



ISO 9001/14001/27001,
OHSAS18001 & SA8000

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

NOTICE INVITING TENDER

To
M/s

BY REGISTERED POST/COURIER/HAND
Ref. No.: DLI/BTD-3/RM-TUR-MCH/10_029

Date: 22/03/2010

Sub: MACHINING OF HP AND IP TURBINE CASINGS FOR R AND M AND UPRATING OF UNIT-3, 110 MW, GNDTP, BATHINDA, PUNJAB

Dear sir,

1. 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)
2. Offer should be sent in Separate envelopes for Techno-commercial and Price bids. Offerers distinctive identification (Company Name),tender no. DLI/BTD-3/RM-TUR-MCH/10_029 due on 09/04/2010 'Techno-commercial' and 'price bid-Option A' and 'price bid-Option B' should be mentioned clearly on cover of each envelope. In case it is holiday on 09/04/2010 the tenders will be opened on next working day.
3. 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.
4. The rates should be valid for a period of three 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.
5. The offer should reach this office on or before 15:00 on 09/04/2010. The offer will be opened at 15:30 on same day (In case it is holiday on 09/04/2010 the tenders will be opened on next working day) in presence of such tenderers or their authorised representatives as may be present.
6. Earnest money of Rs. 100000 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 ONE TIME EMD SHALL BE Rs 1,00,000/= (Rs. One Lakh).
7. 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.
8. The NIT and attachments can be downloaded from www.bhelpsnr.co.in or from www.bhel.com. Bidder(s) can also obtain hard copy of tender documents from this office on request on all working days between 09.30 Hrs. to 12.30 Hrs before 05.04.2010. Request for issue of tender document should clearly indicate Tender No. and work.
The bidders may refer to the Technical and Financial qualifying requirements given in the NIT and comply with the same by providing the necessary documents.
9. It will be in interest of the contractor to visit site before submitting offer to have clear idea about the site conditions.

Telephone : 0120-2515469 to 71, 2515408 Fax: 0120-2515467,2515438,2515423
e-mail : anil@bhelpsnr.co.in

HRDI & PSNR Complex, Plot No. 25, Sector-16A
P.B. No. 55, Noida – 201 301, Distt. Gautam Budh Nagar (UP)
Regd.Office : BHEL House, Siri Fort, New Delhi-110049

Tender No. : DLI/BTD-3/RM-TUR-MCH/10_029 Date : 22/03/2010 Due Date : 09/04/2010

- 10 Time period for completion of job will be Option A 65 days ,Option B - 45 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:- Shall be as given in the scope of work for Options-A and B respectively.. All payments are subjected to income tax deduction at source as per Central Government laws and compliance to all statutory requirement like Works Contract Tax at the rate prescribed under Punjab Value Added Tax unless and until exemption from prescribed Sales Tax authorities is provided by the contractor. It is advised that the contractor shall get himself registered with local sales tax department before submitting first Running Bill.
- 12 BHEL reserves the right to BHEL reserves the right to go for a Reverse Auction instead of opening the submitted sealed bids, which shall be decided after Technical Evaluation.
- 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 5 days (for Option-A) and 15 days (for Option-B) 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 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 15/04/2010.However the date of start shall be the date fixed by BHEL Engineer after award of work.
- 25 PRICE BID OF ONLY THOSE PARTIES WILL BE OPENED WHO QUALIFY IN TECHNO-COMMERCIAL BID.
- 26 **The bidders may quote for either Option A or Option B or both. They must mention in the Technical Bid about the option they are bidding for. Price bids for Options A & B must be in separate envelopes.**
- 27 **BHEL reserves the right to award the work either for Option A or Option B. BHEL's decision in this regard shall be final and binding on the bidders.**

Encl.

Thanking you,

Yours truly,

1. Scope of work - Annexure A
2. Schedule of rates - Annexure B & C

For Additional General Manager

TECHNICO-COMMERCIAL BID FOR :

Tender DLI/BTD-3/RM-TUR-MCH/10_029 dated 22/03/2010

Sub: MACHINING OF HP AND IP TURBINE CASING FOR R AND M AND UPRATING OF UNIT-3 110 MW, GNDTP, BATHINDA

NAME & ADDRESS	:	
PAN NO.	:	
Provident Fund	:	
OFFER NO	:	
EMD	:	
VALIDITY OF OFFER	:	3 Months
COMPLETION PERIOD	:	Option A - 65 days, Option B - 45 days
MOBILISATION PERIOD	:	Option A - 5 days, Option B - 15 days
GUARANTEE PERIOD	:	1 Month

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.

Tenderess to note: Blank copy of the price bid is to be signed & attached with the Techno commercial bid.

- 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.bhelpsnr.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.bhelpsnr.co.in of BHEL PSNR are accepted.

Sign of contractor: _____

Date:

Seal

PRICE BID FOR OPTION-A – MACHINING AT VENDOR’S WORKS:

ANNEXURE C
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Tender No. DLI/BTD-3/RM-TUR-MCH/10_029 dated 22/03/2010

Sub: MACHINING OF HP AND IP TURBINE CASINGS FOR R AND M AND UPRATING OF
UNIT-3, 110 MW, GNDTP, BATHINDA, PUNJAB

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 Option - A (inclusive of all consumables,input materials and supervision) OPTION – A – Machining at Vendor’s Works	(Amount In Figure) Rs. : (Amount in Words) Rupees :
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Sign of contractor: _____

Date:

Seal

PRICE BID FOR OPTION – B – IN-SITU MACHINING:

ANNEXURE C

Tender No. DLI/BTD-3/RM-TUR-MCH/10_029 dated 22/03/2010

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**Sub: MACHINING OF HP AND IP TURBINE CASINGS FOR R AND M AND UPRATING OF
UNIT-3, 110 MW, GNDTP, BATHINDA, PUNJAB**

NAME & ADDRESS	:	
OFFER NO.	:	
OFFER DATE	:	

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

1.	Lumpsum (LS) price for the entire scope of work as per Option - A (inclusive of all consumables, input materials and supervision) OPTION – B – In-Situ Machining	(Amount In Figure) Rs. : (Amount in Words) Rupees :
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Sign of contractor

Seal

Date:

SCOPE OF WORK FOR MACHINING OF HP & IP TURBINE CASINGS AT VENDOR'S WORKS FOR R&M AND UPRATING OF UNIT No. 3 (110 MW) GNDTP BATHINDA – OPTION 'A'

SL No.	ACTIVITY DESCRIPTION
	<p>Total work includes transportation of casings from site to works, machining work at works, packing of casings at their works for safe transportation and transportation back to site including arrangement of trailer to and fro is included in the scope of the contract. Transit insurance as well as insurance in vendor's works is also included in scope. The internals to be fitted in the casings shall also be transported to the works for checking and brought back to the plant by the contractor through his own trailers/trucks.</p>
1)	<p><u>HP CASING</u> Ref:-<u>Drg. No. 0-105-01-62005 Sheet 1 & 2</u></p>
1.1	<p>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].</p>
1.2	<p>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].</p>
1.3 a)	<p>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.</p>
b)	<p>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].</p>
1.4	<p>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].</p>
1.5(a)	<p>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].</p>
(b)	<p>To drill/ tap threaded holes to hold the pads in position in top half casing only.</p>
1.6 (a)	<p>Drilling of hole in outer top half casing for HP exhausts temperature measurement. Spot faced. [Detail T (B-2)].</p>
(b)	<p>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].</p>
(c)	<p>Drilling of holes up to 50 % depth in outer casing top and bottom for measurement of casing temperature. [Section C-C and detail-P].</p>
1.7	<p>Checking/machining of threads in both top and bottom casing existing holes</p>
2.0	<p><u>IP CASING</u> Drg. No. 0-106-01-62002 Sheets1, 2 & 3</p>
2.1	<p>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.</p>
2.2	<p>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.</p>
2.3 (a)	<p>Machining of seating areas of front and rear outer gland boxes in outer casing (axial face machining and radial machining).</p>

SCOPE OF WORK FOR MACHINING OF HP & IP TURBINE CASINGS AT VENDOR'S WORKS FOR R&M AND UPRATING OF UNIT No. 3 (110 MW) GNDTP BATHINDA – OPTION 'A'

(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].
(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	GENERAL
3.1	Overrun Charges: The work to be carried out on turnkey basis and on firm price. No additional or overrun charges shall be entertained at any stage
3.2	Party is advised to visit site and understand work. HP & IP Casings are in dismantled condition at site and machining scope clarifications can be given at site or BHEL SAS Office at Chandigarh / Noida. Copies of 5 nos. of drawings for reference are enclosed.
3.3	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 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, 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.

SCOPE OF WORK FOR MACHINING OF HP & IP TURBINE CASINGS AT VENDOR'S WORKS FOR R&M AND UPRATING OF UNIT No. 3 (110 MW) GNDTP BATHINDA – OPTION 'A'

(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 at his 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, MP outer casing: Maximum dia. = 1830 mm
(d)	Accuracy should be is 0.05 mm with surface finish of 3.2 microns and the tolerances as mentioned in the attached drawings.
(e)	Maximum dimensions/ Weight for handling purpose are as below: HP Outer Casing: Weight = 32000 Kg, Length = 3420mm, Width = 2250 mm, Height = 2130 mm IP Outer Casing: Weight = 40250 Kg Length = 3600 mm, Width = 3700 mm, Height = 2830 mm
3.4	Repair like re-drilling and threading of existing holes etc. is included in the scope
3.5	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.
3.6	Completion Period 65 days Total work includes transportation of casings from site to works, machining work at works, packing of casings at their works for safe transportation and transportation back to site including arrangement of trailer to and fro is included in the scope of the contract. Transit insurance as well as insurance in vendor's works is also included in scope. The internals to be fitted in the casings shall also be transported to the works for checking and brought back to the plant by the contractor through his own trailers/trucks. The work is to be completed in 65 days from the date of lifting and transportation of casings for transportation to their delivery back at site. It may require working in 2 or 3 shifts at works to achieve completion of job.
3.7	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.
3.8	The work is to be taken up immediately as unit is already shut down and casings has been dismantled and accordingly the party has to prepare required tooling in advance along with all resources as men, machine and material. The exact date of start of work will be communicated with a ' 5' days notice as mobilization period.
3.9	Validity of offer – 3 months.
3.10	Handling of turbine components at site will be by BHEL. While handling at works including assembly shall be responsibility of the party. Assistance, including EOT crane will be given for loading and un-loading of casings at site.
3.11	Terms of Payment: <ul style="list-style-type: none"> • 5% of the contract value shall be paid as interest bearing advance against submission of a Bank Guarantee as per BHEL format given at Annexure – I of this SOW for an amount equal to 1.25 times of advance valid for 12 months initially and thereafter extension for a period upto which the advance is fully adjusted. The interest chargeable shall be Prime Lending Rate of State Bank of India plus 2%. The advance paid shall be recovered from the contractor's progressive bills to an extent of 10% of each progressive bill amount along

SCOPE OF WORK FOR MACHINING OF HP & IP TURBINE CASINGS AT VENDOR'S WORKS FOR R&M AND UPRATING OF UNIT No. 3 (110 MW) GNDTP BATHINDA – OPTION 'A'

	<p>with interest charges till it is fully recovered. The BG shall be returned after full adjustment of the entire amount of advance along with interest.</p> <ul style="list-style-type: none"> • 10% of CV after receipt of casings at works and completion of all preparatory works against BG as per BHEL Format at Annexure-I for 100% of Security Deposit, which will be released at the time of release of Final Bill.. • 30% of contract value on completion and checking of machining of first casing. • 30% of contract value on completion and checking of machining of second casing. • 10% of contract value on receipt of first casing at site after machining in good condition duly inspected by BHEL. • 10% of contract value on receipt of second casing at site after machining in good condition duly inspected by BHEL. • 10% of CV after signing of last acceptance documents along with BHEL site. • Service Tax, if any, shall be paid against documentary proof. • All payments are subject to Income Tax deduction as per the applicable rates notified by Government of India and WCT deduction at the rate prescribed under Punjab Value Added Tax unless and until exemption from prescribed Sales Tax Authorities is produced by the contractor. • The contractor should get himself registered with local sales tax department before submission of first running bill. • BHEL reserves the right to withhold payment in case the contractor does not fulfill terms and conditions as per contract.
3.12	<p>The price quoted for the job should include all charges like charges for transportation of casings from site to works, machining work at works, packing of casings at their works for safe transportation and transportation back to site including arrangement of trailer to and fro, Transit insurance as well as insurance in vendor's works, transportation of internals to and fro, customs and taxes, if any etc.</p>
3.13	<p>Prospective contractor must arrange for Road Permits and bear Entry Tax in respect of its tools, machinery, etc. to site.</p>

SPECIAL CONDITIONS OF CONTRACT

1.0 Quantum of work

- 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.
- 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 Commencement and completion of work

- 2.1 The starting time and completion time is the essence of the tender. As the timebound program is firmly committed to customer, the starting time and completion time should be strictly adhered to. 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

**SCOPE OF WORK FOR MACHINING OF HP & IP TURBINE CASINGS AT VENDOR'S
WORKS FOR R&M AND UPRATING OF UNIT No. 3 (110 MW) GNDTP BATHINDA –
OPTION 'A'**

- 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 Penalty for delay :

- 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 Inspection and completion or work:
- 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 Tools, Tackles, Test Equipments & Consumables:

- 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. However in case of emergency, BHEL may supply certain items, if available to contractor at actual cost plus handling charges. These will be deducted from contractor's running bills. T&P shall be regularly tested by the contractor to ensure that the same is available in fit condition for use. Testing equipment for conducting various tests during the progress of overhauling re-commissioning shall have to be provided by the contractor. Spare parts going into permanent installation shall only be provided by BHEL.
- 5.2 The contractor shall provide inspection measuring and test equipments duly calibrated against international standards. In case of any erratic behaviour of these items, the same shall be immediately withdrawn and got recalibrated by the contractor. The contractors shall submit copy of test certificates in respect of T&P, electrodes and instrument as detailed above.

Note: Drawings shall be obtained by the bidders on request from the office of BHEL-PSNR-Noida, Plot No. 25, Sector 16A, Noida (III Floor – Subcontracting Department). These are to be signed and submitted along with the technical bid.

**SCOPE OF WORK FOR MACHINING OF HP & IP TURBINE CASINGS AT VENDOR'S
WORKS FOR R&M AND UPRATING OF UNIT No. 3 (110 MW) GNDTP BATHINDA –
OPTION 'A'**

INTRODUCTION

BHEL has been awarded Renovation & Modernisation (R&M) and up-rating from 110 MW to 120 MW work of Unit-3 and 4 sets at GNDTP, Bhatinda, (Punjab) by PSEB. The R&M work covers Boiler, Electro- static precipitator, 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 material will be supplied from our manufacturing units located all over the country as well as our vendors located both in country and abroad.

GNDTP, Bhatinda consists of 4 x 110 MW units of Czechoslovakian design. Units 3 & 4 were synchronized on 30.03.78 and 31.01.1979 respectively. For attaining 120 MW, machining of Hp outer and IP outer casings will be carried out. New Hp and IP inner casings will be supplied which will be fitted into these old machined outer casings.

New LP casing is being supplied.

**SCOPE OF WORK FOR MACHINING OF HP & IP TURBINE CASINGS AT VENDOR'S
WORKS FOR R&M AND UPRATING OF UNIT No. 3 (110 MW) GNDTP BATHINDA –
OPTION 'A'**

ANNEXURE-I

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

**SCOPE OF WORK FOR MACHINING OF HP & IP TURBINE CASINGS AT VENDOR'S
WORKS FOR R&M AND UPRATING OF UNIT No. 3 (110 MW) GNDTP BATHINDA –
OPTION 'A'**

default or questions the correctness of any demand made by the Company in any Court Tribunal or Arbitration proceedings or before any other Authority.

- (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 not withstanding 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.

**SCOPE OF WORK FOR MACHINING OF HP & IP TURBINE CASINGS AT VENDOR'S
WORKS FOR R&M AND UPRATING OF UNIT No. 3 (110 MW) GNDTP BATHINDA –
OPTION 'A'**

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

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.

**SCOPE OF WORK FOR IN-SITU MACHINING OF HP & IP TURBINE CASINGS
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– OPTION 'B'**

SL No.	ACTIVITY DESCRIPTION
1)	HP CASING Ref:-Drg. No. 0-105-01-62005 Sheet 1 & 2
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(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.
1.6 (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].
1.7	Checking/machining of threads in both top and bottom casing existing holes
2.0	IP CASING Drg. No. 0-106-01-62002 Sheets1, 2 & 3
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].
(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].

**SCOPE OF WORK FOR IN-SITU MACHINING OF HP & IP TURBINE CASINGS
FOR R&M AND UPRATING OF UNIT No.3 (110 MW) GNDTP BATHINDA
– OPTION 'B'**

(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	GENERAL
3.1	Overrun Charges: The work to be carried out on turnkey basis and on firm price. No additional or overrun charges shall be entertained at any stage
3.2	Party is advised to visit site and understand the work. HP & IP Casings are in dismantled condition at site and machining scope clarifications can be given at site or BHEL SAS Office at Chandigarh/ Noida. Copies of 5 nos. of drawings for reference are enclosed.
3.3	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 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, 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.
(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 at site 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.

**SCOPE OF WORK FOR IN-SITU MACHINING OF HP & IP TURBINE CASINGS
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– OPTION 'B'**

(c)	Maximum sizes to be machined at works in different casings are as below: HP outer casing: Maximum dia. = 1145 mm, MP outer casing: Maximum dia. = 1830 mm
(d)	Accuracy should be is 0.05 mm with surface finish of 3.2 microns and the tolerances as mentioned in the attached drawings.
(e)	Maximum dimensions/ Weight for handling purpose are as below: HP Outer Casing: Weight = 32000 Kg, Length = 3420mm, Width = 2250 mm, Height = 2130 mm IP Outer Casing: Weight = 40250 Kg Length = 3600 mm, Width = 3700 mm, Height = 2830 mm
3.4	Repair like re-drilling and threading of existing holes etc. is included in the scope
3.5	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.
3.6	Completion Period: - 45 days The work is to be completed in 45 days It may require working in 2 or 3 shifts to achieve completion of job.
3.7	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.
3.8	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. The exact date of start of work will be communicated with a '15' days notice as mobilization period.
3.9	Validity of offer – 3 months.
3.10	Handling of turbine components at site will be by BHEL.
3.11	Terms of Payment: <ul style="list-style-type: none"> • 5% of the contract value shall be paid as interest bearing advance against submission of a Bank Guarantee as per BHEL format given at Annexure – I of this SOW for an amount equal to 1.25 times of advance valid for 12 months initially and thereafter extension for a period upto which the advance is fully adjusted. The interest chargeable shall be Prime Lending Rate of State Bank of India plus 2%. The advance paid shall be recovered from the contractor's progressive bills to an extent of 10% of each progressive bill amount along with interest charges till it is fully recovered. The BG shall be returned after full adjustment of the entire amount of advance along with interest. • 10% of CV on completion of preparation of tools, fixtures and machines and to be released against certificate of independent inspection agency based in country of origin of equipment and T&P on behalf of BHEL and against BG as per BHEL Format at Annexure-I for 100% of Security Deposit, which will be released at the time of release of Final Bill. Cost of inspection to be borne by the contractor. • 20% of CV on receipt of tools, fixtures and machinery at site and on completion of preparatory works for machining and start of machining works at site. • 30% of contract value on completion and checking of machining of first casing by BHEL. • 30% of contract value on completion and checking of machining of second casing by BHEL. • 10% of CV after signing of last acceptance documents along with BHEL site. • Service Tax, if any, shall be paid against documentary proof.

**SCOPE OF WORK FOR IN-SITU MACHINING OF HP & IP TURBINE CASINGS
FOR R&M AND UPRATING OF UNIT No.3 (110 MW) GNDTP BATHINDA
– OPTION 'B'**

	<ul style="list-style-type: none"> All payments are subject to Income Tax deduction as per the applicable rates notified by Government of India and WCT deduction at the rate prescribed under Punjab Value Added Tax unless and until exemption from prescribed Sales Tax Authorities is produced by the contractor. The contractor should get himself registered with local sales tax department before submission of first running bill. BHEL reserves the right to withhold payment in case the contractor does not fulfill terms and conditions as per contract.
3.12	Power supply for machining equipments will be given for the job at site by BHEL free of charges.
3.13	Compressed air will be made available on the working floor at a pressure of 4.0 kg/cm ² .
3.14	The price quoted for the job should include all charges like charges for machining, manpower, transportation of equipment and tools (to and fro by Airline cargo) insurance for equipment, traveling charges of operators (to and fro), cost for hotel, cost of local travel, customs and taxes, if any etc. Service tax, if any, shall be paid extra against documentary proof, if its payment is statutory.
3.15	Prospective contractor must arrange for Road Permits and bear Entry Tax in respect of its tools, machinery, etc. to site.

SPECIAL CONDITIONS OF CONTRACT

1.0 Quantum of work

- 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.
- 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 Commencement and completion of work

- 2.1 The starting time and completion time is the essence of the tender. As the timebound program is firmly committed to customer, the starting time and completion time should be strictly adhered to. 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.

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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 Penalty for delay :

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 Inspection and completion or work:

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 Tools, Tackles, Test Equipments & Consumables:

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. However in case of emergency, BHEL may supply certain items, if available to contractor at actual cost plus handling charges. These will be deducted from contractor's running bills. T&P shall be regularly tested by the contractor to ensure that the same is available in fit condition for use. Testing equipment for conducting various tests during the progress of overhauling re-commissioning shall have to be provided by the contractor.

Spare parts going into permanent installation shall only be provided by BHEL.

5.2 The contractor shall provide inspection measuring and test equipments duly calibrated against international standards. In case of any erratic behaviour of these items, the same shall be immediately withdrawn and got recalibrated by the contractor. The contractors shall submit copy of test certificates in respect of T&P, electrodes and instrument as detailed above.

6.0 Accommodation for site staff and store space:

6.1 Contractor has to arrange for the stores and office at site and its maintenance. Space for the same shall be made available as per the availability at site. The contractor shall be responsible to provide all necessary facilities like residential accommodation with sanitary facilities, transport, electricity, water, medical facilities, bonus, etc. as required under various labour laws and statutory rules and regulations framed there under to the personnel employed by him. BHEL assumes no liability in this regard.

Note: Drawings shall be obtained by the bidders on request from the office of BHEL-PSNR-Noida, Plot No. 25, Sector 16A, Noida (III Floor – Subcontracting Department). These are to be signed and submitted along with the technical bid.

**SCOPE OF WORK FOR IN-SITU MACHINING OF HP & IP TURBINE CASINGS
FOR R&M AND UPRATING OF UNIT No.3 (110 MW) GNDTP BATHINDA
– OPTION 'B'**

INTRODUCTION

BHEL has been awarded Renovation & Modernisation (R&M) and up-rating from 110 MW to 120 MW work of Unit-3 and 4 sets at GNDTP, Bhatinda, (Punjab) by PSEB. The R&M work covers Boiler, Electrostatic precipitator, 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 material will be supplied from our manufacturing units located all over the country as well as our vendors located both in country and abroad.

GNDTP, Bhatinda consists of 4 x 110 MW units of Czechoslovakian design. Units 3 & 4 were synchronized on 30.03.78 and 31.01.1979 respectively. For attaining 120 MW, machining of Hp outer and IP outer casings will be carried out. New Hp and IP inner casings will be supplied which will be fitted into these old machined outer casings.

New LP casing is being supplied.

**SCOPE OF WORK FOR IN-SITU MACHINING OF HP & IP TURBINE CASINGS
FOR R&M AND UPRATING OF UNIT No.3 (110 MW) GNDTP BATHINDA
– OPTION 'B'**

ANNEXURE-I

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

**SCOPE OF WORK FOR IN-SITU MACHINING OF HP & IP TURBINE CASINGS
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default or questions the correctness of any demand made by the Company in any Court Tribunal or Arbitration proceedings or before any other Authority.

- (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.

**SCOPE OF WORK FOR IN-SITU MACHINING OF HP & IP TURBINE CASINGS
FOR R&M AND UPRATING OF UNIT No.3 (110 MW) GNDTP BATHINDA
– OPTION 'B'**

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

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.

QUALIFYING REQUIREMENTS

Financial Qualifying Requirement common for Both Options A and B

- “The average annual financial turnover during the last 3 years, ending 31st March, 2009 should be at least Rs. 100 lakhs.”

The bidder is required to submit the audited balance sheets and profit and loss accounts of the last three financial years i.e. 2008-09, 2007-08 and 2006-07 in support of the same along with the technical bid.

Technical Qualifying criteria in technical bid in Option A

- “The bidders should have the capability for accurate machining of similar large-sized jobs of about 3 mts. Diameter or above and shall submit supporting documents for execution of two such jobs during the last seven years as on date of opening of technical bid. The bidder shall produce evidence of possessing such capability like vertical boring machine and horizontal boring machine, which can accommodate such large casings”

Technical Qualifying criteria in technical bid in Option B

- “The bidders should have experience of having carried out similar work of in-situ machining of minimum 2 units of turbine casings of 60 MW and above during last seven years as on 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.”