



ISO 9001:2008, 14001:2004,
50001:2011 & OHSAS 18000
MAHARATNA COMPANY

MATERIAL MANAGEMENT (PURCHASE)
CENTRAL FOUNDRY FORGE PLANT, BHEL HARDWAR
RANIPUR, HARIDWAR (INDIA) – 249403
Phone No. +91-1334-281277/281299, FAX No. 225892
e-mail : vinaysingh@bhel.in; anuragkk@bhel.in

Sub: Tender Enquiry for Heavy Duty Turning Insert

Dear Sir,

We are pleased to invite offer in **E-Tender** as per enclosed specifications & terms and conditions for the under mentioned items.

SI No	Tender No	Description of Material	Qty	Date & Time Of Opening
01	201900581, Event ID: 28849	Material Code: FF7158000834 HEAVY DUTY TURNING INSERT FOR MACHINING OF SUPERCRITICAL GRADE IPI CASING. SIZE: AS PER ANNEXURES DIM.: S	1000 Nos.	17/06/2019 at 2.00 PM

Delivery Schedule: Within 45 Days from PO Date. Early delivery is acceptable.

For New Vendor who are not registered with CFFP:

New Vendor who are not registered with CFFP are required to fill the Supplier Registration Form (SRF). The SRF can be filled online through <https://supplier.bhel.in/>. Please ensure to fill the SRF and it is requested to submit the Acknowledgement No./ Application no. of filled SRF along with the offer. Kindly read terms and conditions, offer not in accordance with the instructions is liable to be disqualified or ignored.

Please send the following along with the Offer:

1. **Company Name and Address Proof.**
 2. **GST Number (Scan Copy of Acknowledgement)**
 3. **PAN Copy**
 4. **MSME Certificate (if Any)**
- All the above documents should be signed and stamped.**

Please visit <https://bhel.abcpurchase.com/EPROC/>; www.bhel.com or www.bhelhwr.co.in for more details & corrigendum if any for the tender enquiry. **Offers are to be submitted online in E-tender portal at <https://bhel.abcpurchase.com/EPROC/>**

Offer to be submitted only on e-procurement portal. Hard copy of offer is not required to be submitted to CFFP. Any offers received in Hard copy shall not be accepted and straightaway rejected by CFFP. Before proceeding for submitting quotation in e-portal, supplier to ensure that they are having a valid Digital Signature Certificate (DSC). Valid DSC refers to an Active Signing and Encryption Certificate (both), with specification Class III SHA2 2048 bit

Thanking You,

Yours Faithfully,

For & On behalf of CFFP, BHEL, Hardwar

(Vinay K Singh)

Sr. Engineer (Purchase)

Note: Corrigendum if any shall not be published, kindly refer <https://bhel.abcpurchase.com/EPROC/> for any changes.

ANNEXURE 'B'

Pre- Qualifying Conditions:-

SL.NO.	REQUIREMENT TO BE COMPLIED
1	Only those vendors to quote who are Original tool manufacturer(OEM) or authorized dealer/distributor of Original Tool manufacturer. Authorization certificate from Original Tool manufacturer to be furnished by the vendor with the offer, in case the vendor is dealer/distributor/channel partner of Original Tool manufacturer.
2	Vendor should have experience of supplying tools for machining of Alloy Steel/ Stainless Steel /Austenitic steel/Inconel/nimonic steel(any one or more).
	The following information is to be submitted by the participating vendor about the companies where such type of tools have been supplied. This is required from all the vendors for qualification of their offer.
2.a	Name and address of the customer / company where such tools have been supplied.
2.b	Contact Details of the customer
2.c	Purchase Order Copy / Invoice Copy
2.d	Basic details of supplied tools
2.e	(1) In case OEM is quoting in tender, he should submit PO/Invoice Copies as required in 2(c) in his own name (2) In case Trader is quoting in tender, he should submit PO/Invoice Copies as required in 2(c) in his own name. If the PO/Invoice Copy submitted is in the name of its OEM, authorization letter issued by OEM to trader to be submitted .
2.f	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.

Annexure- 'A'

Supply & Successful establishment of Insert SNMM 250724 for turning & facing operation on SUPER CRITICAL GRADE IPI CASING on Conventional vertical borer Machine achieving required accuracy & surface finish.

1 Machining of SUPER CRITICAL GRADE IPI CASING involving turning & facing operation for Scope-1 on Conventional vertical borer Machine achieving required accuracy & surface finish.

1.1 The material specifications of SUPER CRITICAL GRADE IPI CASING for Scope-1:

Chemical Properties :-

Elements	Ni	Cr	V	Mn	Mo	Co	Al	C	Si	Nb	W	N
Wt. (%)	0.6-0.8	9.2-10.2	0.18-0.25	0.8-1.2	0.9-1.05	1.0Max	0.4Max	0.11-1.14	10.2-0.4	0.05-0.08	0.95-1.05	0.04-0.06

P-0.02 Max,S-0.01 Max,Al-0.02 max

Mechanical Properties: -

0.2% Yields strength: ≥ 520 N/mm²

Ultimate Tensile strength: 680-850 N/mm²

% Elongation $\geq 15\%$

Cast Weight - Upto 39T ;Weight after machining-Upto 35.8T ;Max OD-2410mm, Max ID- 2030 mm , Min ID- 1140mm , Job Height-3900mm

1.2 Machining Conditions :-

Machining shall be carried out on Conventional vertical borer Machine with Bed Dia 7.1 Mtr Without coolant/dry cutting with Tool Post Suitable for shank size 50X50X300.

2. Vendor to offer in following two parts:-

Scope-1 : Required as per Annexure-1

Scope-2 : Required as per Annexure-2

- a) The vendor shall offer separately for Scope-1 & Scope-2 with all required & recommended items.
- b) The offer will be considered for processing only if offer covers specified item with full qty as mentioned in both Scope-1 & Scope-2. **Partial solution/ offer shall be ignored.**
3. The offer should be complete in all respect alongwith item price for Scope-2. **For Scope-1, vendor doesn't need to quote prices as Scope-1 tooling is meant for trial purpose only.**

Technical Acceptance, Ordering & Final Acceptance for Scope-1:

- 3.1 Technical scrutiny of offers shall be done jointly for both Scope-1 & Scope-2 w.r.t. technical offers submitted by vendors against Annexure-1 & 2. **Items offered in both Scope-1 and Scope-2 should be same in Grade, properties, Profile,size .**
- 3.2 Offers of vendors shall be "Provisionally Accepted" after technical scrutiny on the basis of compliance to specified requirements and technical conditions.
- 3.3 For provisionally accepted offers, vendor will be called for shop trial within 15 days from provisional acceptance and will be communicated by BHEL.
- 3.4 Vendors called for shop trial needs to bring item as mentioned in Scope-1 and perform shop trial within 15 days from provisional acceptance. However, schedule of exact date of shop trial will be intimated to vendor by BHEL.
- 3.5 Final Technical Acceptance criteria for supplied tools after Scope-1 shall be their performance including cycle time and material removal volume.
- 3.6 The machining as per Scope-1 using toolings brought by vendors shall be carried out on SUPER CRITICAL GRADE IPI CASING as mentioned at Sl.no. 1.1 on vertical borer Machine with broad specifications as per Sl. No. 1.2.
- 3.7 Machining operations i.e. turning and facing for Scope-1 is to be successfully completed using items as offered by vendor in Scope-1 in Annexure-1 till last cutting edge of supplied inserts, is suitable for smooth machining & achieving surface finish within 12.5 micron. At the end of

trial, full material volume removed will be recorded for that vendor and will further be used for technical acceptance.

3.8 Specified Machining operations i.e. turning and facing for Scope-1 are to be successfully completed as per technical requirements & conditions mentioned in Annexure-1.

3.9 Total Cycle time covering operations in Scope-1 shall be recorded for each vendor. The cycle time recording shall be done from start to end of specified machining operation i.e start of RPM & Feed from start of operation to end of feed after completion of that operation & back to start position. Non-cutting time like loading of tool, approach to start position, checking of tool offset etc. shall not be considered for cycle time recording.

However, time consumed in each insert indexing/ change, done during carrying out specified machining operation, shall be taken into consideration & shall be included in Total cycle time. The best performing vendor shall be identified by BHEL who shall be having lowest total cycle time for Scope-1.

3.10 Vendor needs to perform operation as mentioned in scope-1 with supplied inserts as mentioned in scope-1. Total material removal volume for operation as mentioned in Scope-1 with supplied inserts will be recorded and be used for technical acceptance of vendor for Scope-1 as per following procedure: -

Vendor removing highest material volume for Scope-1 operation will be used as benchmark for acceptance of item supplied for Scope-1 of other vendors. Other vendor's material removal volume should be within 20% lower limit of material removal volume of best performing vendor (i.e. the vendor who will achieve highest material removal volume). If any vendor achieved removed material volume outside 20% lower limit of highest material volume removed by best performing vendor, that vendor's supplied item will be rejected for scope-1 & subsequently technically not suitable for Scope-2.

If best performing vendor(i.e. vendor removing highest material volume) material removal volume is considered as 'X';

Then acceptance criteria for other vendors is:-

respective vendor's material removal volume $\geq 0.8X$

Rejection criteria for other vendors is:-**respective vendor's material removal volume $<0.8X$**

- 3.11 All vendors who shall complete specified operations of Scope-1 with supplied tools meeting technical requirements & conditions mentioned in Annexure-1 & shall have material removal volume within 20% lower limit than material removal volume achieved by best performing vendor (i.e. the vendor who will achieve highest material removal volume) will then be compared for cycle time for final technical acceptance of Scope-1 and subsequently technical suitability for Scope-2. Vendor achieving least cycle time will be considered as benchmark and other vendor's cycle time should be within 20% higher limit of cycle time of best performing vendor (i.e. the vendor who will achieve least cycle time).

If best performing vendor (i.e. vendor achieving least cycle time) material removal volume is considered as 'Y';

Then acceptance criteria for other vendors is:-**respective vendor's achieved cycle time $\leq 1.2Y$** **Rejection criteria for other vendors is:-****respective vendor's achieved cycle time $>1.2Y$**

- 3.12 Further, weightage/ Factor for achieved cycle time & material removal volume shall be applied to price quoted by technically suitable vendors while finalizing L1 vendor for Scope-2 as elaborated at Sl. No. 5.2.1
- 3.13 During trial, if the process or tools could not be successfully established by vendor in one go, the vendor will be given one more chance for successful establishment or to improve any performance/ cutting parameters including cycle time through change of tool/ insert/ grade/ process without any additional financial implications to BHEL. However, the total time period taken in first trial machining and improvement/ modification/ change in supplied tools, their supply & subsequent trial machining in additional chance shall not be allowed to exceed beyond 10 days. In case, there is holdup not attributable to vendor, like non availability of machine, the time period shall be accordingly extended to that extent and informed by BHEL.

4.0 Payment of Supplied tools for Scope-1:

4.1 Vendors will not be made any payment for Scope-1 toolings as these will be used for trial purpose only based on which their technical suitability for Scope-2 shall be ascertained. **Vendors may bring their tools for Scope-1 on returnable basis to take their tools back after trial.**

5.0 Ordering for scope-2 as per Annexure-2:

5.1 Only technically suitable vendors of Scope-2 based on technical acceptance of vendors of Scope-1, shall be considered for price bid opening for Scope-2.

5.2 Out of technically suitable vendors for Scope-2, L1 vendor shall be finalized for scope-2 as per following:

5.2.1 Factor 'F1' & 'F2' shall be applied to Final price of technically accepted vendors for evaluation of L1 status of vendors for Scope-2:

Final price (to be considered for L1 evaluation) = Final landed cost of complete tooling

Package for the respective vendor * F1 * F2

F1 = $\frac{\text{Total cycle time achieved by respective vendor for Scope-1 operation}}{\text{Total cycle time achieved by best Performing vendor (vendor achieving least cycle time) for Scope-1}}$

F2 = $\frac{\text{material removal volume by best Performing vendor (vendor achieving highest material removal volume) for Scope-1}}{\text{Total material removal volume achieved by respective vendor for Scope-1 operation}}$

6. Other Conditions :

1. The insert geometry & grade should be suitable for machining of Super Critical Grade IPI Casing with smooth chip flow, productive machining & chip breaking. Insert should be able to withstand rough machining conditions as Job to be machined generally has black surface, hard spots, sand inclusion, cracks etc and will be subjected to interrupted cutting & sudden impact loading
2. Vendors are required to quote individual price of Scope-2 item only.

Annexure-1

SCOPE-1

1. Vendor to offer complete tooling package for specified operations as mentioned below at Sl. No. 1.4.1. The machining shall be carried out on the SUPER CRITICAL GRADE IPI CASING on conventional Vertical borer machines as per details mentioned in Annexure 'A' at point no.

1.2.

1.1 Job:

1.1.1 SUPER CRITICAL GRADE IPI CASING shall be provided by BHEL for machining trial for all provisionally accepted vendors for scope-1.

1.1.2 Machining of SUPER CRITICAL GRADE IPI CASING by different vendors as per availability of the material & Machine.

1.1.3 For provisionally accepted offers, vendor will be called for shop trial within 15 days from provisional acceptance and will be communicated by BHEL. However, schedule of exact date of shop trial will be intimated to vendor by BHEL.

1.2 Job material: - as provided in Annexure 'A' at Sl. No. 1.1

1.3 Machine details: - as provided in Annexure 'A' at Sl. No. 1.2

1.4 Machining operations:

1.4.1: Turning & facing operation:

Above mentioned machining operation to be completed by using supplied inserts suitable with tool holder PSDNN 5050 T25 as provided by BHEL during shop trial, on BHEL provided SUPER CRITICAL GRADE IPI CASING. Vendor needs to perform turning & facing operation from the supplied Scope-1 items only.

Vendor will continue trial till last cutting edge of supplied insert as part of Scope-1, is suitable for smooth machining & achieving surface finish within 12.5 microns. At the end of trial, total material removal volume achieved till last cutting edge of supplied insert as part of Scope-1 is suitable for smooth machining & achieving surface finish within 12.5 microns, will be recorded along with cycle time for full operation. These recorded material removal volume and cycle time will be used for technical suitability & L-1 for Scope-2.

The vendor to offer for Scope-1 as below: -

- i) Inserts suitable with tool holder PSDNN 5050 T25 : - 2 Nos.

The machining should be smooth without any undue vibrations affecting quality of machining & surface finish.

2. Item offered by one vendor for scope – 1, irrespective of types of Profile/Grade of insert; shall be Considered equitable to item offered by other vendors.

3. Inserts design shall be as per recommendation of vendor. The insert geometry and grade should be suitable for smooth chip flow, chip breaking and productive machining.

4. SUPER CRITICAL GRADE IPI CASING shall be clamped on Conventional Vertical Borer machine with clamping and support blocks as provided by BHEL.

5. Specified operation to be completed within best possible time.

6. In case of any replacement or addition of tool/item, if so required by vendor for successful establishment of require machining, it shall be done by vendor without any financial implications to BHEL.

7. The vendor will have to keep extra consumables /items with them for supplying at short notice, if require for complete machining as per tender scope to avoid any hold up.

8- In case vendor requires any clarification, they may discuss with BHEL prior to submission of their offer to avoid any gape at later stage.

9. Broad specification of the machine have been mentioned at S.I No. 1.2 of Annexure-A. Vendors are required to ensure use of optimum cutting parameters within specified parameters of the machine.

ANNEXURE-2**SCOPE-2**

1. Item offered for scope-2 should be same as offered in Scope-1 w.r.t. grade, profile, properties etc.
2. Price bid of only technically accepted vendors of Scope-1 will be opened for Scope-2.
3. Vendor to offer item for scope-2 as per following: -

<u>S.I NO.</u>	<u>ITEM</u>	<u>Qty.</u>
1	Inserts suitable for mounting on tool holder PSDNN 5050 T25 and as per offered in Scope-1 during shop trial	1000 nos.

Domain :	bhel.abcpurchase.com		
Parent department:	CFFP Haridwar		
Unit name	: CFFP, Haridwar		
Purchase group	: PURCHASE PG	RFQ/NIT/Enquiry Officer	: Vinay Singh
Event ID	: 28849	RFQ/NIT/Enquiry no.	: 201900581
Enquiry Date	: 24/05/2019 05:30:00		
Tender Description	: HEAVY DUTY INSERT		
Terms & Conditions	: Standard Instructions: TEST CERTIFICATE REQUIRED. GUARANTEE CERTIFICATE REQUIRED. BASIC RATES, TAXES DUTIES SEPERATELY CENVATABLE DUPLICATE COPY OF INVOICE. INSP AFTER RECPT AT CFFP. Special Instructions: GUARANTY CERTIFICATE REQUIRED WITH MINIMUM GUARANTY PERIOD OF 12 MONTHS. SEALED PRICE BIDS FOR SCOPE-2 TO BE SUBMITTED VENDORS NEED TO QUALIFY PQC FOR CONSIDERATION OF TECHNICAL SUITABILITY. DELIVERY SCHEDULE: 45 DAYS FROM PO DATE. EARLY DELIVERY IS ACCEPTABLE. ANNEXURE A, ANNEXURE B (PQC) ARE ATTACHED TERMS & CONDITION NOT SPECIFIED IN TENDER ENQUIRY SHALL BE AS PER GENERAL INSTRUCTION AND STANDARD TERMS & CONDITIONS FOR BIDDING AGAINST TENDER ENQUIRY (DOCUMENT NO. CFFP/MM/PUR/GT/02 REV04 Dated 03.04.2019). GST ON LD SHALL ALSO BE RECOVERED FROM SUPPLIER BILL ALONG WITH LD CHARGES IF APPLICABLE.		
Product / service / work keywords	: Insert,		
No. of Bid Parts	: Multiple	Envelope	: Techno-commercial bid , Price bid
Type of contract	: Goods	Project duration / delivery or completion period	: 45 days from PO date.
Download document	: Before login	RFQ floated under the policy	: PP-PURCHASE POLICY
Estimated Category	: G	No. of items already attached	: 1
Delivery/Location At	: CPS CFFP BHEL HARIDWAR	Delivery Date	: 13/11/2019 05:30:00
Inspection by Agency	: CFFP BHEL HARIDWAR	Inspection Location	: CFFP BHEL HARIDWAR
Min. bid required	: 1		

Bid submission configuration

Bid evaluation	:	Item wise	Bidding access	:	Open Tender
Base currency	:	INR	Bidding type	:	NCB/Indigenous

Key configuration

Pre-bid meeting	:	Don't allow
-----------------	---	-------------

Dates configuration

Document downloading start date	:	25/05/2019 15:30:00	Document downloading end date	:	17/06/2019 14:00:00
Bid submission start date	:	25/05/2019 15:30:00	Bid submission end date	:	17/06/2019 14:00:00
Bid opening date	:	17/06/2019 14:01:00			

Document / EMD / Security fee detail

Document fees	:	Not required	EMD	:	Not required
---------------	---	--------------	-----	---	--------------

Bidding forms

New Indigenous Price Bid template

Price bid format for Indian Vendors

Sr.no	Material code	Item name	Enquiry Quantity	Unit of measurement
1	FF7158000834	HEAVY DUTY TURNING INSERT	1000.00	NO

Information for Online Participation

Bidder who wish to participate in this tender needs to procure Digital Certificate as per Information Technology Act-2000 using that they can digitally sign their electronic bids. Bidders can procure the same from any or the CCA approved certifying agencies, or they may contact e-Procurement Technologies Ltd. at below mentioned address and they will assist them in procuring the same. Bidders who already have a valid digital Certificate need not to procure the same. In case bidders need any clarification regarding online participation, they can contact,

e-Procurement Technologies Ltd.

Corporate Office:

Address : A-201/208, Wall Street - 2, Opp. Orient Club,
Nr. Gujarat College, Ellis Bridge,
Ahmedabad - 380006, Gujarat(INDIA)

Digital Certificate Contacts

Contact Person : Mr. Himalay Vaishnav
Cell : +91-9099090830
Phone Nos. : +91-9099090830
Fax No :
e-Mail : info@abcProcure.com

Support Team Contacts

Contact Person : BHEL Support Team Ahmedabad

Cell : +91-8160087732
Phone Nos. : +91-79-68136809/871/861/823/872
Fax No :
e-Mail : Bhel.Support@abcProcure.com

Bidder who wish to participate in e-Tender need to fill data in predefined forms of Price bid available in respective tender only. After filling data in predefined forms bidders need to click on final submission link to submit their encrypted bid. Bidder need to submit Document Fees, EMD & Reference Documents in hard copy if such instruction are given by tendering authority. As Per the new Inter-operability guidelines released by Controller of Certifying Authorities(CCA), the Secured Socket Layer(SSL) certificate for a e-procurement application is generated on a new algorithm, SHA2.

Also, the Digital Certificates that will be applicable for these platforms have to be SHA2 algorithm complaint. For the same, the users have to ensure that they have Windows XP(SP3)/Windows Vista/Windows7 installed in their respective PC/Laptop. In case of Windows XP Service pack - 3, if you get any issue you can install the SSL patch, which is available at our download section of our e-Tender/e-Auction Portal and also at our corporate website www.abcprocure.com just below the label of "Knowledge section".

Fraud Prevention

Bidder along with its associate/collaborators/sub-contractors/sub-vendors/consultants/service providers shall strictly adhere to BHEL Fraud Prevention Policy displayed on BHEL website <http://www.bhel.com> and shall immediately bring to the notice of BHEL Management about any fraud or suspected fraud as soon as it comes to their notice.

Preference to Make in India

For this procurement, Public Procurement (Preference to Make in India), order 2017 dated 15.06.2017 & 28.05.2018 and subsequent orders issued by the respective Nodal ministry shall be applicable even if issued after issue of this NIT but before finalization of contract/PO/WO against this NIT. In the event of any Nodal Ministry prescribing higher or lower percentage of purchase preference and/ or local content in respect of this procurement, same shall be applicable. Default margin of purchase preference shall be 20% to local suppliers with default minimum local content of 50%.