unless Exemption Certificate from appropriate Authority / Authorities is furnished.

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**SCOPE OF WORK FOR IN-SITU MACHINING OF HP, IP & LP TURBINE CASINGS FOR  
R&M AND UPRATING OF UNIT No. 7 (110 MW) HARDUAGANJ TPS**

6.2	<b>Price quoted shall be inclusive of all taxes, duties except service tax.</b> The service tax, <u>as legally livable &amp; payable by the sub-contractor</u> under the provisions of applicable law/act, shall be paid by BHEL as per sub-contractor's bill. However, sub-contractor shall have to submit proof of service tax deposited by them immediately after the deposit but not later than the <u>next bill submitted</u> after the due date of deposit. The sub-contractor shall furnish proof of Service Tax registration with Central Excise Division covering the services covered under this contract. Registration should also bear endorsement for the premises from where the billing shall be done by sub-contractor on BHEL for this project.
6.3	Sub-contractor shall get his organization registered with concerned <u>sales tax/VAT</u> authorities within 15 days of award of this contract, if applicable. The delay on this account and delay in bringing the material shall be to sub-contractor's account and no extension of time shall be allowed on this account. The <u>sales tax/VAT</u> registration for this sub-contractor shall be forwarded to BHEL within 30 days from the date of LOI. In case the sub-contractor is already registered for <u>sales tax/VAT</u> with Govt. Authorities he must quote his registration no, while submitting their tender.
6.4	Sub-contractor has to make his own arrangement at his cost for completing the formalities, if required, with Sales Tax Authorities, for bringing his materials, plants and equipment at site for the execution of the work under this contract. However road Permits for sub-contractor's tools, machinery, etc. shall be arranged by BHEL.
<b>Note</b> :	<b>Other Terms &amp; conditions shall be as per GSCC. In case of any conflict between the special terms and conditions specified in the scope of work and GSCC attached, the conditions of scope of work shall prevail.</b>

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**SCOPE OF WORK FOR IN-SITU MACHINING OF HP, IP & LP TURBINE CASINGS FOR  
R&M AND UPRATING OF UNIT No. 7 (110 MW) HARDUAGANJ TPS**

**Annexure-I**

**Detailed Scope of Work for Machining of HP, IP & LP turbine casings**

<b>1)</b>	<b>HP CASING Ref:-Drg. No. 0-105-01-62005 Sheet 1 &amp; 2</b>
1.1	Machining of groove for increasing size in bottom half of HP outer casing from in side to accommodate new baffle plate at the existing location. [Detail-F, G, H, Z & Section B-B].
1.2	Machining of a slot for casing drain below the above slot at exhaust side in bottom half outer casing [Detail N]. Machining of a slot for casing drain on inlet side in bottom half outer casing. [Detail-X and section L-L].
1.3 a)	Machining of seating areas of front and rear outer gland boxes in outer casing (axial face machining and radial machining to suit the new gland boxes). Machining to be carried out together in upper and lower casing assembled condition.
b)	Machining of grooves for keys of these gland boxes in bottom half of the outer casing. [Detail-Q and R, Section E-E and F-F].
1.4	Machining of steam inlet areas so as to increase the face diameter with steps for matching flange of inlet inserts at four location in HP outer casing (2 at top half and 2 at bottom half). L-ring type of inlet connection. Machining of slots for locating keys with rounded inner ends of these insert flanges. 2 slots per flange [Detail U, V, U1 and Section D-D].
1.5	Re-machining of anti rotational bolt (centering bush and pin) holes in outer casing to suit the new pin/bush diameter-04 nos (02 at top and 02 nos at bottom half of outer casing. [Section A-A]
1.6( a )	Machining of grooves in palms to suit the seating pads of HP inner casing in the outer casing at 4 locations each in top and bottom halves of outer casing from inside. [Section K-K].
(b)	To drill/ tap threaded holes to hold the pads in position in top half casing only.
1.7 (a)	Drilling of hole in outer top half casing for HP exhausts temperature measurement. Spot faced. [Detail T (B-2)].
(b)	Drilling of 3 holes in outer casing bottom half (through holes) for insertion of thermocouples for measurement of inner casing temperature. [Section J-J and Detail G and W].
(c)	Drilling of holes up to 50 % depth in outer casing top and bottom for measurement of casing temperature. [Section C-C and detail-P].
1.8	Checking/machining of threads in both top and bottom casing existing holes
<b>2.0</b>	<b>IP CASING Drg. No. 0-106-01-62002 Sheets1, 2 &amp; 3</b>
2.1	Machining of steam inlet areas so as to increase the face diameter with steps for matching flange of inlet inserts at two locations in IP outer casing (1 at top half and 1 at bottom half). L-ring type of inlet inserts connection. As per section B-B and view B1 of drawing.
2.2	Machining of slots grooves at 2 locations each in the above faces for locating keys of matching flanges of inserts. As per section B-B and view B1 of drawing.
2.3 (a)	Machining of seating areas of front and rear outer gland boxes in outer casing (axial face machining and radial machining).
(b)	Machining of grooves for keys of these gland boxes in bottom half of the outer casing. [Detail-Y and view-X] view C1 and section C-C of the drawing.
2.4 (a)	Machining of front palms for inner casing support (inside of top-bottom outer casing). To suit the inner casing palm size at front (inlet side).
(b)	Machining from inside of top-bottom outer casing near parting plane for support of inner casing at rear [detail F-F].

*Signature*

**SCOPE OF WORK FOR IN-SITU MACHINING OF HP, IP & LP TURBINE CASINGS FOR  
R&M AND UPRATING OF UNIT No. 7 (110 MW) HARDUAGANJ TPS**

(c)	Machining of groove from inside of bottom half of casing at bottom for inner casing guide key at rear [section D-D and D1-D1].
(d)	Machining of groove (axial & radial faces) inside of top-bottom outer casing for placing the inner casing at rear (exhaust end) all along the circumference and near parting plane [Detail V].
(e)	Welding built-up with electrode ENiCrFe3 as required and machining of inside of bottom outer casing at bottom near extraction-7 opening [Detail-U].
(f)	Drilling of hole in bottom outer casing for casing drain near extraction-7.
2.5 (a)	Machining of groove (axial faces) to accommodate blade carrier as indicated in drawing in outer top and bottom casing (Location F-8). Machining at parting planes on both left and right side for resting of carriers as per Detail-Q of drawing.
(b)	Machining of groove (axial faces) to accommodate blade carrier as indicated in drawing in outer top and bottom casing (Location F-9). Machining at parting planes on both left and right side for resting of carriers as per Detail-P of drawing.
(c)	Welding of supporting blocks (U & L brackets) at parting plane of outer casing at top and bottom halves (both left and right side) as per view-N and G of drawing. Machining the same and drilling and tapping for threads for fixing and dowelling of pins as per drawing details.
(d)	Machining of groove from inside of bottom half of casing at bottom for inner blade carrier keys as per Detail-R & S of drawing.
2.6	Drilling of 2 holes up to 50 % from outside of outer casing thickness at top and bottom as per section-E-E and detail E-1 of drawing.
2.7	Machining of inner surface in bottom half casing at casing pin location as per view W1 and W2 of drawing.
2.8	Drilling/machining of hole at 12 o'clock position at rear of outer casing as per detail drawing location (C-D: 9-10). Including threading.
2.9	Removing of material from inside at the inlet location of outer casing in both top and bottom casing to accommodate inner casing as per drawing location C-4 & H-4.
3.0	<b>LP CASING Drg. No. 0-107-40-62002 &amp; 0-107-40-62003</b>
3.1	Machining of grooves (axial & radial) in top and bottom casing for guide blade carriers at 08 locations as per drawing.
3.2	Machining near parting plane on both sides in both top and bottom casing for support of guide blade carriers, their adjustments and locking.
3.3	Machining of grooves for keys in bottom half of the casing for guide blade carriers.
3.4	Drilling of holes for draining of grooves in bottom casing only.

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**SCOPE OF WORK FOR IN-SITU MACHINING OF HP, IP & LP TURBINE CASINGS FOR  
R&M AND UPRATING OF UNIT No. 7 (110 MW) HARDUAGANJ TPS**

ANNEXURE-II

**BANK GUARANTEE FOR PAYMENT OF ADVANCE**

B.G. No.

Date

This deed of Guarantee made this \_\_\_\_\_ day of \_\_\_\_\_ two thousand \_\_\_\_\_ by \_\_\_\_\_ (Bank) hereinafter called the "The Guarantor" (which expression shall unless repugnant to the context or meaning thereof be deemed to include its successors and assigns) in favour of M/S Bharat Heavy Electricals Limited a Company incorporated under the Companies Act, 1956, having its registered office at BHEL House, Siri Fort, New Delhi - 110049 through its unit at Power Sector-Northern Region, Noida, Distt. Gautam Budh Nagar, (U.P.) India, hereinafter called "The Company" (which expression shall unless repugnant to the context or meaning thereof be deemed to include its successors and assigns).

WHEREAS M/s. \_\_\_\_\_ (hereinafter referred to as the Contractor) have entered into a Contract arising out of Letter of Intent no. \_\_\_\_\_ dtd \_\_\_\_\_ (hereinafter referred to as "the Contract") for the --< Name of work >-- with the Company.

AND WHEREAS the Contract inter-alia provides that the Company will pay to the Contractor interest bearing advance of Rs. \_\_\_\_\_ (Rupees \_\_\_\_\_ only) on certain terms and conditions specified in the Contract subject to the Contractor furnishing a Bank Guarantee for Rs. \_\_\_\_\_ (Rupees \_\_\_\_\_ only) in favour of the Company.

AND WHEREAS the Company has agreed to accept a Bank Guarantee from a Bank to cover the said advance.

AND WHEREAS the Contractor has approached the Guarantor and in consideration of the arrangement arrived at between the Contractor and the Guarantor, the Guarantor has agreed to give the Guarantee as hereinafter mentioned in favour of the Company.

**NOW THIS DEED WITNESSES AS FOLLOWS:-**

- (1) In consideration of the Company having agreed to advance a sum of Rs. \_\_\_\_\_ (Rupees \_\_\_\_\_ only) to the Contractor, the Guarantor do hereby guarantee the due recovery by the Company of the said advance with interest thereon as provided according to the terms and conditions of the Contract. If the said Contractor fails to utilise the said advance for the purpose of the Contract and /or the said advance together with interest as aforesaid is not fully recovered by the Company the Guarantor do hereby unconditionally and irrevocably undertake to pay to the Company without demur and merely on a demand, to the extent of the said sum of Rs. \_\_\_\_\_ (Rupees \_\_\_\_\_ only) any claim made by the Company on them for the loss or damage caused to or suffered by the Company by reasons of the Company not being able to recover in full the advance with interest as aforesaid.
- (2) The decision of the Company whether the Contractor has failed to utilise the said advance or any part thereof for the purpose of the Contract and / or as to the extent of loss or damage caused to or suffered by the Company by reason of the Company not being able to recover in full the said sum of Rs. \_\_\_\_\_ with interest if any shall be final and binding on the Guarantor, irrespective of the fact whether the Contractor admits or denies the default or questions the correctness of any demand made by the Company in any Court Tribunal or Arbitration proceedings or before any other Authority.

*Signature*

**SCOPE OF WORK FOR IN-SITU MACHINING OF HP, IP & LP TURBINE CASINGS FOR  
R&M AND UPRATING OF UNIT No. 7 (110 MW) HARDUAGANJ TPS**

- (3) The Company shall have the fullest liberty without affecting in any way the liability of the Guarantor under this Guarantee, from time to time to vary any of the terms and conditions of the Contract or extend time of performance by the Contractor or to postpone for any time and from time to time any of the powers exercisable by it against the Contractor and either enforce or forebear from enforcing any of the terms and conditions governing the Contract or securities available to the Company and the Guarantor shall not be released from its liability under these presents by any exercise by the Company of the liberty with reference to the matters aforesaid or by reasons of time being given to the Contractor or any other forbearance, act or commission on the part of the Company or any indulgence by the Company to the Contractor or of any other matter or thing whatsoever which under the law relating to sureties would, but for this provision have the effect of so releasing the Guarantor from its liability under this guarantee.
- (4) The Guarantor further agrees that the Guarantee herein contained shall remain in full force and effect during the period till the Company discharges this Guarantee, subject to however, that the Company shall have no claim under this Guarantee after \_\_\_\_\_ i.e. (the present date of validity of Bank Guarantee unless the date of validity of this Bank Guarantee is further extended from time to time, as the case may be) unless a notice of the claim under this Guarantee has been served on the Guarantor before the expiry of the said period in which case the same shall be enforceable against the Guarantor notwithstanding the fact that the same is enforced after the expiry of the said period.
- (5) The Guarantor undertakes not to revoke this Guarantee during the period it is in force except with the previous consent of the Company in writing and agrees that any liquidation or winding up or insolvency or dissolution or any change in the constitution of the Contractor or the Guarantor shall not discharge the Guarantor's liability hereunder.
- (6) It shall not be necessary for the Company to proceed against the Contractor before proceeding against the Guarantor and the Guarantee herein contained shall be enforceable against them notwithstanding any security which the Company may have obtained or obtain from the Contractor shall at the time when proceedings are taken against the Guarantor hereunder be outstanding or unrealised.
- (7) Notwithstanding anything contained herein before, our liability under the Guarantee is restricted to Rs. \_\_\_\_\_ (Rupees \_\_\_\_\_). Our guarantee shall remain in force until \_\_\_\_\_, i.e. the present date of validity of Bank Guarantee unless the date of validity of this Bank Guarantee is further extended from time to time. Unless a claim or demand under this guarantee is made against us on or before-----, we shall be discharged from our liabilities under this Guarantee thereafter.
- (8) Any claim or dispute arising under the terms of this documents shall only be enforced or settled in the courts at New Delhi/ Delhi only.
- (9) The Guarantor hereby declares that it has power to execute this Guarantee under its Memorandum and Articles of Association and the executant has full powers to do so on its behalf under the Power of Attorney dated \_\_\_\_\_ (To be incorporated by the Bank) granted to him by the proper authorities of the Guarantor.

IN WITNESS whereof the \_\_\_\_\_ (Bank) has hereunto set and subscribed its hand the day, month and year first, above written.

Signed for and on behalf of the Bank



**SCOPE OF WORK FOR IN-SITU MACHINING OF HP, IP & LP TURBINE CASINGS FOR  
R&M AND UPRATING OF UNIT No. 7 (110 MW) HARDUAGANJ TPS**

**WITNESSES**

1. Name & Address

2. Name & Address

**Notes:**

1. The above BG shall be executed on the non-judicial stamp papers of adequate value procured in the name of the Bank in the state where the Bank is located.
2. The above BG is required to be sent by the executing bank directly to BHEL at the address where tender is submitted /accepted under sealed cover.


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**List of Special T&P required for In-situ Machining of 110 MW**

**Turbine HP/IP/LP casings at site**

- Milling beds - 0.6, 1.0, 1.5, 3.0 & 5.5 Mtrs.
- Motorized Feed controller
- Large bearing block
- Large Spindle/ working spindle
- Ball cross arm
- Sleeve
- Angle sleeve
- Magnetic Boring Machine
- Grinding block
- Boring unit with boring bar & boring shaft
- Drill chuck
- Miller chuck
- Milling head
- Boring head
- Air Grinder
- Measuring instruments viz Inside/Out side micrometers
- Straight Edge
- Face Lathe
- ALU Arms
- Feed Motor
- Air Boring machine
- Air Hammer
- Bender motor for boring machine
- Drill Shaft 5.6 Mtr
- Cutting tools for milling bed
- PIV Gears
- Bearing Blocks

**Note:** The above list of T&P has been prepared based on earlier experience of In-situ machining of HP, IP and LP casing for R&M of Unit-1, 110 MW at Panipat TPS. However actual list may vary by nomenclature/ exact size/ numbers for In-situ machining of HP, IP & LP turbine casings for R&M and Uprating of Unit no. 7 (110 MW) Harduaganj TPS.



**SCOPE OF WORK FOR IN-SITU MACHINING OF HP, IP & LP TURBINE CASINGS FOR  
R&M AND UPRATING OF UNIT No. 7 (110 MW) HARDUAGANJ TPS**

**QUALIFYING REQUIREMENTS**

**A. Financial Qualifying Requirement**

"The average annual financial turnover during the preceding three years (2008-09, 2009-10 & 2010-11) should be at least Rs.150 lakhs."

The bidder is required to submit the audited balance sheets and profit and loss accounts of the last three financial years i.e. 2010-11, 2009-10 and 2008-09 in support of the same along with the technical bid.

**B. Technical Qualifying criteria in technical bid**

(i) "The Bidder should have executed one such job of in-situ machining of similar large-sized jobs of 2.3 mtrs. diameter or above during last seven years as on the date of opening of technical bid. The bidder shall submit relevant work orders and satisfactory completion certificate or any other proof of completion of job as supporting document."

**OR**

(ii) The bidders having Joint Venture with an Indian contractor and either of them has executed one such job of in-situ machining of similar large-sized jobs of 2.3 mtrs. diameter or above during last seven years. The bidder shall submit relevant work orders and satisfactory completion certificate or any other proof of completion of job as supporting document."

**Consortium criteria**

**Joint Venture against B (ii) shall be as follows:**

- i) Legal documents of Joint Venture agreement, signed by all partners, shall be submitted as part of technical bid and shall be scrutinized during technical scrutiny. The composition of the Joint Venture and role and responsibility of each Partner must be well defined especially about the type of arrangement between the two Partners in ensuring the execution of the job;
- ii) One of the partners shall be nominated as being in charge (hereafter referred to as the 'Lead Partner'), and this authorization shall be evidenced by submitting a power of attorney / authority letter, signed by legally authorized signatories of all the Partners;
- iii) In such a case of Joint Venture, the number of partners including the lead partner shall not exceed two;
- iv) Lead Partner shall be authorized to incur liabilities and receive instructions for and on behalf of any and all Partners of the Joint Venture and the entire execution of the contract, including payment, shall be done exclusively with Lead Partner;
- v) All partners of Joint Venture shall be liable jointly and severally for execution of the contract in accordance with the contract terms;
- vi) In case of dissolution of Joint Venture agreement, the Lead Partner shall be liable for arranging another partner for Joint Venture meeting the requisite qualifying

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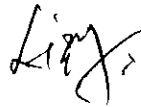
**SCOPE OF WORK FOR IN-SITU MACHINING OF HP, IP & LP TURBINE CASINGS FOR  
R&M AND UPRATING OF UNIT No. 7 (110 MW) HARDUAGANJ TPS**

requirements and completing the work as per the terms of contract without any additional cost to BHEL or without affecting project schedule;

- vii) For the purpose of Financial Qualifying Requirements, Financial Turnover of Lead Partner only shall be considered;
- viii) The tenderers shall be required to submit a BG acceptable to BHEL amounting to 1% of contract value through their Joint Venture partner in favour of BHEL as a backup guarantee (from the Joint Venture partner) for successful execution of work. This BG shall be submitted within one month from date of LOI and shall remain valid for 12 months and shall be extended up to commissioning of unit, if required. BHEL shall return the above BG on commissioning of unit.

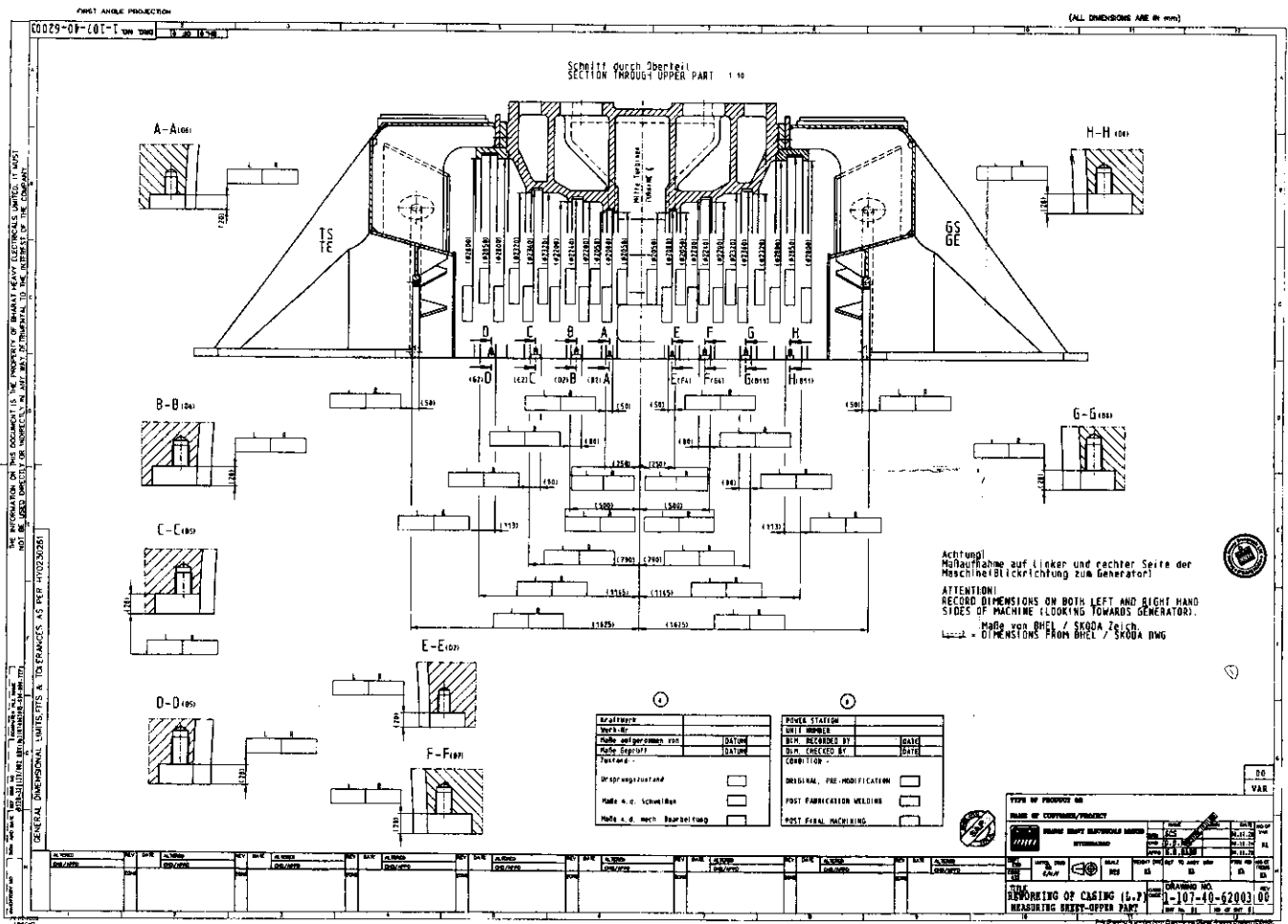
**Explanatory Notes for QR**

- i. Tenderer shall submit documents in support of meeting the respective Qualifying Requirement.
- ii. Last seven years mentioned above will be reckoned from date of Technical Bid opening.
- iii. If the qualifying work is completed in the seven (7) years period specified above, even if started earlier, the same will also be considered meeting the qualifying requirements.





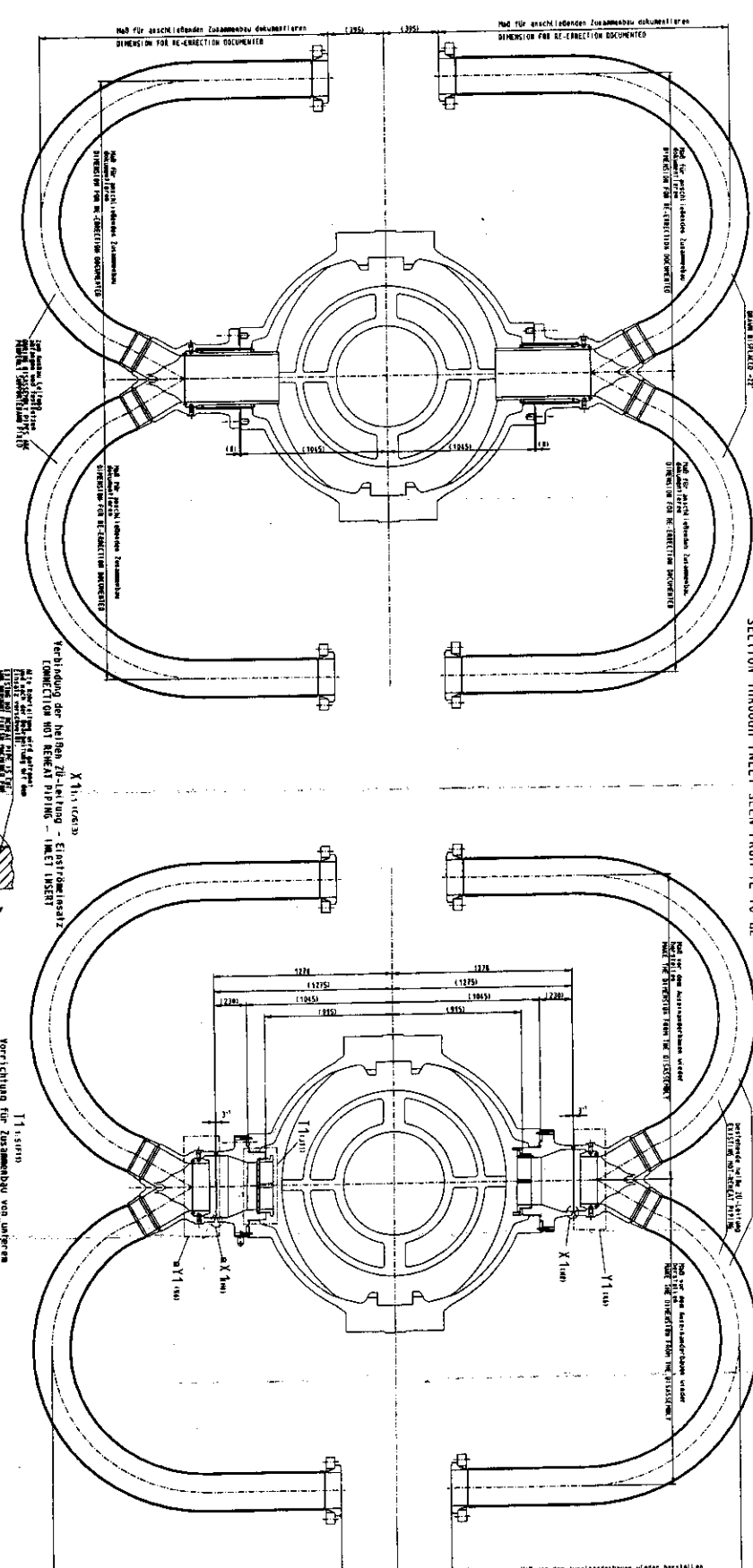
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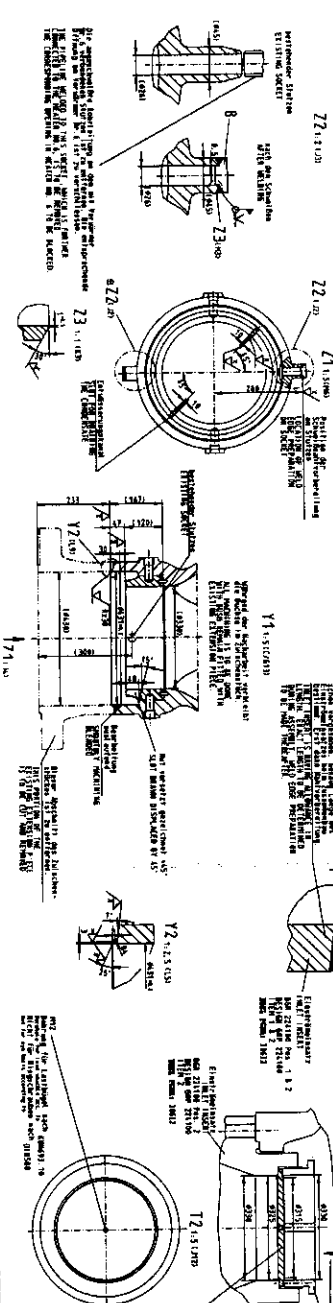


[illegible]

XIV



GENERAL DIMENSIONAL LIMITS/FITS & TOLERANCES AS PER HYD230281

[illegible]

**NOTE:**  
1. RPA CLASSIFICATION, EMPLOYMENT, TESTING  
E. MODIFICATION OF THE FORMS: 10-672(1),  
APPEND.

**FOR MORE CULTS:**  
FOR JOURNALISTS VISIT AND  
REPORT BACK: 4-136-01-0200) FOR  
SACRAMENTO OF I.S. MEDIA CENTER.

HIERZU GEBHÖRT BLATT 1 : 9535-221129  
 BLATT 2 : 9535-221128  
 TO THIS BELONGS SHEET 1 : 9535-221129  
 SHEET 2 : 9535-221128

(continued)

[illegible]0-0 (13.85) 1.25 ~  
D.H.

U10001:1

10




→

99  
35

Z 1189, 6181, 5  
Vorrichtung für Zusammenbau von Unterflur  
Einströmlinsatz mit HD Außengehäuse  
FIXTURE FOR ASSEMBLY OF LOWER  
INLET INSERT WITH HP OUTER CASING

[illegible]

$A_{-1}$   $\xrightarrow[\text{R210}]{\text{dmg (dich)}}$   $A_1 A_2 A_3 A_4 A_5$  A  
 STAGE THREE

TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT		DATE		PAGE	
MATERIAL SHORT CATALOGUE LISTS		1987/1988		1 of 1	

REWORKING OF  
OUTER CASING (H.P.)



