

BHARAT HEAVY ELECTRICALS LIMITED, HEEP, RANIPUR, HARIDWAR
Quality Control Department -Fabrication division

Tender Notice


NIT No: HW/QM/QCF/16-17/01

Dated: 20.10.2016

Sealed quotations superscribing the tender number and due date are invited from well-established, reliable and experienced firms for carrying out Radiography testing and Ultrasonic testing as per the details given below:

Name of Work	Radiography testing (X-Ray & Gammagraphy) and Ultrasonic testing a. X-Ray (Activity Code: WW6520000001): 1710000 sq.cm. b. Gammagraphy (Activity Code: WW6520000002): 296400 sq.cm. c. Ultrasonic testing (Activity Code: WW6520000003): 1800 metres of weld length
NIT No & Date	HW/QM/QCF/16-17/01 Dated: 20.10.2016
Period of Work	One Year
NIT Value	Rs.1574220/- (Rs. Fifteen lakh seventy four thousand two hundred and twenty only) + Service Tax at the rate applicable at the time of execution of the work
Amount of Earnest Money Required	Rs.31485/- (Rupees Thirty one thousand four hundred and eighty five only)
Last Date and time of Receipt of Tender	11.11.2016 (Friday) up to 01:45 p.m. at tender box in tender room.
Date & Time for opening of Technical Bid	11.11.2016 (Friday) at 02:30 p.m.
Place of opening of Tender	Tender Room in purchase department, 4th floor, Main Administrative Building, HEEP, BHEL, Ranipur, Haridwar. 249403 (Uttarakhand) India
Tender Cost	Rs. 500/- (Five Hundred only)

Place *Haridwar*
Date *20.10.2016*


AK Sharma
SDGM(QC-F)

I /We agree.

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Sign and seal of Contractor

TECHO-COMMERCIAL BID
TERMS AND CONDITIONS

1. This tender enquiry comprises of following documents:
This NIT No: HW/QM/QCF/16-17/01 Dated: 20.10.2016
Terms and Condition: Annexure-I
Pre-qualification Criteria Annexure-II
Technical Requirements: Annexure-III
Details of firm: Annexure-IV
Checklist and schedule of general particulars: Annexure-V
Format of Certificate by Chartered Accountant (on EM-II expiry) Annexure-VI
Price Bid: Annexure-VII
2. Full set of Tender can be either downloaded from BHEL websites www.bhel.com / www.bhelhwr.co.in and also from www.tenders.gov.in or can be purchased from office of the undersigned on submission of proof of depositing the Tender cost at the Cash section. Tender fee is not required to be submitted if Tender Document is downloaded by the contractor directly from website.
3. The offer must be sent in two separate sealed envelopes containing Techno-commercial Bid in one envelope marked 'Techno-commercial Bid' and Price Bid in second envelope marked 'Price Bid'. Both these envelopes must be contained in an outer main envelope. 'NIT number' and 'Date and Time of opening of Enquiry' should be clearly displayed on all the envelopes.
4. Sealed Techno-commercial bid envelope should consist of all the documents as mentioned in Annexure V, 'Checklist and Schedule of General Particulars' (point no.1 to 9), except for the price bid (point no.10).
5. Sealed Price bid envelope should only contain price bid in Annexure-VII format and should be clearly marked on the envelope as 'Price Bid'. Price Bid in any other format will not be accepted.
6. Bidders who accept all the terms and conditions of this Tender will only be considered for the Price bid stage.
7. Offers can be sent to the address mentioned below by Registered Post, Courier etc., so as to reach latest by 1.45 P.M. on 11.11.2016. The quotations must be posted with due date allowance for transit time:
Tender Room in purchase department,
4th floor, Main Administrative Building,
HEEP, BHEL, Ranipur, Haridwar.
249403 (Uttarakhand) India.
8. Offers may also be submitted by hand in the Tender Box kept in Tender Room in purchase department, 4th floor, Main Administrative Building, HEEP, BHEL, Ranipur, Haridwar. (Uttarakhand) India-249403 by 1.45 P.M. on 11.11.2016.
9. Tenders not received, at the Tender room located at 4th Floor of Main Administrative Building, HEEP, by the date and time mentioned above will not be accepted.
- 10. Contractor should sign and put his seal on all pages of tender document.**

11. In case of any query, bidders may contact SDGM (QC-F) at phone: 01334-284394 or email at: amit_k_s@bhelhwr.co.in .
12. In the present contract radiograph area equivalent to 9000 X-Ray radiographs (of size 19 cm X 10 Cm) and 2400 Gamma Ray radiographs (of size 19 cm X 10 Cm) are proposed to be subcontracted. For the same rates are to be offered in terms of Rs. per square cm of accepted radiograph for X-Ray and Rs. per square cm of accepted radiograph for Gammagraphy. In ultrasonic testing 1800 metres of weld length is proposed to be subcontracted. For the same rates are to be offered in terms of Rs. per metre of tested weld length. Rates for X-Ray, Gammagraphy and Ultrasonic Testing are to be offered only in the sealed Price Bid as mentioned in clause 5 of NIT. Apart from the same rates are **not** to be mentioned anywhere else in the offer.
13. Area of Radiographs to be subcontracted may vary upto -10% on the lesser side and upto +20% on the higher side than the quantity mentioned in the clause 12 above. Similarly the weld length to be subcontracted for ultrasonic testing may also vary upto -10% on the lesser side and upto +20% on the higher side than the weld length mentioned in the clause 12 above.
14. In actual working large proportion of X-Ray and Gammagraphy radiographs have 190 square cm. area (i.e.size19 cm X 10 cm). However area of actual X-Ray and Gammagraphy radiographs may also be different from the same depending upon the job requirements. Area of the accepted radiograph (is square cm.) multiplied by unit rate in Rs. Per square cm. (for X-Ray and Gammagraphy respectively) will be the criteria for payment for the radiograph.
15. BHEL reserves the right to extend the contract for one more year with mutual consent. The same will be done depending upon the satisfactory performance of the contractor during the contract period.
16. **Quotations of only those parties will be accepted who submit offer for both Radiography (X-Ray & Gammagraphy) and Ultrasonic testing work. Total cost for X-Ray, Gammagraphy and Ultrasonic testing offered by the party will be added up and the same will be taken as the criteria for award of work.**
17. **No separate equipment or unit charge / unit mobilization charge / personnel stay charge or any other charge shall be applicable for X-Ray, Gammagraphy (Iridium-192) or Ultrasonic Testing. If the rates are quoted by the party in any form other than as specified in Price Bid Annexure-VII, the offer of the party will not be considered. The rate must be firm and without any escalation clauses for the entire period of contract.**
18. Offer of the contractor shall be valid for at least **90** days from the date of opening of the tender.
19. MSE suppliers can avail the intended benefits only if they submit along with the offer, attested copies of either EM II certificate having deemed validity (five years from the date of issue of acknowledgement in EM II) or valid NSIC certificate or EM II certificate along with attested copy of a CA certificate (Format enclosed at Annexure -VI where deemed validity of EM II certificate of five years has expired) applicable for the relevant financial year (latest audited). Date to be reckoned for determining the deemed validity will be the date of bid opening (Part 1 in case of two part bid). Non submission of such documents will lead to consideration of their bid at par with other bidders. No benefit shall be applicable for this enquiry if any deficiency in the above required documents are not submitted before price bid opening.

20. Earnest Money Deposit (EMD)

- a) An Earnest Money Deposit (EMD) of Rs.31485/- (Rs. Thirty one thousand four hundred and eighty five only) is to be deposited in the following forms:
 - i. Cash deposit as permissible under the extant Income Tax Act at BHEL, HEEP Haridwar, Cash counter and receipt to be enclosed with the Techno-commercial bid.
 - ii. Electronic Fund Transfer credited in BHEL account and details to be mentioned in Techno-commercial bid.
 - iii. Banker's cheque/ Pay order/ Demand draft, in favour of 'Bharat Heavy Electricals Limited', payable at Haridwar alongwith the Techno-commercial bid.
- b) The EMD of bidder will be forfeited if:
 - i. After opening the tender and within the offer validity period, the tenderer revokes his tender or makes any modification in his tender which is not acceptable to BHEL.
 - ii. The Contractor fails to deposit the required Security deposit or commence the work within the period as per LOI/ Contract. (In case LOI is silent in this regard, then within 14 days of award of contract.)
- c) EMD shall be refunded to the unsuccessful bidders.
- d) EMD shall not carry any interest.

21. Security deposit:

- a) Security Deposit will be 5% of the contract value.
- b) EMD of the successful tenderer shall be converted and adjusted towards the required amount of Security Deposit.
- c) The balance amount to make up the required Security Deposit of 5% of the contract value may be accepted in the following forms:
 - i. Cash (as permissible under the extant Income Tax Act)
 - ii. Local cheques of Scheduled Banks (subject to realization)/ Pay Order/ Demand Draft/ Electronic Fund Transfer in favour of BHEL
 - iii. Bank Guarantee from Scheduled Banks/ Public Financial Institutions as defined in the Companies Act. The Bank Guarantee format should have the approval of BHEL.
 - iv. Fixed Deposit Receipt issued by Scheduled Banks/ Public Financial Institutions as defined in the Companies Act (FDR should be in the name of the Contractor, a/c BHEL).
 - v. Securities available from Indian Post offices such as National Savings Certificates, Kisan Vikas Patras etc. (held in the name of Contractor furnishing the security and duly endorsed/ hypothecated/ pledged, as applicable, in favour of BHEL)
(Note: BHEL will not be liable or responsible in any manner for the collection of interest or renewal of the documents or in any other matter connected therewith)
- d) At least 50% of the required Security Deposit, including the EMD, will be collected before start of the work. Balance of the Security Deposit will be collected by deducting 10% of the gross amount progressively from each of the running bills of the Contractor till the total amount of the required Security Deposit is collected.
- e) If the value of work done at any time exceeds the contract value, the amount of Security Deposit shall be correspondingly enhanced and the additional Security Deposit shall be immediately deposited by the Contractor or recovered from payment/s due to the Contractor.

- f) The recoveries made from running bills (cash deduction towards balance Security Deposit amount) can be released against submission of equivalent Bank Guarantee in acceptable form, but only once, before completion of work, with the approval of the authority competent to award the work.
- g) The security deposit shall not carry any interest.
- h) Security deposit shall be released to the Contractor after satisfactory completion of the contract.

22. Payment Terms:

- a) The contractor will submit bills, for the testing work completed during the period, in triplicate, Payment shall be made every three months depending upon the quantum of satisfactorily completed work against the bills raised by the contractor in the same period. Bill prepared by the contractor must contain PAN based service tax registration number and PAN number.
 - b) NIT value is exclusive of Service tax. Payment of the Service tax will be made as per rates applicable at the time of execution of work.
 - c) Payment of service tax shall be made after verifying the deposit of service tax as per service tax act and rules. However, in case, the deposit date of service tax falls beyond the normal payment date of bill, service tax shall be paid based on a declaration by the contractor that the same will be deposited and its proof will be submitted to BHEL along with the next bill.
 - d) Payment of subsequent/ final bill shall be made only after verifying the proof of deposit of service tax of the earlier bill.
 - e) The payment will be made in e-payment mode. For the same the successful tenderer will submit his bank details on the prescribed format duly verified by the bank.
 - f) All payment will be subject to Tax Deduction at Source (TDS) as per extant rules.
 - g) If commencement of testing work (on offered radiographic testing job or ultrasonic testing job) is delayed beyond 24 hours of offer of jobs by BHEL, penalty @ 0.2 % (per delay) of the total contract value shall be deducted from respective quarterly bill. Total penalty during the contract period shall be maximum 5% of total contract value.
23. The vendor should have valid PF code No. and ESI Code No. and should submit the proof of the same or should be willing to submit the undertaking to obtain the same within one month of award of work.
24. The vendor will provide PAN based Service Tax registration number for the relevant services at the time of submitting the bid for the services offered. He will submit a proof of the same.
25. The decision of BHEL regarding interpretation of any of the terms and conditions set forth in this agreement shall be final and binding to the contractor.
26. The Contractor is to accept all the terms and conditions set forth in this tender document. Conditional tenders are likely to be rejected.
27. BHEL has the right to cancel the tender at any stage without assigning any reason.
28. If the contractor makes default in carrying out the work as directed and continues in that state after a responsible notice from Head (QC-F) or his authorized representative or fails to comply with any of the terms and conditions of contract or after reasonable notice in writing with orders properly issued thereunder, Head (QC-F) may exercise his authority to cancel the work awarded to the contractor in part or as a whole.

29. BHEL reserves the right to cancel the contract at any stage by giving one month notice and the Contractor will not have any claim in this regard for such short closure.
30. In the case of termination of contract on the ground of non-satisfactory services (including non-availability of properly functioning equipment or manpower in time), next lowest contractor may be given the option to complete the remaining work on the same terms and conditions as offered to the terminated contractor.
31. When under this contract or otherwise any sum of money shall be recoverable from or payable by the contractor, the same be deducted from any sum then due against the present contract with BHEL or he shall pay the claim on demand.
32. If any information/documents submitted by the Contractor are found false/fake at any stage, the offer will be cancelled and earnest money/ security deposited shall be forfeited. The suitable action will be taken against the Contractor as per Company rules.
33. All orders, notices etc. to be given under this contract shall be in writing, type-script or printed and communicated by fax / email / registered post / courier.
34. The contract shall include all labour, materials, tools, consumables, equipment and transport which may be required for the execution of the work. The contractor will be deemed to have satisfied himself as to the scope / nature of the work, nature of site, local facilities of access and all matters affecting the execution of work. No extra charges consequent to any misunderstanding in these respects or otherwise will be allowed.
35. The contractor shall not assign, transfer or sublet any portion of the work.
36. Banning of business dealings with the contractor may be resorted to for serious lapses in performance/ misdemeanour such as abandoning the work without completing, resorting to unfair means (including false certification), not accepting the contract when awarded etc. (as per approved Guideline for Suspension of Business dealings with suppliers/ contractors).
37. The expense of completing and stamping the agreement shall be borne by the contractor.
38. All disputes, questions, matters and things touching or concerning the contract upon which the Head (QC-F) and the contractor do not agree, shall be decided by the General Manager (Quality) and his decision shall be final and binding.

BHARAT HEAVY ELECTRICALS LIMITED, HEEP: RANIPUR, HARIDWAR
Quality Control Department -Fabrication division
PRE QUALIFICATION CRITERIA

Tender Notice No.: HW/QM/QC-F/16-17/01

NIT Value: Rs.1574220/-

Sl. No.	Criteria	Confirm (YES/NO)	Details:
1.	Average annual turnover for the last three financial years ending 31 st March, 2016 or 31 st December, 2015 should be at least 5 lacs. Copy of Audited Balance sheet and Profit & loss account for last three financial years has to be furnished by the vendor along with the offer.		Turnover (in lacs) 1. FY15-16 ----- 2. FY14-15----- 3. FY13-14----- 4. Average-----
2(i)	a) The vendor should have executed at least one similar Radiography Testing and Ultrasonic Testing work having contract value of at least 12.6 lacs in the previous five years ending 31 th Oct, 2016. OR b) The vendor should have executed at least two similar Radiography Testing and Ultrasonic Testing works each having contract value of at least 7.9 lacs each, in the previous five years ending 31 th Oct, 2016. OR c) The vendor should have executed at least three similar Radiography Testing and Ultrasonic Testing works each having contract value of at least 6.3 lacs in the previous five years ending 31 th Oct, 2016.	a) OR b) OR c)	a)FY----- Contract value----- OR b)FY 1----- 2----- Contract value 1----- 2----- OR c)FY 1----- 2----- 3----- Contract value 1----- 2----- 3-----
2(ii)	In case the work executed by the contractor with reference to Clause 2(i) above is for Radiography testing only then, to qualify, the vendor should have additionally executed:		

I /We agree.

Sign and seal of Contractor

	<p>a) One similar Ultrasonic Testing work having contract value of at least 1.33 lacs in the previous five years ending 31th Oct, 2016.</p> <p style="text-align: center;">OR</p> <p>b) Two similar Ultrasonic Testing work each having contract value of at least 0.83 lacs in the previous five years ending 31th Oct, 2016.</p> <p style="text-align: center;">OR</p> <p>c) Three similar Ultrasonic Testing works each having contract value of at least 0.67 lacs in the previous five years ending 31th Oct, 2016.</p>		<p>a)FY----- Contract value-----</p> <p style="text-align: center;">OR</p> <p>b)FY 1----- 2----- Contract value 1----- 2-----</p> <p style="text-align: center;">OR</p> <p>c)FY 1----- 2----- 3----- Contract value 1----- 2----- 3-----</p>
3.	The vendor will submit the documentary evidence such as Purchase Order / Work Order copies etc. clearly mentioning the scope of work, contract value and completion date/year with reference to clause 2.		
4.	The vendor will submit the performance certificate(s) from at least one customer regarding satisfactory completion of work as per clause 2. Performance certificate shall include Customer's details such as Name of contact person/Designation, Address, Telephone No./email ID etc.		
5.	<p><u>Qualified NDT Personnel:</u></p> <p>a) The vendor shall have at least one BARC RT Level-II qualified person who can perform as Site Incharge. In addition to this the vendor shall have at least one more RT-Level-II person qualified from BARC/ ISNT/ ASNT/ other similar institutions.</p> <p>b) For Ultrasonic Testing the vendor shall have at least two UT Level-</p>		

	II qualified personnel from ISNT/ ASNT/ other similar institutions. c) A copy of NDT Qualification certificate for the personnel as per Clause 5(a) and 5(b) above is also to be submitted.		
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Note: BHEL reserves the right to verify the information provided by the vendor with the vendor's customers directly.

TECHNO-COMMERCIAL BID
TECHNICAL REQUIREMENTS

1.0 SCOPE:

1.1 This specification describes Technical requirements to be fulfilled by outside NDT agency, who provide testing facilities inside plant.

2.0 GENERAL REQUIREMENTS:

- 2.1 Radiography Testing and Ultrasonic testing shall be performed as per the applicable national / international / B.H.E.L. standards / B.H.E.L. Procedures. Contractor's testing personnel deputed at BHEL shall be capable of interpreting the same and carrying out the testing work accordingly.
- 2.2 It will be the responsibility of the contractor to maintain required equipment and accessories in proper calibrated state.
- 2.3 Calibration and reference blocks shall be available with the contractor wherever required.
- 2.4 The contractor will reach our works alongwith the testing equipment and start performing Radiography (X-Ray & Gammagraphy) and Ultrasonic testing work within 14 days of award of the contract.
- 2.5 The contractor has to ensure that he will be able to attend assigned Radiography (X-Ray & Gammagraphy) and Ultrasonic testing jobs in reasonable time and in no case it should be more than 24 hours.
- 2.6 The contractor shall be able to promptly arrange additional equipment and manpower at BHEL works, whenever required to cater the excess workload or in case of any operational problem in his NDT equipment. It shall be the responsibility of the contractor to ensure that production work is not suffered due to breakdown of equipment/ non availability of manpower.
- 2.7 The contractor will be required to operate inside BHEL premises. The NDT workload may vary with the variation in the production activities during the year.
- 2.8 The operator may be required to work in day and night shift for the completion of work.
- 2.9 RT and UT qualified personnel with minimum two years working experience will be accepted for deputation at BHEL, Haridwar for testing work.

3.0 SPECIAL CONDITIONS FOR RADIOGRAPHY(X-RAY AND GAMMAGRAPHY):

- 3.1 In Radiography, our workload include mainly fabricated assemblies of carbon steel, alloy steel, stainless steel, inconel etc. Type of weld joints tested by radiography are butt welds / inclined butt welds / corner welds / nozzle welds / T-joints etc. Piping assemblies constitute a sizable amount of our X-ray workload. Sometimes castings, forging or machined components are also required to be radiographed. Jobs are required to be tested by X-Ray (using X-Ray machine) or Gamma Ray (using Iridium-192 source). Normally radiography of jobs with wall thickness upto 20 mm is to be done

with X-Ray and radiography of jobs with wall thickness more than 20 mm is to be done by using Gamma Ray (using Iridium-192 source).

- 3.2 **The contractor shall maintain at least one X-Ray machine and one Gammagraphy (Iridium 192) source at our works during the period of the contract.** The X-ray machine will be of minimum 250KV rating and will be able to effectively radiograph the thickness range mentioned for X-ray jobs in clause 3.1 above.
- 3.3 At least one Radiography Site Incharge (BARC RT-Level-II) person will be deputed by the contractor at our site. Radiography testing (X-ray and Gammagraphy) shall be performed by minimum RT Level-I qualified personnel. Radiography evaluation and decision making shall be done by minimum RT Level-II qualified personnel from ASNT/ ISNT/ BARC or other similar agency.
- 3.4 Noncompliance to any of the clauses of the applicable standard or code shall result in the rejection of the radiograph and the contractor will be required to re-radiograph (reshot) at his own cost. Re-radiography level shall be maintained below 5%, as it delays the completion of work. BHEL reserves the right to cancel the contract if the rejection and re-radiography is frequently more than 5%.
- 3.5 BHEL will provide AERB approved Radiography enclosure for performing radiography work. A dark room will also be provided to the contractor (without consumables). In few cases radiography may also be required to be done outside the enclosure in the shop during no occupancy time.
- 3.6 During radiography operation, one responsible contractor person qualified as Site Incharge (BARC RT level-II) will be available for supervision of work and shall be answerable to BHEL for the job execution and performance output.
- 3.7 Radiation safety of contractor's employees inside the factory shall be the responsibility of contractor solely. He shall also be responsible for other safety related aspects for his personnel.
- 3.8 The contractor shall arrange AERB permission for movement of his radiation source to our works. All safety requirements laid down by AERB shall be strictly complied by the contractor's personnel. Adequate number of radiation safety and monitoring equipment shall be available with the testing personnel.
- 3.9 All consumables i.e. radiographic films, screens, cassettes, lead sheets, film wrappers, illuminator, cello tapes, lead letters, film processing chemicals etc. shall be arranged by the contractor.
- 3.10 Radiographic films of brand **Agfa / Kodak / Fuji** or equivalent shall be used. Films of above brands cut and packaged in India are also acceptable. Film processing chemicals compatible to the above films shall be used. The above items shall be used well within the shelf life of the respective item. Timely procurement of films and their proper storage shall be contractor's responsibility.

3.11 Radiography shall be performed as per the technique specified in the applicable radiography standard. The radiograph shall be treated as acceptable if it meets the density, sensitivity and other requirements specified in the applicable specification.

3.12 For the **X-Ray(using X-Ray machine) and Gammagraphy (using Iridium-192 source)** the quoted rates shall include :

- a) Taking X-Ray or Gammagraphy exposure as per NDT Laboratory approved procedure, BHEL, national or international code or standard.
- b) Processing of exposed films and marking of identification details on film wrapper.
- c) Evaluation of radiographs as per applicable standards/ Codes/ Specifications.
- d) Maintaining record of receipt and completion of offered requisitions.
- e) Preparation of evaluation reports on BHEL performa.
- f) Getting the radiographs and reports cross evaluated by BHEL NDT personnel.
- g) Marker pen / paint marking of radiographic reference numbers, segment numbers etc. on the job. Marking of defective region on the weld with appropriate colour paint / marker pen.
- h) Returning the radiographs to NDT Lab alongwith concerned radiography reports.

4.0 SPECIAL CONDITIONS FOR ULTRASONIC TESTING OF WELDS:

- 4.1 Ultrasonic Testing (UT) workload mainly consists of carrying out UT on weld joints and weld edges (prior to welding) in fabricated assemblies and castings used in power plant equipment.
- 4.2 In welds UT is carried out mainly on **butt welds / inclined butt welds / corner welds / nozzle welds / T-joints etc.** having section thickness from 10 mm to approximately 300 mm.
- 4.3 Ultrasonic Testing of welds in our products normally require sensitivity setting using **Flat Bottom Hole (FBH)** as the reference reflector. Flat Bottom Hole test block, DGS scales / DGS diagrams may be used for the same.
- 4.4 **At least one analog or digital type pulse echo, A-Scan equipment, capable of being operated on rechargeable batteries, shall be maintained by the contractor at our works for use in testing.** Prior to first use satisfactory screen height linearity and amplitude control linearity of the equipment (as per ASME Section V) shall be

demonstrated to NDT Laboratory. The test system should show adequate resolution, sensitivity and precision for the testing as per the applicable NDT procedure / specification / code. During working the same shall be verified at least once in every three months.

- 4.5 The contractor shall ensure and confirm availability of equipment - Ultrasonic flaw detector, machine charger, probes, cables, standard (IIW and Miniature) calibration blocks (also called V1 and V2 standard test blocks), DGS scales / DGS diagrams for the probes used etc. all in good working condition. Non availability / break-down of any of the above equipment / accessories shall not be accepted as the cause for stoppage of work.
- 4.6 Butt welds, inclined butt welds, nozzle welds will require ultrasonic testing as per applicable BHEL specification. These weld joints may require ultrasonic testing by using one or more angle beam probes as per the applicable specification. Ultrasonic testing by normal beam probe/twin crystal probe may also be required in flush ground butt welds, nozzle welds, weld edges etc.
- 4.6 Qualified NDT personnel having at least **UT Level-II** qualification from ASNT / ISNT or from other similar institution shall be employed to perform / evaluate the testing. Besides this the operators should have practical experience in performing Ultrasonic Testing on the similar type of jobs using DGS scale / DGS diagrams. They should be able to carry out the test independently as per BHEL NDT procedures / specifications, national or international standards. They should be able to prepare test report in the BHEL formats.
- 4.7 As per the requirement of BHEL Quality Plan applicable for the project, ultrasonic testing may be required to be got witnessed by external customers like NTPC, LLOYDS, RITES, QUEST, NPC etc., wherever required. Availability of external customers shall be arranged by BHEL for witnessing of ultrasonic testing.
- 4.8 It is required that high degree of accuracy and precision is maintained in the testing operations. BHEL NDT Laboratory person may verify the test results reported by the contractor. In case of major discrepancies or adverse feed-back is received from external customers, BHEL reserves the right to cancel the contract.
- 4.9 The contractor should arrange the couplant-oil, grease, etc. and possess necessary accessories such as spare battery packs, cables, probes, standard calibration blocks, etc. which are required for uninterrupted testing operations. The angle beam probes shall be preferably “built in wedge type” (e.g. GE make WB / MWB series probes or equivalent).
- 4.10 The copy of the procedures by which tests shall be conducted will be issued by NDT to sub-contractor. The procedures should be returned to BHEL once the contract is over. The contractor is prohibited in making the copy and using the same elsewhere.
- 4.11 The contractor should have at least following probes/ test blocks/ cables in his possession. If the tenderer is not having any particular probe, he will give undertaking to arrange the same before start of the work:

SL.NO.	TYPE	REMARK
1.	IIW calibration block (V1 block)	
2.	Miniature test block (V2 block)	
3.	Normal beam probe 2 MHz 24 mm Φ	Matching cable required.
4.	Normal Beam probe 2 MHz 10 mm Φ	-do-
5.	Normal beam probe 4 MHz 24 mm Φ	-do-
6.	Normal beam probe 4 MHz 10 mm Φ	-do-
7.	TR probe 4 MHz 21 mm Φ	-do-
8.	TR probe 4 MHz 10 mm Φ	-do-
9.	Angle beam probe 2 MHz 45° 8X9 mm	-do-
10.	Angle beam probe 2 MHz 60° 8X9 mm	-do-
11.	Angle beam probe 2 MHz 70° 8X9 mm	-do-
12.	Angle beam probe 4 MHz 45° 8X9 mm	-do-
13.	Angle beam probe 4 MHz 60° 8X9 mm	-do-
14.	Angle beam probe 4 MHz 70° 8X9 mm	-do-

4.12 For the ultrasonic testing the quoted rate shall include:

- a) Conducting ultrasonic testing as per NDT Laboratory approved procedure, BHEL, national or international code / specification.
- b) Recording the observations as per applicable specifications.
- c) Evaluation of the indications as per applicable procedure / specification.
- d) Preparation of testing report on the BHEL format.
- e) Maintaining record of receipt and completion of offered requisitions.
- f) Getting the results / reports cross evaluated by NDT personnel of BHEL or by customer's representative if required as per BHEL Quality Plan.
- g) Marking of defective region on the weld with appropriate colour paint/ marker pen.
- h) Submission of test reports to BHEL.

ANNEXURE-IV**DETAILS OF THE FIRM**

**(To be furnished along with the offer against tender Enquiry No.
HW/QM/QCF/16-17/01 Dated: 10.11.2016).**

1. Particulars of the Firm

Sl. No.	Description	Particulars
1.	Name of the firm	
2.	Address	
3.	Phone No.(s)	
4.	Fax No. (if any)	
5.	Email Address (if any)	
6.	PF Code No.	
7.	ESI No.	
8.	PAN based Service Tax registration no.	

2. Details of Equipment / accessories available with the firm:

1	2	3	4	5
Equipment/ accessories	Make/Model	Rating	Quantity	Remarks
RADIOGRAPHY TESTING				
X-Ray Equipment (<i>minimum rating 250 KV</i>)				
Gammagraphy Equipment (Iridium-192)				
Radiation Surveymeter				

I /We agree.

Sign and seal of Contractor

IQI	Confirm (YES/NO)			
Film Brand used (<i>Agfa, Kodak, Fuji</i>)	Confirm (YES/NO)			
Lead screen, cassettes, lead markers, adhesive tape, film developing chemicals etc.	Confirm (YES/NO)			
ULTRASONIC TESTING				
Ultrasonic Flaw Detector(s)				
Probes with matching cables availability as per Clause 4.11 of Annexure-III of Tender document is to be mentioned.				
IIW standard calibration blocks V1 and V2				
Others				

3.0 Any other information about the firm

NOTE: Copy of supporting documents may be added, wherever required.

I /We agree.

Sign and seal of Contractor

TECHNO-COMMERCIAL BID

CHECKLIST AND SCHEDULE OF GENERAL PARTICULARS

NOTE : - Bidder shall fill in the following details and no column should be left blank.

Sl. No.	Description	Vendor to Clarify	Page No. of Tender Doc.
1.	Name & Address of the Bidder	YES/NO	
2.	Email Address / Fax No. Phone nos.	YES/NO	
3.	Submission of signed and stamped copy of “NIT “and “Terms & conditions-Annexure-I”.	YES/NO	
4.	Pre-Qualification Criteria (Annexure-II) duly filled up, signed and submitted.	YES/NO	
5.	Submission of signed and stamped copy of “Technical requirement-Annexure-III”.	YES/NO	
6.	Detail of Firm (Annexure-IV) duly filled up, signed and submitted.	YES/NO	
7.	Tender cost submitted (By cash receipt). Pl. give details. #Not required if tender is directly downloaded from the website.	YES/NO	
8.	EMD submitted (Rs 31485/- By Cash receipt / bank draft). Pl. give details.	YES/NO	
9.	Submission of copy of supporting documents, i.e.: a) PAN based service tax registration no. b) PF code no. certificate c) ESI code no. certificate d) Copy of audited Balance Sheet and Profit & Loss account for the last three financial years. e) RT and UT work Purchase Order / Work Order copies for similar work f) Performance Certificate from customer(s). g) RT/ UT qualified personnel qualification certificates h) Testing Equipment / accessories list wherever required i) Valid NSIC certificate or EM II certificate along with attested copy of a CA certificate (Format enclosed at Annexure -VI where deemed validity of EM II certificate of five years has expired) # If applicable.	YES/NO	
10.	Submission of annexure-VII (Price bid) in a separate sealed envelope.	YES/NO	

The above list consists of minimum documents to be submitted alongwith the offer. Other relevant document, if any, may also be submitted alongwith the Techno commercial offer.

I /We agree.

Sign and seal of Contractor

Annexure-VI

Certificate by Chartered Accountant on letter head
(only for those who are submitting EM-II Certificate)

This is to Certify that M/S

.....
.....
(Hereinafter referred to as 'company') having its registered office at
..... is registered under MSMED Act 2006, (Entrepreneur
Memorandum No (Part-11)
dtd:....., Category:..... (Micro/Small). (Copy enclosed).

Further verified from the Books of Accounts that the investment of the company as
per the latest audited financial year..... as per MSMED Act 2006 is as follows:

1. **For Manufacturing Enterprises:** Investment in plant and machinery (i.e. original
cost **excluding land and building and the items specified by the Ministry of Small
Scale Industries vide its** notification No.S.0.1722(E) dated October 5, 2006 :
Rs.....Lacs
2. **For Service Enterprises:** Investment in equipment (original cost **excluding land and
building and furniture, fittings and other items not directly related to the service
rendered or as may be notified under the MSMED Act, 2006:**
Rs.....Lacs

(Strike off whichever is not applicable)

The above investment of Rs.....Lacs is within permissible limit of
Rs.....Lacs forMicro/Small (Strike off which is not
applicable) Category under MSMED Act 2006.

Or

The company has been graduated from its original category (Micro/ Small) (Strike off which
is not applicable) and the date of graduation of such enterprise from its original category is
..... (dd/mm/yyyy) which is within the period of 3 years from the date of graduation
of such enterprise from its original category as notified vide S.O.No.3322(E)
dated 01.11.2013 published in the gazette notification dated 04.11.2013 by Ministry of
MSME.

Date:

(Signature)

Name-

Membership number-

Seal of Chartered Accountant

I /We agree.

Sign and seal of Contractor

ANNEXURE-VII

**BHARAT HEAVY ELECTRICALS LIMITED, HEEP: RANIPUR, HARIDWAR
Quality Control Department -Fabrication division**

PRICE BID

Tender Notice No.: HW/QM/QC-F/16-17/01

NIT Value: Rs.1574220/-

Sl. No.	Description of work	Unit of measurement	Quoted Rate (Per unit)
1	Radiography Testing : X-RAY (Activity Code: WW6520000001)	Rs. Per Sq.Cm. of accepted radiograph	In figures:..... In Words:.....
2	Radiography Testing: Gammagraphy (Activity Code: WW6520000002)	Rs. Per Sq.Cm. of accepted radiograph	In figures:..... In Words:.....
3	Ultrasonic testing (Activity Code: WW6520000003)	Rs. Per metre of tested weld length	In figures:..... In Words:.....
4	Service tax applicability		YES/NO (Tick whichever is applicable)

Note:

- Rate should be quoted in figures as well as in words. No cutting / Over Writing is allowed in rates. In case of contradiction between percent quoted in figure and Words, the same mentioned in Words will prevail.

I/We have the read the Terms and Conditions and Contractual Obligation of contract as per the Techno-commercial Bid under this NIT and undertake to fulfill all its requirement under the quoted rates.

(Signature of the Tenderer)

I /We agree.

Sign and seal of Contractor