



BHARAT HEAVY ELECTRICALS LIMITED
HEEP HARIDWAR INDIA-PIN 249403
FAX NO: 0091 1334 226462, PHONE NO: 0091 1334 281561

Tender No.: T/3991/18/4109H/2

Date of Issue:30.03.2019

The Heavy Electricals Equipment Plant (HEEP) located in Haridwar, India is one of the major manufacturing plants of Bharat Heavy Electricals Ltd. The core business of HEEP includes design and manufacture of large steam and gas turbines, turbo generators and so on.

We are looking for reputed vendors having capability to supply Media & Chemical for Vibro Finishing of Steam Turbine Blade at New Blade Shop as per Specifications/Documents (Ref:VIB/CONSUMABLES/EOI/18-19/01) provided as per Annexure-1

Sealed tenders with the Tender No. and opening date clearly super scribed on the cover are invited from the manufacturers (registered as well as unregistered) for the supply of the following items:-

Tender No.	Description of Item	Last Date to Download	Opening Date
T/3991/18/4109H/2	HW7799980915 MEDIA 22X10 ACT DARK BROWN CERAMIC MEDIA SIZE: 22X22X10 DIM.: LXWXT IN MM <u>App. Qty=4050 kg</u>	21.04.2019	22.04.2019
	HW7799980931 MEDIA 17.5X11X22 EAC DARK BROWN CERAMIC MEDIA SIZE: LXWXT IN MM <u>App. Qty=4050kg</u>		
	HW7799981083 CHEMICAL FOR BLADE SURFACE REFINEMENT FS-AADP OF M/S FINSOL <u>App. Qty=16200 kg</u>		
	W7799981091 CHEMICAL FOR BURNISHING PROCESS FS-BPP OF M/S FINSOL <u>App Qty=1620kg</u>		

The tender documents can be downloaded from our web site www.bhel.com or www.bhelhwr.co.in, after downloading the tender documents from web site, the tender is required to be submitted as per detailed in **"Instruction to Bidders"**.

The date for opening of tender shall be 22.04.2019. Tenders will be received up to **1.45 P.M. on 22.04.2019** and opened on the same day at **2.00 P.M. in the Tender Room.** Please note that tender received after due date & time (1.45 PM on 22.04.2019) **will not be REPEAT will not be opened.** BHEL will not be responsible for any type of postal / courier delay.

Specifications & Drawing of the above items are available on our above mentioned websites. Other cross referred documents can either be physically collected from BHEL, Haridwar or can be obtained by email sanjeev-k@bhel.co.in, vinodkm@bhel.co.in. Amendments/Corrigendum, if any, will be hosted on our web site only. Other terms and conditions will be as per tender documents.

The offer of vendor who are Delisted/Under Hold by BHEL, shall not be considered till the period of their Delist/Hold. The offers of the bidders who are on the banned list and also the offer of the bidders who engage the services of the banned firm shall be rejected. The list of Banned firms is available on BHEL Website www.bhel.com.

Documents submitted with the offer/bid by the bidder (original supplier) shall be signed and stamped in each page by authorized representative of the bidder. Documents not signed and stamped in each page by the authorized signatory of the bidder, shall neither be accepted nor considered for evaluation of the bid.

Please submit your technical offer only for above requirement subject to our terms and conditions. No price Bid is to be submitted along with this offer.

The authorized representative should bring authority letter from their parent company (Manufacturer) for the specific tender no. attending the bid opening.

KINDLY READ "INSTRUCTIONS TO BIDDERS." QUOTATION NOT IN ACCORDANCE WITH THE INSTRUCTIONS ARE LIABLE TO BE DISQUALIFIED AND IGNORED.

INSTRUCTIONS TO BIDDERS FOR OPEN TENDER

Technical Eligibility and Pre-Qualification requirement/criteria are enclosed (**Ref: VIB /CONSUMABLES /EOI/18-19/01**). The offers are invited from suppliers having technical capability to supply Media & Chemical for Vibro Finishing of Steam Turbine Blade as per enclosed tender documents and PQR. The offers received will be technically evaluated by BHEL and short listed vendors will be asked to submit their detailed techno-commercial offers through formal NIT/Enquiry, for our future requirement. This is not for procurement. The scope of this tender enquiry is to explore vendors for supplying Media and Chemicals for Vibro finishing of Turbine blades at BHEL as per our requirement. The Qty mentioned is just for reference of annual consumption. Vendor to offer their equivalent or better solution.

Only technical bid along with documents in support of PQR are to be submitted at this stage. No price bids are to be submitted along with this offer.

The technical bid submitted by you should comprise of the following documents:

1. Annexure-1 for technical requirement cum PQR. Point wise reply to all points mentioned in Technical requirement cum PQR specified in the tender. Relevant documents as requested in Technical requirement cum PQR must be attached.
2. The item description mentioned in tender documents are for reference only. Vendor to offer their equivalent or better Media & Chemical for Vibro Finishing of ST Blade.
3. Vendor registration Form(SRF)
(Kindly follow the link and follow instructions: <http://supplier/bhel.in/>)
The SRF duly filled up will be assessed for manufacturing capability, quality systems, being followed, organizational soundness and financial worthiness.

The following shall be superscripted on the envelope:

1. Tender No. and its item Description
2. Due date of Opening
3. Vendors Full Name and Address

The envelope shall be addressed to

TO,
Head of Material Management
Heavy Electrical Management
BHEL Haridwar-249403

Envelope not marked as above liable to be ignored and will not be opened.

1. The Quotation should be from the Principal/Original Manufacture failing which the quotation is likely to be ignored. However if OEM / Principal insist on engaging the services of an agent, such agent shall not be allowed to represent more than one manufacture /supplier in the same tender. Moreover either the agent could bid on behalf of manufacturer/supplier or the manufacturer / supplier could bid directly but not both. In case bids are received from both, the manufacture/supplier and agent, the bid received from agent shall be ignored. In case the quotation is submitted through agent, the quotation must accompany original authorization letter from the principal / original manufacture.
2. **Documents submitted with the offer/bid by the bidder (original supplier) shall be signed and stamped in each page by authorized representative of the bidder.** Documents not signed and stamped in each page by the authorized signatory of the bidder, shall neither be accepted nor considered for evaluation of the bid.
3. Any correction /amendment shall be properly & fully authenticated with signature. No overwriting is acceptable.

Answer-12

TECHNICAL REQUIREMENT FOR VIBRO MEDIA AND CHEMICAL FOR SUPERFINISHING OF STEAM TURBINE BLADES

	BHEL REQUIREMENT	REQUIRED	OFFERED	DEVIATION	REMARKS
1.0	Suitable ceramic media & chemicals are required to vibro finish steam turbine blades made of high temperature and creep resistant hot rolled alloy steel in material grades X22CrMoV12-1, X20Cr13, X19CrMoVNbN11-1, X12CrMoWVNbN10-1-1 having tensile strength up to 1050 N/MM2 and hardness up to 335 BHN. Surface Roughness to be achieved after vibro finishing : Ra 0.40 microns in both axial and radial directions or better. Input surface roughness of blades will be (Ra) 1.6 - 2.5 microns achieved from machining. The super finishing will be done by vibro-abrasion between turbine blade and suitable ceramic chips in an acidic medium followed by cleaning in a neutralizing medium.	Vendor to accept.			
2.0	Accordingly vendor shall offer following items equivalent to items listed in indent. The item details in indent are for reference only and vendor to quote only equivalent or better items as per their capability: A) 2 numbers of ceramic media for vibro abrasion B) 1 number of chemical powder / liquid for de-burring C) 1 number of chemical powder/ liquid for polishing. Vendor shall necessarily submit details of offered products with ordering codes, geometry, specification and other technical details. Vendor shall mention the source of the items (indigenous/ imported) and submit detail of manufacturing facility. Vendor may visit BHEL, Haridwar works for technical discussions.	Vendor to accept and submit details with offer.			
3.0	VIBRATORY MACHINE TO BE USED:				
3.01	Offered items should be compatible with following machine: Machine volume: 600 Litre with PU inner lining. Model: VB 625 RD-PU (7.5 HP motor, 1440 RPM) of M/s GALA Precision Engineering Pvt Ltd or Vibro machine (7.5 HP motor, 1440 RPM) of M/s SM systems Pvt Ltd. In the machines during operation, Angle between upper and lower eccentric weight : Lower weight set at 90 degree clock wise, Amplitude: 5 mm (approx.), phase angle : 50 to 60 degree.	Vendor to accept.			
4.00	BATCH QUANTITY ESTIMATE:				
4.01	Vendor to refer drawing VIB/DWG/01 as attached and suggest estimated number of blades per batch for above machine and express the calculation in terms of dimensions: H, T, D as in attached drawing considering effective working volume of machine as 80% of total volume. Blade length shall vary from 70 mm to 500 mm. T and D varies from 10 mm to 80 mm approx..	Vendor to accept and submit details with offer.			

8/27/10/18
Sandip Chakraborty

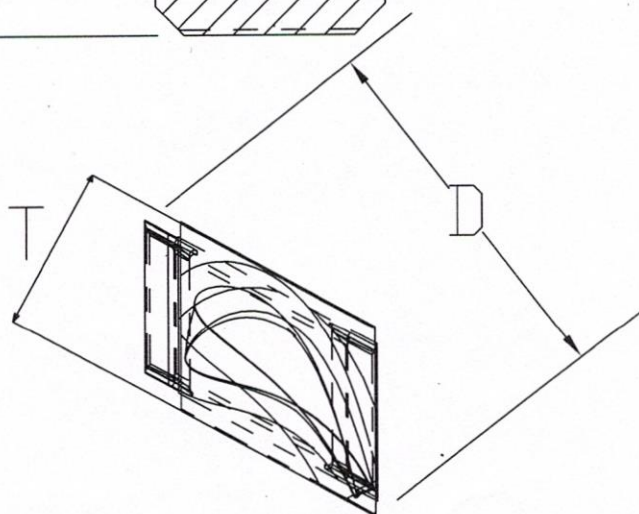
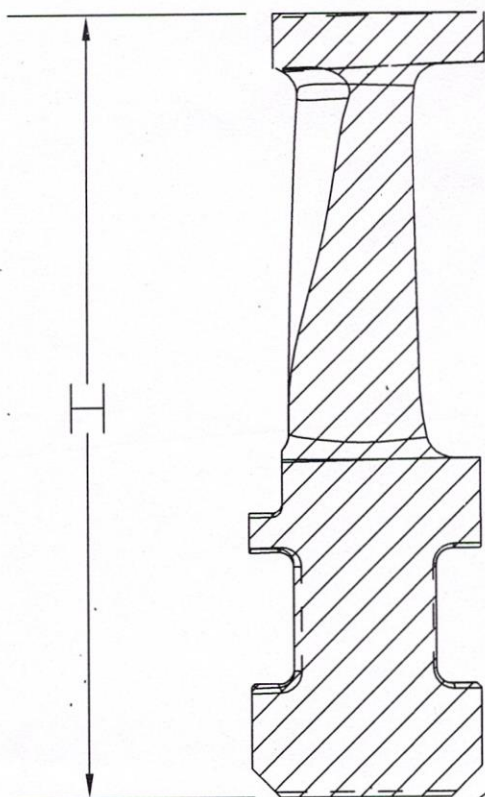
R. K. Roy

21/10/18

6.00	CONSUMPTION PATTERN:				
6.01	Consumption pattern of the media & chemical should be as followings (Including first filling of ceramic media, top up/ replenishment of the media): For 80 working days running for 2 batches/day, consumption of Ceramic media 1= 600 KG or less. For 80 working days running for 2 batches/day, consumption of Ceramic media 2= 600 KG or less. For 80 working days running for 2 batches/day, consumption of Deburring chemical = 400 KG or less. For 80 working days running for 2 batches/day, consumption of Polishing chemical= 160 KG or less.	Vendor to comply and submit details with offer.			
7.00	PRE QUALIFYING REQUIREMENTS:				
7.01	Vendors who are supplying vibro media and chemicals for previous 2 years or more (from the date of opening of the tender) for vibro finishing of turbine blades from any of the following materials: X20Cr13, X22CrMoV12-1, X19CrMoNbVN11-1, X12CrMoWVNB10-1-1 should quote.	Vendor to accept.			
7.02	List of the customers / companies where referred items have been supplied is to be submitted.	Vendor to submit			
7.03	Vendor to intimate name of customer / company where vibro media and chemicals have been supplied. Vendor to submit a PO copy as proof of supply which should be minimum 2 years old from the date of opening of this tender. However in the submitted PO copy, offered prices may be concealed by suitable means.	Vendor to submit			
7.04	Vendor to intimate their annual turnover from vibro media and chemicals. For this, vendor to submit valid proof of annual turnover from vibro media and chemicals.	Vendor to intimate			
7.05	BHEL reserves the right to verify the information provided by vendor. In case the information provided by vendor is found to be false/ incorrect, the offer shall be rejected.	Vendor to submit			

22/10/18
Sandya Choudhary
22/10/18

22/10/18
R.K. Rajeev
22/10/18



VIB/DWG/01

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27/10/18