



An ISO 9001  
Company

## Bharat Heavy Electricals Limited

(High Pressure Boiler Plant)

Tiruchirappalli – 620014, TAMIL NADU, INDIA

MATERIALS MANAGEMENT

<b>TITLE</b>	Phone: +91 431 2574205 Fax : +91 431 2520250 Email : saruna@bheltry.co.in
Supply of SA182 F12,F22 CI2 alloy steel bars.	

	<b>Reference Number:</b> <b>Enquiry</b> MM/OS/1301200038	<b>Enquiry Date:</b> 06.07.12	<b>Due date for submission of quotation:</b> 03.08.12
You are requested to quote the Enquiry number date and due date in all your correspondences. This is only a request for quotation and not an order			

BHEL/Trichy is looking for empanelment of new vendors for supply of " Alloy steel Round bars to specification SA182 F12 CI2, SA182 F22 CI2 and as per TDC 309/04"

BHEL commercial terms & conditions with Price Bid formats and all annexure can be downloaded from BHEL web site <http://www.bhel.com> or from the Government tender website <http://eprocure.gov.in> (public sector units) Bharath Heavy Electricals Limited) under enquiry reference "MM/OS/1301200038 "

Tenders should reach us before 14:00 hours on the due date  
Technical bid will be opened at 14:30 hours on the due date  
Tenders would be opened in presence of the tenderers who have submitted their offers and who may like to be present.

Yours faithfully,  
For Bharath Heavy Electricals Limited

Sr.MANAGER / MM / OS / TRICHY

**S. ARUNACHALAM**  
MANAGER  
OUTSOURCING  
BHEL, TRICHY- 14.

BHARAT HEAVY ELECTRICALS LIMITED  
PURCHASE / OUTSOURCING  
BHEL / TRICHY

Ref: MM/OS/1301200038


Date: 06.07.2012

**ANNEXURE-A**

**ENQUIRY TERMS & CONDITIONS FOR SUPPLY OF ROUNDS TO SPECIFICATION SA182 F12, F22**

<b><u>Sl No</u></b>	<b><u>BHEL Requirements</u></b>	<b><u>Supplier Comments (Acceptance or otherwise for each point to be given )</u></b>												
<b>1.</b>	<p><b><u>Material specification, size &amp; quantity :</u></b></p> <p>a) Supply of Alloy steel rounds to material specification indicated below and as per BHEL TDC: 309/Rev.04. (Without IBR FORM IV certification)</p> <table border="1"> <thead> <tr> <th>Sl No</th><th>Description of Item &amp; Specification</th><th>Weight (MT)</th></tr> </thead> <tbody> <tr> <td>10</td><td><b>SA182 F12 CL2:</b> Round dia 6 mm x 6000 mm</td><td>20</td></tr> <tr> <td>20</td><td><b>SA182 F12 CL2:</b> Round dia 10 mm x 6000 mm</td><td>10</td></tr> <tr> <td>30</td><td><b>SA182 F22 CL3:</b> Round dia 12 mm x 6000 mm</td><td>2</td></tr> </tbody> </table> <p style="text-align: center;"><b>Total weight = 32 MT</b></p> <p>b) Submit your offer in TWO PART bids system (TECHNO-COMMERCIAL BID + PRICE BID) clearly indicating the specification referred and any deviation against specification and TDC: 309/rev04 shall be indicated in the offer itself point by point.</p>	Sl No	Description of Item & Specification	Weight (MT)	10	<b>SA182 F12 CL2:</b> Round dia 6 mm x 6000 mm	20	20	<b>SA182 F12 CL2:</b> Round dia 10 mm x 6000 mm	10	30	<b>SA182 F22 CL3:</b> Round dia 12 mm x 6000 mm	2	
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<b>2.</b>	<p>No negative tolerance is acceptable on both Length &amp; Diameter. Tolerance of plus 100 mm is acceptable on length.</p> <p>Coil form supply is not acceptable and offer will be rejected.</p>													
<b>3.</b>	<p>a) Marking method to be indicated for Maker's symbol, heat number and specification / grade.</p> <p>b) Bars to be supplied in bundles &lt; 01 ton with good packing so that straightness is maintained.</p>													
<b>4.</b>	THE OFFER WILL BE EVALUATED ON INDIVIDUAL ITEM BASIS ONLY.													
<b>5.</b>	OFFER IS TO BE SUBMITTED FOR THE REQUIRED FULL QUANTITY AGAINST EACH ITEM AS PER THE TENDER, OTHERWISE OFFER IS LIABLE FOR REJECTION.													
<b>6.</b>	Part item ordering to be accepted otherwise offer is liable for rejection.													
<b>7.</b>	<p>a) Mill test Certificates to be issued for the supply. Test certificates must incorporate details regarding material specification, Melt no, Manufacturing process and heat treatment done on material, BHEL purchase order no, supplier name and logo, TC no, size and results obtained in chemical and mechanical testing. The test certificates must bear signature of competent personnel of suppliers.</p> <p>b) All inspection charges to your account only.</p> <p>c) For new suppliers, pre-despatch inspection at supplier's works will be done by BHEL/BHEL authorized inspection agency.</p>													
<b>8.</b>	<p><b><u>Rates:</u></b></p> <p>Quote your firm rate per MT basis with inclusive of all charges like inspection, UT charges etc. Price variation at the time of ordering is not acceptable. Freight is to be your scope only. The offer will be evaluated on total landed cost to BHEL Trichy.</p>													
<b>9.</b>	<p><b><u>Payment terms:</u></b></p> <p>Our payment term is 60 days after receipt and acceptance of material at our stores only. LC payment is not acceptable and offer shall be rejected. Any payment mode other than through direct EFT/RTGS transfer is not acceptable and offer shall be rejected.</p>													

	If you are a new supplier, you have to submit RTGS format for payment transfer incase PO is placed.	
<b>10.</b>	<b>Delivery:</b> a) Our delivery requirement is <b>dt: 30.09.2012</b> . Delivery period for the above items from the date of Purchase order is required. b) Liquidated Damages: In case of delayed delivery, LD clause will be operated as per the existing procedure (0.5% per week of delay of value of undelivered goods up to a maximum of 10%). Confirm. c) Confirm acceptance for Performance Bank Guarantee and Risk Purchase clause.	
<b>11.</b>	In case, if you are a new supplier you have to submit details of technical docs (catalogs, facilities report etc.) to support supply of Alloy steel bars.	
<b>12.</b>	Furnish supply details made to other customers in India for the above specification.	
<b>13.</b>	Offer is to be submitted in TWO part bid system. Technical bid with commercial terms and conditions and Priced bid each in separate sealed covers. Enquiry reference and due date to be indicated on the envelope for both Technical & Priced bid.	
<b>14.</b>	Only after technical evaluation and if offer is found technically suitable, priced bid will be opened for further process.	
<b>15.</b>	Offer validity of <b>45 days</b> is required after priced bid opening in case you are qualified.	
<b>16.</b>	Competitive offer (Technical & Priced bid) to the following address is to be submitted within due date of this tender. <b>TO:</b> <b>MANAGER/PURCHASE/MM/OUTSOURCING</b> <b>FIRST FLOOR, 79 BLDG,</b> <b>BHEL- TRICHY, INDIA</b> <b>PIN: 620014</b> <b>Tel: 0431-2574205</b> <b>E-mail: <a href="mailto:saruna@bheltry.co.in">saruna@bheltry.co.in</a></b>	
<b>17.</b>	<b>Enclosed:</b> (i) TDC: 304/Rev: 09. (ii) Terms and conditions.	

  
**S. ARUNACHALAM**  
 MANAGER  
 OUTSOURCING  
 BHEL, TRICHY- 14.



**Revision Record:**

Rev:01: Source of supply for AS included., Rev:02:12/11/96: Text re-written, Class.No.s introduced for Alloy steel. High temperature test removed. TDC:0: 306/00 merged into this. Rev:03: Cl. 4.0, 6.0, 9.0 modified. Rev 04: Cl 5.0 revised to include Impact test for Bars used for Valves Purchase Orders: Clarity brought in Cl 4.0

**1.0 MATERIAL SPECIFICATION: ASME {Latest on date of Purchase Order (PO)}:**

CS : SA 105

AS : SA 182 F11 Class 2, F12 Class 2 &amp; F22 Class 3, SA 193 B7 &amp; B16

SS : SA 182 Gr. F 316, SA 479 TP 410 Condition 2.

Additional Requirement: As listed below (supplementary to Specification)

Size and Qty.: As per Purchase order &amp; Drawing.

**2.0 CHEMICAL COMPOSITION & PROCESS**Melting: CS & AS: Fully killed. SS: hot finished. Product analysis per heat: CS: C $\leq$ 0.25%.

Steel for making bars to be inspected at Mill &amp; test certificate countersigned by IBR approved Inspecting Authority, if the mill is not approved under IBR as well known steel maker.

Steel for SA 182-F11, F12 and F22 if indigenously procured, to be from following manufacturers approved under IBR for creep resistant steels: i) Alloy Steel Plant, Durgapur, ii) Tata Iron &amp; Steel Company, Jamshedpur &amp; iii) Mahindra Ugin Steel Company, Bombay.

**3.0 DIMENSIONS AND TOLERANCES**

Dimensional Tolerances : CS &amp; AS: as per SA 29. SS: as per SA 484.

**4.0 HEAT TREATMENT(HT)**

CS: Normalised at temp 880-920 deg C. AS(SA 182): Normalised and tempered,

SA 193: Quenched and tempered.

**5.0 MECHANICAL TESTS**

Extent of test: for each size/heat/HT batch.

Additional requirements of tests: Bend test: CS: 1 Sample 19mm. thick(t) x 25.4mm width to be bent 180 deg. around mandrel of radius 6.35 mm. AS(SA 182 only): Sample 25.4mm width to be bent 180 deg. around mandrel of radius =1.5 x t.

Bars meant for Valves Purchase Orders of SA 105 and SA 182 F22 Cl 3 materials shall be impact tested. 1 / HT batch: SA 370, 2mm. Charpy-U notch, at Room temperature: Acceptance: Avg of 3 specimens: 36J, single Min: 24J.

**6.0 NON DESTRUCTIVE TEST**

Extent of test: for each product. Stage of test : After heat treatment.

UT: Dia  $\geq$  50mm.: 100% : SA 388. Acceptance: AM 203.2, ASME Sec.VIII Div. 2.**7.0 WORKMANSHIP AND FINISH**

Items to be free from scales &amp; defects like laps, seams, folds, cracks, etc. SS to be Pickled &amp; passivated as per ASTM A 380 or machined.

**8.0 REPAIR**

Repairs by fusion welding are prohibited. Surface defects can be removed by mechanical means and defective areas smoothly dressed up with the adjacent surface. Minimum dimension after repair to meet drawing / Specification.

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**9.0 MARKING AND PACKING**

Details of stamping on each item: dia  $\geq$  25 mm.: with low stress stamps and bordered by paint:  
Heat number, Specification & grade, Size, Maker's emblem/code & Inspection Authority's seal.  
Dia < 25 mm: All above details to be painted. Bars to be supplied in bundles < 1 ton, secured suitably for rough handling. Metal tags with details of specification, melt number and maker's emblem to be secured to the bundles.

**10.0 INSPECTION AND CERTIFICATION**

For IBR items, inspection and tests to be witnessed by an IBR approved inspecting agency, in case the shop is not recognised as a "Well known Forger/Steel maker" under IBR. Test certificate in English language countersigned by applicable inspection agency for each product with following details shall accompany the product (in format approved by Boiler inspectorate for IBR items).

1. Purchase Order No.(BHEL), TDC No. & Test certificate number
2. Specification, grade, class, applicable year of code, Heat Number, Drawing No., Quantity & Size
3. Melting & forging/rolling process, Chemistry including incidental elements - Heat wise.
4. Heat treatment details of the material and test bars.
5. Mechanical test results, NDE test results with reference & acceptance standard.
6. Certified copy of TC for starting material if applicable.
7. Cleaning & Surface treatment details.

**11.0 END USE**

SA 105, SA 182 & SA 479 are for Pressure part components in Boilers & Valves of high temperature service meeting IBR and ASME Section I. SA 193 is for high temperature bolting and for drive shafts.

<b>Prepared</b>	K.Ganesan (QA)	<i>K. Ganesan</i>
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