



**NATIONAL INSTITUTE OF TECHNOLOGY  
ROURKELA-769008 (ODISHA)**

An Institute of National Importance under Ministry of HRD, GOI

**NOTICE INVITING TENDER**

Tender Notification No: NITR/PW-SR/MM/2019/139

Dated: 22/08/2019

The National Institute of Technology, Rourkela invites bids from the eligible bidders for procurement of **Ultrasonic Shot Peening Machine**.

Last date of Submission of Bid : **19/09/2019 at 11:00 AM**

Opening date of techno-commercial Bid : **20/09/2019 at 11:00 AM**

**For Details:** [http://nitrkl.ac.in/OldWebsite/Jobs\\_Tenders/9Equipment/Default.aspx](http://nitrkl.ac.in/OldWebsite/Jobs_Tenders/9Equipment/Default.aspx)

**Contact:** Prof. A. Basu , MM

Ph: 0661-2462553; Email: [basua@nitrkl.ac.in](mailto:basua@nitrkl.ac.in)

Bidding through: <https://eprocure.gov.in/eprocure/app>

sd/-  
**REGISTRAR**



**NATIONAL INSTITUTE OF TECHNOLOGY  
ROURKELA-769008, ODISHA**

**OPEN TENDER NOTICE NO.:NITR/PW-SR/MM/2019/139**

**DATED: - 22/08/2019**

(Procurement of Ultrasonic Shot Peening machine)

<b>Sl. No.</b>	<b>Description of Goods/Service</b>	<b>Quantity</b>
01.	Ultrasonic Shot Peening machine (Detailed specification as per Annexure – I)	01 unit

1. Quantity required : As mentioned above (All information provided in technical specification)
2. Delivery : Within **90 days** from the date of purchase order
3. Last Date of submission of Bid : **19/09/2019 at 11:00 AM**
4. Date of opening of techno-commercial bid : **20/09/2019 at 11:00 AM**
5. The firm should not have been black listed at anytime.
6. The submission of following bids by the tenderer should be through <https://eprocure.gov.in/eprocure/app> Please follow the guidelines as per the portal.

**Procurement of Ultrasonic Shot Peening machine**  
(Open Tender Notice No.: NITR/PW-SR/MM/2019/139 ,Dated: 22/08/2019) Due on 19/09/2019 at 11:00 AM

7. **Liquidated damage clause** will be charged for any delay in supply of goods.
8. The validity of the tender shall be **90 days** from the date of opening of the bids.
9. Detailed advertisement including all tender documents is also available in our website at [http://nitrkl.ac.in/OldWebsite/Jobs\\_Tenders/9Equipment/Default.aspx](http://nitrkl.ac.in/OldWebsite/Jobs_Tenders/9Equipment/Default.aspx)
10. NIT reserves the right to qualify or deny prequalification of any or all applicants without assigning any reasons.

**(REGISTRAR)**  
**NIT,Rourkela**  
**Fax No-0661-2462022**  
**Ph. No-0661-2462021**

**Technical Specification of for Ultrasonic Shot Peening Machine**

1. Ultrasonic Shot Peening (USP) machine shall be capable of shot Peening flat/curved metallic components, inducing thereby, the desired compressive stresses to the required depth.

The Peening process positively improves fatigue life of the component and resists stress corrosion cracking.

2. USP shall use the principle of imparting kinetic energy to the media by means of a vibrating surface at ultrasonic wave frequency of 20 KHz, within a hermitically sealed enclosure.

The process must be absolutely clean with no dust generation or loss of media.

The USP equipment and media must conform to the following specifications and standards -

- BAE - NF L 06-833 "Aerospace series — Ultrasonic shot p\Peening for inducement of compressive surface stresses for metallic parts" May 2009
- SAE/AMS specifications AMS2580 entitled "Shot Peening, Ultrasonically Activated", Rev A.
- SAE/AMS specifications AMS2585 entitled "Shot Peening Media, Ultrasonically Activated", Rev A.

3. The USP shall be Portable with a hand held Peening head and consist of the following elements:

- i. Central Unit which includes the Generator.
- ii. Emitter
- iii. Booster(s)
- iv. Sonotrode
- v. Treatment Enclosure.
- vi. Media.
- vii. Spare Parts for 1 year operation as Option.

4. Broad Parameters of Ultrasonic Shot Peening equipment –

- i. Input Voltage = 230 +/-10% V AC; 50/60 Hz;
- ii. Maximum Power = 1000 Watts (without any additional device)
- iii. Nominal Standard Power = 250 - 400 Watts
- iv. Cooling = Compressed Air at 6 Bar +/- 15%; Flow rate = 250 – 300 liter/min. Compressor will not be included in the quote

5. Detailed specifications –

Sl. No.	Elements	Specifications	Purpose
1	Central Unit	<ul style="list-style-type: none"> <li>• HMI with 7 inch touch screen with ergonomic colored interface</li> <li>• Specific Software programs to supervise the working of USP</li> <li>• Size = 300 x 400 x 675 mm approx.</li> <li>• Weight = &lt; 30 kgs</li> </ul>	Provide easy operation access of the equipment
2	Generator	<ul style="list-style-type: none"> <li>• Digital type.</li> <li>• Output Signal = 20 KHz +/- 400Hz;</li> <li>• Peening Amplitude = 35 – 80 microns</li> </ul>	Digitally generates an electric sine wave with ultrasonic frequency.
3	Peening head	<ul style="list-style-type: none"> <li>• Dimensions – 400 x 80 x 100 mm;</li> <li>• Weight ~ 3kg without cord.</li> <li>• Peening area 80 mm x 30 mm</li> </ul>	The size will be adapted following the size of the part that it must peen.
4	Emitter	<ul style="list-style-type: none"> <li>• Peizo-electric element</li> </ul>	Converts the electric sine-wave signal to mechanical displacement.

5	Booster(s)		Amplifies the mechanical energy.
6	Sonotrode	<ul style="list-style-type: none"> <li>• Material = Titanium;</li> <li>• Size: according to the application (rectangular)</li> </ul>	Imparts the kinetic energy to the Media
7	Treatment Enclosure	<ul style="list-style-type: none"> <li>• Material – hard plastic (Polyoxymethylene (POM))</li> <li>• Estimated Life : minimum 50 hrs</li> </ul>	Provide hermitically sealed enclosure for Media to uniformly peen the component surface.
8	Media	<ul style="list-style-type: none"> <li>• Material : steel 100 Cr6</li> <li>• Size = 1.0 mm and 3.0 mm</li> <li>• Quantity – 100 grams of each size.</li> </ul>	To peen the component with required quality
9	Spare Parts	Optional	Please Mention separately

6. Sound level during Peening shall be not more than 80 dB measured 1 m away from machine.

### Others

- A complete design along with clear indication/markings of specification mentioned in the technical bidding document (wherever possible) of the instrument must be provided with the bidding document
- Warranty: 1-year standard warranty from the date of installation.
- Scanned copy of technical brochure and website reference of the same must be included in the bid. The specification mentioned in the bid document must tally with the technical brochure.
- Technical specification of the instrument with "Yes/No" format against each specification will not be considered a technical bidding document. A separate compliance sheet of technical specification with specific value of the equipment along with the deviation must be included.
- Detailed User List with the concerned person's valid contact details, in India or abroad where instrument is still in operational condition must be provided.
- The ordered goods are required to be installed within 30 days of receipt of goods at this Institute. Installation should be carried out only by expert engineers of Supplier / Manufacturer. During the course of installation, necessary training on operation and maintenance of the goods shall be imparted to Institute's Faculties / Engineers / Technicians. Installation and training must be free of cost
- During the course of evaluation, NIT Rourkela, may, at its discretion ask the bidder for clarification of its bid. The request for clarification and the response shall be in writing / email and no change in prices or substance of the bid shall be sought, offered or permitted.
- Prior installation conditions / site preparation / electrical connection required must be clearly mentioned in the quotation along with technical bidding documents
- Prices of additional / optional items not appearing in the BOQ, if any, shall be quoted in a separate PDF file, duly signed by Bidder's authorized person/persons.
- If any component/ additional instrumental unit/consumables which is required for smooth running of instrument is made in India that must be quoted in INR. Anything which is of Indian origin must be quoted in INR.
- The comparison between the indigenous and the foreign offers shall be made on FOB destination basis and CIF / CIP basis respectively
- In case optional items are specified in the tendered specifications, the Purchaser reserves the right to buy or not to buy the optional items. In case the option is exercised to buy the optional items after Bid opening, then the cost of optional items would be included to ascertain the Lowest Evaluated Responsive Bid. In case, the option is exercised not to buy the optional items, then the cost of the optional items would not be included in ascertaining the Lowest Evaluated Responsive Bid.

- The quotations are liable to be rejected if any of the above conditions are not complied with or there is any violation of GFR17 rules and regulations. Conditional Bids shall not be accepted.
- The Bidder shall bear all costs associated with the preparation and submission of its bid, and "the Purchaser", will in no case be responsible or liable for these costs, regardless of the conduct or outcome of the bidding process.
- Note: Where there is no mention of packing, forwarding, freight, insurance charges, taxes etc., such offers shall be treated as inclusive of all these expenses
- In all regards, the GFR17 rules and regulation will be strictly followed

**For goods manufactured abroad**

- (i) If the instrument is of foreign origin (i.e. manufactured in foreign country) then price must be quoted in foreign currency.
- (ii) The price must be mentioned with clear demarcation at every stage such as instrument price, discount, packing and forwarding, transport, insurance whichever is applicable.
- (iii) Bidder should mention the country of origin and the country from which goods will be finally shipped
- (iv) In case, an Indian agent is directly submitting a bid on behalf of its Principals, a copy of the Authorization Certificate issued by the Principals in favour of the Indian agent should be furnished along with a certified copy of the Agency Agreement between the foreign Principal and Indian agent. Both these certificates must be up-to-date
- (v) A letter in the official letter head of the principal declaring the Indian agent as their authorized agency to bid must contain the official tender enquiry no as depicted in CPP portal must be included with the technical bid. (This must not be clubbed with Authorization Certificate)
- (vi) For items with foreign origin, price must be quoted in foreign currency up to CIP Kolkata basis and NIT Rourkela will arrange customs clearance (in coordination with the supplier) and transportation to NIT Rourkela.

**For goods manufactured in India.**

- (i) The price must be mentioned with clear demarcation at every stage such as instrument price, discount, GST calculated, packing and forwarding, transport, insurance whichever is applicable.
- (ii) The delivery up to NIT Rourkela is solely bidder's responsibility
- (iii) GST at applicable rates, which will be payable on the goods if the contract is awarded. Bidders are requested to calculate GST @5% (in this regard necessary documents will be provided to the awardee bidder at the appropriate stage)
- (iv) Charges for inland transportation, insurance and other local services required for delivering the goods at the desired destination must be mentioned in the bid.

**EMD (Earnest Money deposit)/ Bid Security:**

The Bidder must furnish, as part of its bid, a Bid Security (BS) for an amount as specified in the Invitation for e-procurement. In the case of foreign bidders, the BS shall be submitted either by the Principal or by the Indian agent and in the case of indigenous bidders; the BS shall be submitted by the manufacturer or their specifically authorized dealer/bidder.

The bid security is required to protect the Purchaser against the risk of Bidder's conduct, which would warrant the security's forfeiture.

The bid security shall be in Indian Rupees for offers received for supply within India and denominated in the currency of the bid or in any freely convertible foreign exchange in the case of offers received for supplies from foreign countries in equivalent Indian Rupees. The bid security shall be in one of the following forms at the bidders' option:

- (a) A bank guarantee issued by a Nationalized/Scheduled bank/Foreign Bank operating in India in the form provided in the bidding documents and valid for 60 days beyond the validity of the bid. In case a bidder desires to submit a BG issued from a foreign bank, then the same should be confirmed by a Nationalized /Scheduled Indian bank, with all confirmation charges to Bidder's account. [Note: Purchaser reserves the right to verify the authenticity such Bank Guarantees from the issuing / confirming / controlling bank];

Or

- (b) A Banker's cheque (BC) or demand draft (DD) in favour of Director, NIT Rourkela issued by any Nationalized / Scheduled Indian bank.

The bid security should be submitted in its original form. Copies shall not be accepted so as to reach this office on or before due date of submission of e-bid.

The bid security of unsuccessful bidder will be discharged /returned as promptly as possible positively within a period of 45 days after the expiration of the period of bid validity or placement of order whichever is later, without any interest.

The successful Bidder's bid security will be discharged upon the Bidder furnishing the performance security, without any interest. Alternatively, the BS may also be adjusted against Performance Security, if it is paid through DD/BC.

The bid security may be forfeited:

- (a) If a Bidder withdraws or amends or impairs or derogates its bid during the period of bid validity specified by the Bidder on the Bid Form; or
- (b) In case of a successful Bidder, if the Bidder fails to furnish order acceptance within 21 days of the order or fails to sign the contract and/or fails to furnish Performance Security within 21 days from the date of Purchase order. Or
- (c) In case selected L1 bidder (after qualifying the technical bidding) fails to comply or try to change the specification of the instrument after Purchase Order has been issued;or
- (d) In case selected L1 bidder (after qualifying the technical bidding) claims the inability to supply the instrument within quoted price. Or
- (e) In case selected L1 bidder (after qualifying the technical bidding) declares their inability to supply the instrument.Or
- (f) In case selected L1 bidder (after qualifying the technical bidding) impose any extra condition/cost which was not mentioned in their quotation with respect to technical specification and commercial terms and conditions. Or
- (g) In case bidder impose any prior installation condition/ requirement of consumables during installation at NIT, involving extra cost at purchaser's side which is not mentioned in the quotation.  
Or
- (h) In case of any violation of GFR17.

### **Opening and Evaluation of e-Bids**

The Purchaser will open all e-bid of technical cover first. After technical evaluation and publication of technical evaluation results, the financial cover will be opened only for those bidders who have successfully qualified in technical evaluation as per the schedule given in Invitation for e-Bids. The e- Bids shall be opened at the appointed time and location on the next working day.

The bidders' names, bid modifications or withdrawals, bid prices, discounts, and the presence or absence of requisite Bid Security and such other details as the Purchaser, at its discretion, may consider appropriate, will be announced at the opening. Bid will be rejected for

- (1) Late bid submission

- (2) Failure/ late deposition of EMD/Bid Security within specified time mentioned. The contents of the Bid Form and Price Schedule Form would however be announced only at the time of opening of Priced-bids in the case of two-bidsystem.

### **DELIVERY**

1. Delivery of the Goods and performance of the Services shall be made by the Supplier in accordance with the time schedule specified by NIT Rourkela in the Purchase Order. If, at any time during performance of the Contract / Purchase Order, the Supplier encounters conditions impeding timely delivery of the Goods and performance of Services, the Supplier shall promptly notify NIT Rourkela in writing of the fact of the delay, its likely duration and its cause(s). As soon as practicable after receipt of the Supplier's notice, NIT Rourkela shall evaluate the situation and may, at its discretion, extend the Supplier's time for performance with or without penalty, in which case the extension shall be ratified by the parties by amendment of the Purchase Order /Contract.
2. A delay by the Supplier in the performance of its delivery obligations shall render the Supplier liable to the imposition of penalty pursuant to Penalty Clause as mentioned in GFR17, unless an extension of time is agreed upon without the application of penaltyclause.

### **Fraud and corruption**

The purchaser requires that the bidders, suppliers and contractors observe the highest standard of ethics during the procurement process and execution of such contracts. In pursuit of this policy, the following are defined:

- (i) "Corrupt practice" means the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence the action of a public official in the procurement process or in contract execution;
- (ii) "Fraudulent practice" means a misrepresentation or omission of facts in order to influence a procurement process or the execution of acontract;
- (iii) "Collusive practice" means a scheme or arrangement between two or more bidders, with or without the knowledge of the purchaser, designed to establish bid prices at artificial, non-competitive levels;and
- (iv) "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the procurement process or affect the execution of a contract;

The purchaser will reject a proposal for award if it determines that the Bidder recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive or coercive practices in competing for the Contract in question;

### **Clarification of bidding documents:**

A prospective Bidder requiring any clarification of the Bidding Documents shall contact the Purchaser in writing at the Purchaser's address/ Responsible faculties. The Purchaser will respond in writing to any request for clarification, provided that such request is received not later than ten (10) days prior to the deadline for submission of bids. The Purchaser shall forward copies of its response to all those who have acquired the Bidding Documents directly from it, including a description of the inquiry but without identifying its source. Should the Purchaser deem it necessary to amend the Bidding Documents as a result of a clarification, it shall do so following the procedure under clause relating to amendment of Bidding documents and Clause relating to Deadline for Submission of Bids. The clarifications and amendments issued would also be hosted on the website of the purchaser for the benefit of the other prospectivebidders.

## **Performance Security (PS)**

1. Within 21 days of receipt of the notification of award/PO, the Supplier shall furnish performance security in the amount specified in tender document, valid till 60 days after the warranty period. Alternatively, the PS may also be submitted at the time of release of final payment in cases where part payment is made against delivery & part on installation. The PS, where applicable, shall be submitted in advance for orders where full payment is to be made on Letter of Credit (LC) or on delivery. In this case, submission of PS at the time of negotiation of documents through Bank would be stipulated as a condition in the LC and the Bid Security/ EMD should be kept valid till such time the PS is submitted.
2. The proceeds of the performance security shall be payable to the Purchaser as compensation for any loss resulting from the Supplier's failure to complete its obligations under the Contract.
3. The Performance Security shall be denominated in Indian Rupees for the offers received for supplies within India and denominated in the currency of the contract in the case of offers received for supply from foreign countries.
4. In the case of imports, the PS may be submitted either by the principal or by the Indian agent and, in the case of purchases from indigenous sources, the PS may be submitted by either the manufacturer or their authorized dealer/bidder.
5. The Performance security shall be in one of the following forms:
  - (a) A Bank Guarantee [BG] or Demand Draft (DD) or Banker's Cheque (BC) issued by a Nationalized / Scheduled bank located in India or a Foreign bank with preferably its operating branch in India in the form provided in the bidding documents. In case of Performance Security being furnished in the shape of Bank Guarantee issued by any foreign bank, the said BG/DD shall have to be confirmed by any Nationalized bank of India. All confirmation and other bank charges in this respect shall be borne by the Supplier. Purchaser shall independently verify the authenticity of the BGs from the issuing / confirming / controlling banks. Or
  - (b) A Banker's cheque or Account Payee demand draft in favor of Director, NIT Rourkela.
6. In the event of any contract amendment, the supplier shall, within 21 days of receipt of such amendment, furnish the amendment to the performance security, rendering the same valid for the duration of the contract, as amended for further period of 60 days thereafter.

Technical bidding document must include the following:

1. Complete technical specification of the instruments and its necessary parts and accessory items required for running the instrument
2. A complete design along with clear indication/markings of specification mentioned in the technical bidding document (wherever possible) of the instrument
3. Scanned copy of technical brochure and website reference of the same must be included in the bid.
4. A duly signed detailed User List with the concerned person's valid contact details, in India or abroad where instrument is still in operational condition must be provided.
5. A copy of the Authorization Certificate issued by the Principals in favour of the Indian agent along with a certified copy of the Agency Agreement between the foreign Principal and Indian agent. Both these certificates must be up-to-date
6. A letter in the official letter head of the principal declaring the Indian agent as their authorized agency to bid, must contain the official tender enquiry no as depicted in CPP portal, must be included with the technical bid. (This must not be clubbed with Authorization Certificate)
7. A duly signed separate compliance sheet of the specification (at every point) mentioned in the technical part along with the deviation (if any). This compliance sheet will not be considered as technical specification of the instrument.

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