



General Note:

Page:1/2

PHONE : 91-44-28158821
GRAMS : BHARATELEC
FAX NO:
E-mail :
Web :

OFFICE COPY

Collective No.

9621700190

Enquiry Date

10.11.2017

**Due Date For
Quotation**

25.11.2017

Please quote Enquiry No, Date and due date in all correspondences.
This is only a request for quotation and not an order

Item	Description	Unit	Quantity	Delivery Quantity	Schedule Date
10	SP6923420059 GRIPPER JAW DIA. 41 MM FOR 800KN DB GRIPPER JAW FOR 800 KN DRAW BENCH DRAWING. NO. : 20.ST.221.02.099/18 SL. NO. : 01 SIZE : DIA.41.00 MM TDC : TDC/TE/MFG - 25 REV.No. 04 DATE 16.08.2011	SET	45.000	45.00	15.01.18
20	SP6923420105 GRIPPER JAW DIA. 61 MM FOR 800KN DB GRIPPER JAW FOR 800KN DRAW BENCH DRAWING. NO. : 20.ST.221.02.099/18 SL. NO. : 05 SIZE : DIA 61.00 MM TDC No.: TDC/TE/MFG - 25 REV No. 04 DATE 16.08.2011	SET	15.000	15.00	15.01.18

General Note:

This tender is floated thro' E-procurement site and PLEASE CLICK THIS
LINK TO TAKE YOU TO THE PROCUREMENT SITE <https://bheleps.buyjunction.in>,

1. This Tender is floated on TWO-BID basis.
2. Following details are enclosed.
a.,Annexure-A - Important Note to Tenderers & Annexure-D Note to
MSE Vendors enclosed. enclose your MSE Certificate accordingly.
Tenderers are requested to submit their Offers in TWO-BID basis,

viz.,

I.,,Part I,,...,Technical and Un-Priced Commercial Bid

II.,,Part II,,...,Price Bid

b.,,Annexure-B - Technical Conditions

c.,,Annexure-C - Commercial Conditions

3. Tenderers are required to fill in above Annexure-B and C and
enclose them along with their UN-PRICED BID.

4.a. Delivery date furnished in the Enquiry is only indicative.

4.b. For Delivery Schedule - Pl. refer Clause No. C.4 of Annexure- C.

5. Price Bid of Vendors, who accept the Clause No. B.1 to B.3 of
Annexure-B & C.1 to C.5 of Annexure- C. shall only be considered for
further processing. Fill the Annexure-B & C and enclose it with
Technical and Un-Priced commercial Bid.

For Payment term - Refer Annexure - C Point No. C- 2. Any deviation in

The offers should reach us 30 minutes before the time of opening of tenders.
The offers will be opened at 14.30 hrs on the due date of tender in the presence of
tenderers who have submitted their offer and who may like to be present for the tender
opening.Late and delayed offers are liable to be rejected.

Yours faithfully,
For **BHARAT HEAVY ELECTRICALS LIMITED**

MANAGER / PURCHASE
(SSTP)

**9621700190 / 10.11.2017****23505**

the above payment term will attract loading as mentioned below.
For payment term deviation - "Base rate of SBI (as applicable on the date of bid opening. Techno-commercial bid opening in case of two part bids) + 6% shall be considered for loading for the period of relaxation sought by bidders.
Payment through Bank. LC/Advance Payment are liable for rejection.

6. For new vendors, who ever viewed thro' web site, they will be given the documents as per Annexure-E with the technical bid.

Enclosures:**"LD clause has to be confirmed without fail."**

The 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.

PR Links

Material.	PR.No	PR.Item.	Quantity	Acc. Assign	Customer Number
SP6923420059	120149483	00010	45.000	/000000	
SP6923420105	120149483	00020	15.000	/000000	

list of suppliers**RFQ-5200006526****Open Tender Dummy Code**

The offers should reach us 30 minutes before the time of opening of tenders.
The offers will be opened at 14.30 hrs on the due date of tender in the presence of tenderers who have submitted their offer and who may like to be present for the tender opening.Late and delayed offers are liable to be rejected.

Yours faithfully,
For **BHARAT HEAVY ELECTRICALS LIMITED**

MANAGER / PURCHASE
(SSTP)

IMPORTANT NOTE TO TENDERERS
(FOR INDIGENOUS & OVERSEAS SUPPLIERS)

This Tender is floated on TWO-BID System. Tenders are requested to submit their offers in TWO-BIDS (Part I: Un priced bid and Part II: Price Bid) separately.

1. **Part I: UN PRICED BID:** (Complete with technical & Commercial conditions as per enquiry The Tenderer should confirm their acceptance / comments to the Enquiry along with other commercial Terms & Conditions of the Tender. In case any deviation is taken by the Tenderer from the Tender requirements, it is to be clearly indicated in the offer with reference to the particular clause. If such deviations are not explicitly indicated in the offer, it will be construed by BHEL that the Tenderer is complying with Annexure Clause(s), Commercial terms & conditions and other conditions in full.
2. **Part II: PRICE BID:** Price (with break-up details wherever required) to be indicated.
3. **Both Un priced Bid and Price Bid is** to be submitted before 1400 hours (Indian Time) on tender Due Date.
4. Unpriced Bid shall only be opened on the Tender Due Date mentioned in the Tender online.
5. After opening the Unpriced Bid, they shall be evaluated by BHEL for their suitability. BHEL shall hold discussions with the responded Tenderers on the Technical and Commercial terms and freeze the terms & conditions of the offer. These frozen technical specifications will be communicated to responded tenderers.
6. BHEL shall offer opportunity to the responded and technically / commercially suitable Tenderers, to submit their latest Price Bid/ Impact of prices, if any in line with the frozen technical, Commercial, delivery conditions.
7. This latest Price Bid & the Impact of prices for the frozen technical specifications submitted by the Tenderers will be opened. Based on the above, the ranking of the Tenderers shall be made and accordingly the Tender shall be finalized.

Annexure-D

Important Note to MSE Vendors

1. 20% of the tendered quantity is earmarked for MSE suppliers in this tender.
2. Out of the 20% tendered quantity reserved for MSE suppliers, 4% shall be earmarked for procurement from MSE owned by SC / ST entrepreneurs.
3. In case MSE vendor participating in the tender quotes within the price band of L1 + 15%, they will be allowed to supply the portion of the requirement subject to acceptance of L1 price by MSE vendor. In case of more than one such MSE, the supply shall be shared proportionately.
4. MSE suppliers can avail the intended benefits only if they submit along with 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 CA certificate (Format enclosed) applicable for the year, certifying quantum of investment in plant and machinery within the permissible limit as per the act for relevant status (Micro or small) where the deemed validity of EM II is over. Date to be reckoned for determining the deemed validity will be the last date of technical bid submission. Non submission of such documents will lead to consideration of their bids at par with other bidders and MSE status of such suppliers shall be shifted to Non MSE supplier till the supplier submits these documents.

Certificate by Chartered Accountant

This is to Certify that M/S, (hereinafter referred to as 'company') having its registered office at..... is registered under MSMED Act 2006, (EntrepreneurMemorandum No (Part—II).....dtd:....., Category:..... (Micro/Small)). (Copy enclosed).

Further verified from the Books of Accounts that the investment of the company as on date 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.5.0.1722(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**

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

Date:

(Signature)

Name -

Membership number -

Seal of Chartered Accountant

Annexure – B.
Technical Conditions

Vendor Code:	Vendor Name:	
Tender No.:	Tender Date:	Tender Due Date:
Sl.No.	Technical Requirement	Accepted
B. 1.	To supply of Materials as per Tender specifications / Drawing without any deviation.	
B. 2.	The following Test certificate will be sent along with the supply, 1. Raw material Chemistry – from NABL accredited Lab certificate. 2. Hardness & Temperature time recorder graph for heat treatment cycle followed. 3. LPT 4. Dimension report	
B. 3.	To supply of materials with suitable preservation and packed suitably.	

Annexure – C.
Commercial Conditions

Sl.No.	Commercial Terms	Accepted				
C1.	<u>Delivery Terms</u> : Free delivery at BHEL/SSTP Stores.					
C2.	<u>Payment</u> : 100% after 45 days after receipt and acceptance of materials by BHEL					
C3.	<u>LIQUIDATED DAMAGES:</u> It is clearly understood among the parties to the Contract that TIME IS THE ESSENCE OF THE CONTRACT. Therefore, the delivery of the goods specified in the Purchase Order shall be made within the time prescribed. Where the Seller supplies or despatches the goods, beyond the delivery period specified, and the Purchaser will have no obligation to accept the goods. If accepted, Liquidated Damages at the rate of 0.5% (Zero point five Percent) of the total value of goods delayed, per week of delay, subject to a maximum of 10% (Ten Percent) or part thereof, will be levied without prejudice to any other relief or compensation due to the Purchaser under any other conditions of the Contract. <u>RISK PURCHASE:</u> Alternatively, the Purchaser, at his option, will be entitled to terminate the Contract and to purchase elsewhere at the risk and cost of Seller, either the whole of the goods or any part, which the Seller has failed to deliver or dispatch within the time stipulated as aforesaid or if the same were not available the best and nearest available substitute thereof. The Seller shall be liable for any loss, which the Purchaser may sustain by reason of such Risk Purchase(s), in addition to penalty at the rate mentioned above.					
C4.	<u>Delivery period required</u> : <table><tr><td>Delivery from PO Date</td><td>Enq.Sl. Nos. 1 & 2</td></tr><tr><td>Within 2 Months</td><td>All Quantity</td></tr></table>	Delivery from PO Date	Enq.Sl. Nos. 1 & 2	Within 2 Months	All Quantity	
Delivery from PO Date	Enq.Sl. Nos. 1 & 2					
Within 2 Months	All Quantity					
C5.	Validity of Offer - 60 Days from the Date of Tender Opening.					

Sl.No.	Commercial Terms	
C6.	a. GST HSN No.	
	b. GST (%)	
	C. GST Regn & PAN No.	
C7.	Other Cost (if any) - % (or) Rs.	
C8.	Are you Micro/Small/Medium Industry? (If YES, please furnish MSE Regn.No., along with a copy of MSE Certificate)	YES / NO MSE No. MSE Certificate enclosed(Yes/NO)
C9.	Contact detail Name Mobile No. Mail Id	
C10.	<u>Deviations, if any (attach additional sheet, if reqd) :</u>	

Signature with Date :
Seal :

Annexure-E - Important Note to New Vendors (Who have not enrolled at SSTP)

The new vendors who had the Digital signature certificate (DSC), PLEASE CLICK THIS LINK TO TAKE YOU TO THE PROCUREMENT SITE -

<https://bheleps.buyjunction.in>,

And also the following will be required to furnish the documentary proof/ information along with their offers:

1. Certificate of registration to supply of Machining Items (copy of certificate given by the govt. to be submitted).
2. Banker's information (copy of bank pass book first page to be submitted).
3. MSME vendor certificate (if applicable).
4. Address of your organization (complete postal address with PINCODE).
5. Contact person's Phone No. /Mobile No. / FAX No. /E-mail ID.
6. Statutory documents – GST REGN / SERVICE etc. (copy to be furnished)
7. NSIC/SSI Certificate (if applicable)
8. ISO Certificate (if applicable)
9. Experience certificate as proof of supply of similar items to any Govt. agencies / PSU / Organisations (copy of PO's to be furnished).
10. Audit Report/ IT Return (if applicable)
11. Agency agreement with manufacturer (if applicable)
12. Partnership Deed (if applicable).
13. Available Heat treatment facilities and confirm point by point of Technical delivery condition.

If the new vendors fail to submit the above documentary proof/information, their offers will not be considered for this enquiry.

TERMS AND CONDITIONS OF ENQUIRY On Line thro' <https://bheleps.buyjunction.in>,

1.0 OFFER

1.1 Each Tender shall be given **On Line thro' <https://bheleps.buyjunction.in>**

1.3 Rate(s) shall be net F.O.R./BHEL-SSTP STORES, inclusive of risk in transit and remain valid for 60 days from the Enquiry Due/other Taxes/Duties.

1.4 If any Sales Tax and/ or Excise Duty and/ or other Taxes/Duties is/are payable as extra to the quoted Rate, it shall be specifically stated in offer, failing which the Purchaser will not be liable for payment of Sales/Excise Duty/other Taxes/Duties.

1.5 No voluntary revision of prices will be entertained after opening the Tender(s).

1.6 Manufacturer's Name, Trade Mark or Patent No., if any, shall be specified. Illustrative leaflets giving technical particulars are required along with the Offer, wherever necessary.

1.7 Products with I.S.I. Certification Marks will be preferred.

1.8 The Purchaser shall be under no obligation to accept the Lowest Tender or any other Tender. The Purchaser shall be entitled to accept or reject any Tender, in part or full, without assigning any reason whatsoever.

1.9 The Purchaser also reserves the right to allow the Purchase Preference Facilities to the Public Enterprises, as admissible under Government Policy and Amendments thereto from time to time.

1.10 BHEL reserves the right to increase or decrease the Tender Quantity and split the Tender Quantity among more than one Tenderer and place Orders accordingly in proportion, based on commitment, requirement and Supplier's capability in terms of delivery and quality.

1.11 Lowest Rate received against Tender(s) need not be the technically acceptable L-1 Rate and BHEL reserves the right not to consider the same.

1.12 BHEL reserves the right to negotiate or re-float the opened Tender, if L-1 rate is not the lowest acceptable rate to them, inter-alia other reasons.

1.13 BHEL reserves the right to negotiate the L-1 Rate.

1.14 BHEL may order more than one Vendor at the lowest acceptable Rate.

2.0 **SAMPLES:** Wherever possible, samples shall be submitted separately whether specifically requested or not, so as to reach the Purchaser on or before the Enquiry Due Date. They shall be clearly marked with the Enquiry No. and Enquiry Date, on the cover to facilitate identification.

3.0 **PACKING AND MARKING:** The Seller shall arrange for securely protecting and packing the stores to avoid loss or damage during transit.

4.0 **TERMS OF PAYMENT:** 100% Payment will be made after 45 days of receipt & acceptance of materials at BHEL. Wherever required by the Purchaser, the successful Tenderer must send the Operation and maintenance Manual(s), Test Certificate(s), Drawing(s) etc., for the materials ordered, along with the materials and a statement to that effect shall be made in the invoice. Failure to comply with this provision, will result in delay in payment of the Bill(s), Goods dispatched either by V.P.P. or routing the documents through Bank, will not be accepted unless agreed to by the Purchaser.

5.0 **LIQUIDATED DAMAGES:** It is clearly understood among the parties to the Contract that TIME IS THE ESSENCE OF THE CONTRACT. Therefore, the delivery of the goods specified in the Purchase Order shall be made within the time prescribed. Where the Seller supplies or despatches the goods, beyond the delivery period specified, and the Purchaser will have no obligation to accept the goods. If accepted, Liquidated Damages at the rate of 0.5% (Zero point five Percent) of the order value, per week of delay, subject to a maximum of 10% (Ten Percent) or part thereof, will be levied without prejudice to any other relief for compensation due to the Purchaser under any other conditions of the Contract.

6.0 **RISK PURCHASE:** Alternatively, the Purchaser, at his option, will be entitled to terminate the Contract and to purchase elsewhere at the risk and cost of Seller, either the whole of the goods or any part, which the Seller has failed to deliver or dispatch within the time stipulated as aforesaid or if the same were not available the best and nearest available substitute thereof. The Seller shall be liable for any loss, which the Purchaser may sustain by reason of such Risk Purchase(s), in addition to penalty at the rate mentioned in Clause No.05 above.

7.0 CENVAT CREDIT:

7.1 Please explicitly indicate the following in the Offer to enable us to avail CENVAT Credit.

7.1.2 Central Excise Chapter Heading Number, under which the goods will be cleared and Present Rate of Excise Duty.

7.2 In the event of an Order being placed, Excise Duty will be reimbursed only based on the Duplicate Copy EXCISE INVOICE (Transporters Copy), Seller shall take acknowledgement from the authorized personnel/transporter, while delivering the goods, for having handed over the above Duplicate Copy.

7.3 If the Seller is a First Stage Dealer/Second Stage Dealer/Depot/Consignment Agent/Importer/Importer-Agent, the Seller has to confirm that the will be following the procedures in terms of the provisions of Central Excise Rule s-2002 to enable BHEL to avail CENVAT Credit, under CENVAT Credit Rules-2002.

7.4 All the time of submission of Invoice(s), the Seller is required to furnish the following Certificate.

The Amount of Rs. (Rupees in words.) claimed as CENVAT in the Bill is in accordance with the provisions of the Rules in all respects and that the same has been paid to the Central Excise Authorities in respect of the materials covered by the Bill.

8.0 **GENERAL:** And other conditions which might have been quoted by the Seller and are in contravention to the Terms prescribed in the Tender/Order and which have not been specifically accepted by the Purchaser, will not be applicable to the Contract and BHELs standard Terms and Conditions shall only be applicable.

9.0 IMPORTANT NOTE:

9.1 In the event of quoting Packing and Forwarding charges extra in the offer, the Packing charges and Forwarding charges shall be separately quoted and shall not be combined. Also please note that no Excise Duty and Sales Tax shall be payable on Forwarding charges. In case this is not complied with, corresponding Excise Duty and Sales Tax on packing charges will not be paid.

9.2 Tenderer is requested to furnish all the details called for in the Tender. In case any required data/information is / are not furnished in the Offer, Purchaser reserves the right to assume the same for the purpose of evaluation/comparison and decide the Tender accordingly.

10.0 Important Note to MSE Vendors:

10.1 20% of the tender quantity is earmarked for MSE suppliers in the tender.

10.2 Out of the 20% tendered quantity reserved for MSE suppliers, 4% shall be for procurement from MSE owned by SC/ST entrepreneurs.

10.3 In case MSE vendor participating in the tender quotes within the price band of L1 + 15%, they will be allowed to supply the portion of the requirement subject to acceptance of L1 price by MSE vendor. In case of more than one such MSE, the supply shall be shared proportionately.

10.4 MSE suppliers can avail the intended benefits only if they submit along with offer, attested copies of either EM II certificate having deemed validity five years from the date of issue with CA certificate (Format enclose) applicable for the year, certifying quantum of investment in plant and machinery within the permissible limit as per the act for relevant status (Micro or Small) where the deemed validity of EM IIs over. Date to be reckoned for determining the deemed validity will be the last date of technical bid submission.

10.5 Non submission of such documents will lead to consideration of their bids at par with other bidders and MSE status of such suppliers shall be shifted to Non MSE supplier till the supplier submits these documents.

Processflow of OPEN TENDER		
Module	Steps	Remarks
Supplier Registration	Supplier visits EPS at https://bheleps.buyjunction.in . Clicks "NEW SUPPLIER" button for registration. Fills up the Registration form.	
	<u>REGISTERED SUPPLIERS :</u> For registered suppliers, they can select the ENLISTED option & complete their registration with their existing vendor code.	
	<u>UNREGISTERED SUPPLIERS :</u> For un-registered suppliers, they can select the INTERESTED option & complete their registration with their preferred Login Code.	
	Supplier maps their digital certificate at the time of registration.	
Authentication of registration	MIjunction will ensure Authentication of vendor registration as PAN BHEL basis.	
Bid Submission	Supplier will login using his/her login ID & password	
	View the RFQs under OPEN TENDER section	
	Suppliers will show their INTEREST to participate	
	Respond to RFQ	
	Upload details of TENDER FEE & EMD with the valid document proof (as attachment)	
	Uploads Pre-qualification docs, Fills Techno-commercial & Price template	
	Submits Quotation	

Part I Opening & Evaluation

2. Registration of Suppliers and Flow.

unregistered Supplier: Supplier visits EPS at <https://bheleps.buyjunction.in>

- a. Supplier visits EPS at <https://bheleps.buyjunction.in>
- b. Clicks "REGISTER" for registration
- c. Fills up the Registration Page form
- d. MJ will ensure Authentication of Registration ¹
- e. Supplier logs in with the ID and password
- f. Supplier Maps the signing Certificate
- g. MJ will ensure the authentication the signing certificate ¹.
- h. Supplier Logs in to the system again and views the RFQ
- i. Supplier Attaches himself to the RFQ by clicking the Interested button
- j. Supplier fills the bid template and makes necessary attachments
- k. Supplier submits his bid by clicking CONFIRM.

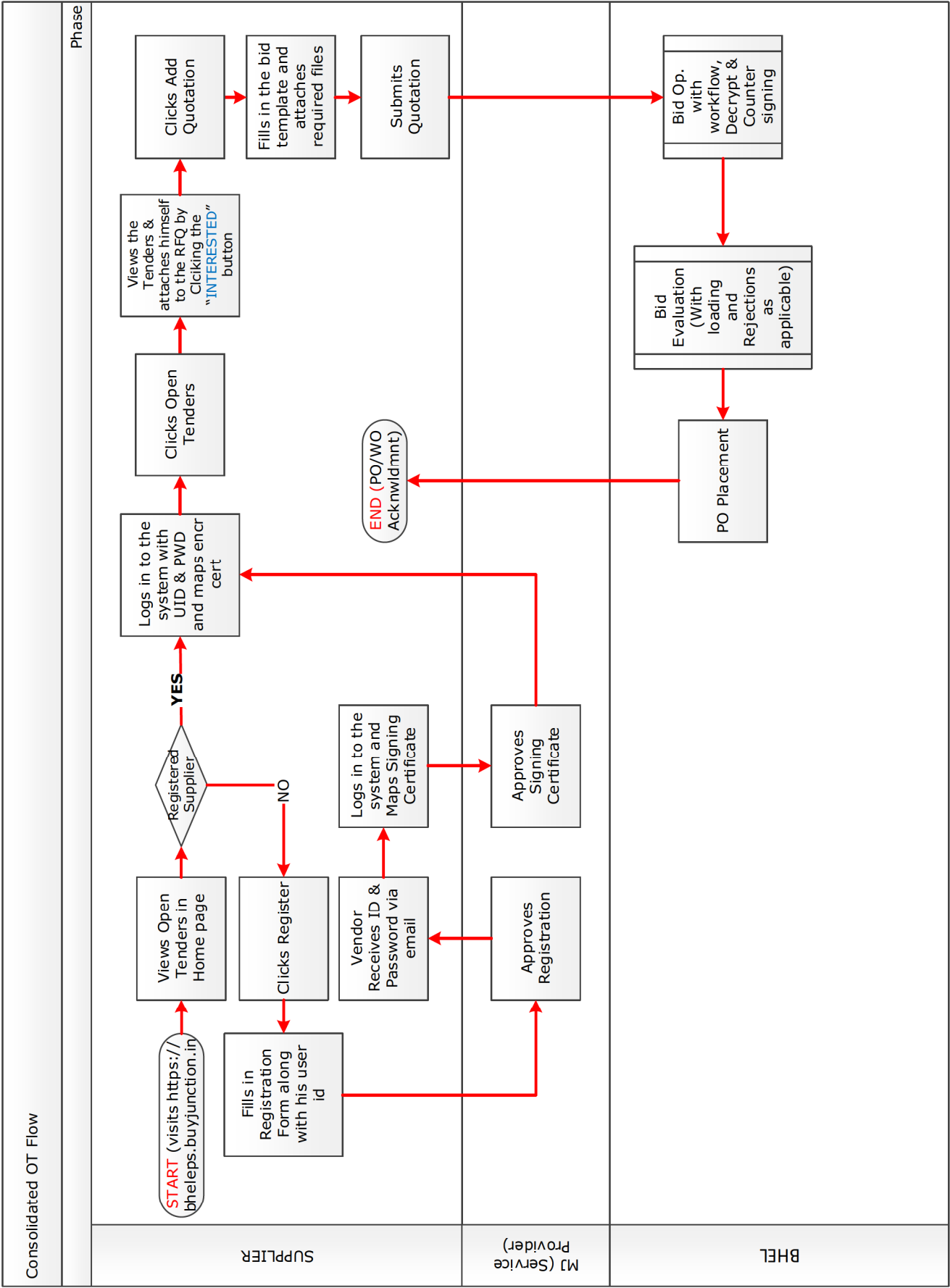
NB:-

¹ -- BHEL Administrator or user will have no role for approving Registration and Open Tenders and DSC for Any supplier who has registered himself from the front END which is in case of OT.

- **For registered Supplier:**

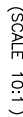
- Supplier visits EPS home page
- Supplier signs in with his/her user id and password
- Selects the RFQ Code and views it.
- Attaches himself to the RFQ by clicking the Interested button
- Supplier fills the bid template and makes necessary attachments
- Supplier submits his bid by clicking CONFIRM.

12. Consolidated Flow Diagram of OT process





DETAIL B


$$\begin{array}{r} 1.6 \\ \times 0.8 \\ \hline \end{array}$$

ALL DIMENSIONS ARE IN MILLIMETERS

CHEMICAL COMPOSITION

HARDENED AND TEMPERED TO 55-58 HRC

 MARK MATERIAL CODE No & ØA VALUE, FIRMS NAME& P O No.

Note:- CHAMFER THE SHARP EDGES TO 0.5X45°

[illegible]

BHEL, Tiruchirapalli-620014		SSTP / Tool Engineering	Technical Delivery Conditions
Product : Gripper Jaws for Cold Mill Draw Bench			
Document No.	Revision No.	Effective Date	Page No.
TDC/TE/MFG-25	04	16.08.2011	1 of 2
Revision Record	Rev. No. 03 - NDT certification requirement added in clause 3.3 & 7.1 Raw material test certificate requirement modified in clause 3.4 Test report requirement details added in clause 8.0 Heat treatment details added in clause 5.0 Rev. No. 04 – Drawing No. 20.ST.221.02.213 added in Clause 1.0		

1.0 **PRODUCT:**

Gripper Jaw for Draw Benches as per Drawings furnished below:

Sl.No.	Equipment	Drg. No.	Drg. Rev. No.
1.	50 KN Draw Bench	20.ST.032.01.138	AS PER LATEST ENQUIRY / PURCHASE ORDER
2.	60 KN Draw Bench	20.ST.032.01.137	
3.	315 KN Draw Bench	30.ST.222.02.405	
4.	800 KN Draw Bench	20.ST.221.02.099	
5.	800 KN Draw Bench	20.ST.221.02.213	

2.0 **APPLICATION:**

Used in the Draw Benches for tube drawing operation in Cold Mill.

3.0 **MATERIAL:**

1. IS 3748 – 1990 T90Mn6WCr2

2. Conduct Ultrasonic Test on Raw Material after proof machining in accordance with SA 388.

3. Acceptance Standard in accordance with AM 203.2(c), ASME Sec VIII Div.2. Test report Shall be certified by NDT Level II qualified personnel as per **SNT-TC-1A (Society for Non destructive Testing)**

4. **Chemistry** : As per drawing

Original mill test certificate shall be provided. Otherwise copy of original mill test certificate and test report from NABL accredited lab for chemical check on sample from the procured material shall be provided.

4.0 **DIMENSIONS AND TOLERANCE:**

Shall be as per drawing.

5.0 **HEAT TREATMENT:**

Heat treatment shall be done as per the parameters given below before finish grinding.

Sl.No.	Process	Detail
1.	Stress Relieving	To be charged in furnace at temp 250°C 650–660° C – Soaking @ 1Hour / 25mm thickness Furnace cool to 400°C; and then Air Cooling
2.	Pre Heating	To be charged in furnace at temp 250°C Pre heat to 450°C – Hold for 1hr. Pre heat to 650°C – Hold for 1hr. Rate of heating - 110°C per hour
3.	Hardening	790-815 ° C – Soaking @ 1Hour / 25mm thickness
4.	Quenching Medium	Quenching Oil. After temperature equalization – Cool in air
5.	Tempering	After quenching , temper immediately when it reaches 50 ° C To be charged in furnace at temp 250°C 175-260° C – Soaking @ 1Hour / 25mm thickness
6.	Hardness to be achieved	As per drawing

BHEL, Tiruchirapalli-620014	SSTP / Tool Engineering	Technical Delivery Conditions	
Product : Gripper Jaws for Cold Mill Draw Bench			
Document No.	Revision No.	Effective Date	Page No.
TDC/TE/MFG - 25	04	16.08.2011	2 of 2

6.0 INSPECTION & TESTING:

6.1 DIMENSIONAL INSPECTION:

Dimensional inspection shall be carried out by the supplier and report for the same shall be sent along with the supplies – Acceptance as per drawing.

6.2 MECHANICAL TESTING :

Hardness Test on the job shall be done as per **IS 1586 : 2000** - Acceptance as per Drawing.

7.0 Non Destructive Test :

7.1 Liquid Penetrant Test :

To be conducted on entire surface after finish machining as per **ASTM E165** and shall be certified by **NDT Level II qualified personnel as per SNT-TC-1A**.

Acceptance standards : All surfaces to be examined shall be free of,

1. Relevant linear indications,
2. Relevant rounded indications greater than 3/16 inch (5 mm)
3. Four or more relevant rounded indications in a line separated by 1/16 inch (1.5 mm) or less, edge to edge.

8.0 TEST CERTIFICATE / REPORTS:

Following test certificates shall be sent with Materials.

PO No., component name, TDC NO. and drawing no. shall be mentioned where ever applicable.

Traceability data like Heat / Melt No. & job Sl. No. shall be provided in all the reports.

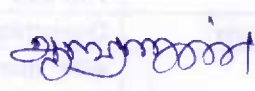
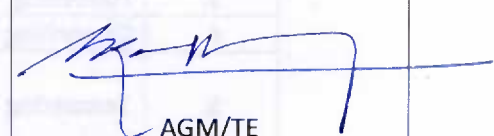
1. Raw Material Chemistry (Clause 3.4)
2. Hardness (Clause 6.2)
3. Temperature-Time-Recorder Graph for the Heat Treatment Cycle followed
4. Ultrasonic Test Report for Raw Material (Clause 3.2 & 3.3)
5. Liquid Penetrant Test (Clause 7.1)
6. Dimension Report (Clause 6.1)

9.0 MARKING:

The marking shall be done on the job as shown in the Drawing.

10.0 PRESERVATION & PACKING :

1. Supply with rust preventive coating which shall be dry after application and removable by common solvents.
2. Pack suitably to avoid transit & handling damages.

Prepared By	Reviewed By	Approved By
 DM/TE	 SM/QA & C	 AGM/TE