



An ISO 9001  
Company

## Bharat Heavy Electricals Limited

(High Pressure Boiler Plant)

Tiruchirapalli – 620014, TAMIL NADU, INDIA

MATERIALS MANAGEMENT / CAPITAL EQUIPMENT

<b>ENQUIRY NOTICE INVITING TENDER</b>	Phone: +91 431 257 7653 Fax : +91 431 252 0031 Email : <a href="mailto:skaruna@bheltry.co.in">skaruna@bheltry.co.in</a> ,  Web : <a href="http://www.bhel.com">www.bhel.com</a>
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<b>TWO PART BID</b>  Tender to be submitted in Two Parts	<b>Enquiry Number:</b>  <b>2731300004</b>	<b>Enquiry Date:</b>  <b>dt.29.03.2013</b>	<b>Due date for submission of quotation</b>  <b>dt.30.04.2013</b>
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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.

Please note that under any circumstances both delayed offer and late offers will not be considered. Hence vendors are requested to ensure that the offer is reaching physically our office before 14.00 Hrs on the date of tender opening

Item No.	Item Description	Quantity
10	Supply, Installation and commissioning Tilting Turn Table - 10,000 Kg as per the Technical Specification, & Commercial Conditions applicable (to be downloaded from web site <a href="http://www.bhel.com">www.bhel.com</a> or <a href="http://tenders.gov.in">http://tenders.gov.in</a> )	01 No.

Important Points to be taken care during the submission of offer:-

1. Bidder's Response Column in technical specification sheet to be duly filled in without fail. Additional details provided in the offer may be supported with documentary evidence.
2. Check list to be filled and enclosed along with the offer failing which, the offer will not be considered for evaluation.
3. The equipment shall be guaranteed for 18 months from the date of supply or 12 months from the date of commissioning whichever is earlier.
4. The delivery period required for equipment is 6 months.

BHEL's General guidelines /instructions including bank guarantee formats and list of consortium banks, commercial terms checklist can be downloaded from BHEL web site <http://www.bhel.com> or from the government tender website <http://tenders.gov.in> (public sector units > Bharat Heavy Electricals Limited page) Tender Enquiry reference "2731300004"

Tenders should reach us before 14:00 hours on the due date Tenders 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 BHARAT HEAVY ELECTRICALS LIMITED  Engineer / MM / Capital Equipment
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Part A: COE :TI:ATP:

**PART A****QUALIFYING CRITERIA FOR THE SUPPLY OF “Tilting Turn-Table” – Qty 1 No.****SECTION – I**

The BIDDER is expected to give complete details against each clause in the table given below, with additional sheets those may be attached (giving clear reference number) to furnish and cover the requisite details / documents.

<b>S. No.</b>	<b>PARTICULARS</b>	<b>BIDDER'S RESPONSE</b>
1	BIDDER to provide the Profile of their Company	
2	The Bidder (OEM) shall have a minimum of TEN Years of Continuous Experience in the field of Design, Manufacture and Supply of Tilting Turn-Tables.	
3	List of customers to whom Tilting Turn-Table swere supplied, installed and commissioned till date.	
4	Details on SERVICE-AFTER-SALES Set-Up in India including the Addresses of Agents / Service Centres in India.	
5	Any Additional Data to supplement the manufacturing capability of the BIDDER for the subject equipment.	

Part A: COE :TI:ATP:

**SECTION – II**

The BIDDER has to compulsorily meet the following requirements to get qualified for submitting an offer for the Tilting Turn-Table:

S. No.	REQUIREMENTS	BIDDER'S RESPONSE
1	Only those Bidders (OEMs) should quote, who have supplied and commissioned at least Five Tilting Turn-Table, of capacity 10,000 kg or higher, in the past three years (on the date of opening of Tender) and such machine should presently be working satisfactorily for more than one year after commissioning (on the date of opening of Tender),.	
	The Bidder should submit following information where the tilting turn-tables have been supplied:	
1.1	Name and postal address of the customer or company where similar equipment is installed.	
1.2	Name and designation of the contact person of the customer.	
1.3	Phone, FAX no and email address of the contact person of the customer.	
1.4	Month and Year of commissioning of the equipment.	
1.5	Application for which the equipment is supplied	
2	Along with the Technical offer, the Bidder should submit the <u>Performance certificates from the customers for the satisfactory performance of the equipment supplied as per clause 1.0 above.</u> (For obtaining the Performance certificate, a suggestive format is provided in <b>SECTION – IV</b> )	
3	Offers of only those Bidders who meet the above Qualifying Criteria will be considered for further evaluation.	
4	BHEL reserves the right to verify the information provided by Bidder. In case the information provided by Bidder is found to be false/ incorrect, the offer shall be rejected.	

Part A: COE :TI:ATP:

**SECTION – III**

The BIDDER has to comply with the following, for accepting the Technical Offer for scrutiny by the Purchaser:

<b>S. No.</b>	<b>REQUIREMENTS</b>	<b>BIDDER'S COMPLIANCE</b>
1	The BIDDER shall submit the offer in TWO PARTS-Technical [ <b>with PART A &amp; PART B</b> ] & Commercial and Price Bid.	
2	The offer shall contain a comparative statement of Technical Specifications given by BHEL and the offered details submitted by the Bidder, against each clause. Merely stating 'CONFIRMED' or 'COMPLIES' or 'YES' or 'NO-DEVIATION' or similar words wherever 'Bidder to Specify' details in the technical comparative statement may lead to disqualification of the Technical Offer.	
3	The Technical Offer shall be supported by product Catalogues & Data Sheets and also technical details of Bought-Out-Items with copies of Product Catalogue to the extent possible.	
4	The Commercial Offer (given with the Technical Offer) shall contain the Scope of Supply and the Un-Priced Part of the Price-Bid, for confirmation of the inclusion of all the accessories, tooling's, attachments, auxiliary parts, spares, consumables, etc. with the main and basic equipment, to meet the technical specification requirements.	
5	BIDDER has to indicate the Country of Origin for the supply of equipment.	

Part A: COE :TI:ATP:

**SECTION – IV**

**PERFORMANCE CERTIFICATE**  
**(On Customer's Letter Head)**

1. Supplier of the Tilting Turn-table :
2. Make & Model of the Tilting Turn-table :
3. Month & Year of Commissioning :
4. Application for which the Tilting Turn-table is used :
5. Size of the rotary table & weight carrying capacity of the table :
6. Performance of the equipment : Satisfactory / Good / Average /  
(Strike off whichever is not applicable) Not Satisfactory
7. After Sales Service : Satisfactory / Good / Average /  
Not Satisfactory
8. Any other remarks :

Date:

Signature & Seal of the Authority  
issuing the Performance Certificate



**Part B :**

Clause	PARTICULARS AND BHEL SPECIFICATION	BIDDERS OFFER With Technical Details
2.8	Tilting angle shall be varying from 0 to 90°. An angular scale graduated with an LC of 0.5 degrees shall be fitted to indicate the angle of tilt.	Vendor to confirm
2.9	Tilting shall be motorized and can be with fixed slow speed. Table positioning at any angle between 0 to 90° and locking at any position shall be possible.	Vendor to confirm.
2.10	Provision shall be made in the form of a graduated scale and pointer to set the angle of tilt.	Vendor to confirm.
2.11	Tilting torque of the table :	Vendor to specify
2.12	<p>A remote pendant with sufficient length cable (which will be around 10 mtrs; and exact length will be finalized during pre-dispatch inspection) to vary the speed from sitting near the job shall be provided. The remote pendant shall have the following provisions:</p> <ul style="list-style-type: none"> <li>(a) Emergency push button</li> <li>(b) Forward / Reverse / Off - selector switch for rotation</li> <li>(c) Forward / Reverse / Off - selector switch for table tilting</li> <li>(d) Auto / Manual selector switch</li> <li>(e) On / Off push buttons</li> <li>(f) Single turn Potentiometer with graded scale for varying the rotational speed.</li> </ul>	Vendor to confirm
2.13	Standard slewing ring is to be provided and to be protected from damage due to welding current by providing suitable ear thing arrangement. The bearings of table and Slewing rings shall be of reputed makes of SKF/ FAG/ TIMKEN or any other reputed make which are acceptable to BHEL.	Vendor to confirm
2.14	<b>Positional stability:</b> The Turn table should be stable at any tilted position of the table with the Job mounted condition.	Vendor to confirm

**Part B :**

Clause	PARTICULARS AND BHEL SPECIFICATION	BIDDERS OFFER With Technical Details
<b>3.0</b>	<b>Additional accessory: <u>Roller Support (Positioner)</u></b>	
3.1	A suitable <b>Roller Positioner</b> (Qty: 1 No.) to support long pipes or shells (for dimensions - Ref. 1.1) at the other end, when they are held horizontally in the Turn table. Weight carrying capacity of the positioner is <b>5,000 Kg (min)</b> .	Vendor to confirm & specify the capacity
3.2	<b><u>Pitch:</u></b> Distance between the Rollers (pitch) shall be adjustable manually with the use of screw rod arrangement, to hold the different diameters of pipes and shells. Vendor is to specify the minimum and maximum pitch.	Vendor to specify
3.3	<b><u>Height Adjustment:</u></b> Height of the positioner also to be adjustable manually with the use of screw jack arrangement, to accommodate the above mentioned jobs to keep in line with the axis of the rotary table. Vendor to specify the vertical adjustment range.	Vendor to specify
3.4	<b><u>Positional Stability:</u></b> Stability of the roller positioner shall be ensured at all positions (with or without jobs).	Vendor to confirm
<b>4.0</b>	<b>ELECTRICAL:</b>	
4.1	415V $\pm$ 10%, 50HZ $\pm$ 3 HZ, 3 Phase AC (3 wire system without neutral) Power Supply will be provided by BHEL at a single point near the table, as per layout recommended by Vendor. All types of cables (including the power cable required for extending power supply to the main control panel which will be 20 mtrs), connections, circuit breakers etc. required for connecting BHEL's power supply point to different parts of the table/control boxes, shall be the supplied by the vendor.	Vendor to confirm
4.2	Motors shall conform to IEC or Indian Standards. Preferred makes of motors are SIEMENS/ABB. Any other makes suggested by the vendor is subject to the acceptance by BHEL.	Vendor to confirm

Part B :

Clause	PARTICULARS AND BHEL SPECIFICATION	BIDDERS OFFER With Technical Details
4.3	The KW rating of the motors to be specified	Vendor to specify
4.4	All pneumatics, if any shall be of Festo make and hydraulics, if any shall be of Rexroth / Vickers make.	Vendor to confirm
4.5	The drives shall be of SIEMENS/ABB or any other make acceptable to BHEL	Vendor to confirm
4.6	BHEL prefers to have standard reputed gear boxes used in the machine. Gear boxes shall be of Radicon / greaves / Bonfiglioly or any other reputed make is subject to the acceptance by BHEL.	Vendor to confirm
4.7	All the cable trays required for laying of cables should be included in the offer.	Vendor to confirm
4.8	<b>Wiring:</b> All electrical motors, limit switches etc, on the machine shall be wired using PVC sheathed cable running in conduits to common terminal block. All cables, wires shall be neatly routed and fixed with proper identification.	Vendor to confirm
5.0	<b>Spares:</b> Itemized break-up of Mechanical, Electrical , Electronic and Pneumatic /Hydraulic Spares used on the machine in sufficient quantity as per recommendation of BIDDER for 2 years of trouble free operation on three shifts continuous running basis should be offered by BIDDER.	Vendor to furnish
5.1	<b>Mechanical &amp; Hydraulic Spares:</b> Bearings, Clutches, gears and all types of Pumps, Valves, Pressure Switches / Transducers, Filters, Seals, 'O' Rings, Hydraulic Hoses, etc.	Vendor to furnish

**Part B :**

Clause	PARTICULARS AND BHEL SPECIFICATION	BIDDERS OFFER With Technical Details
5.2	<b>Electrical Spares:</b> All types of Drives, Relays, Contactors, Proximity Switches, Push Buttons, Indicating Lamps, Semiconductor Fuses, Special Fuses, Circuit Breakers, Main Power Switch, etc.	Vendor to furnish
5.3	All types of spares for the total machine and accessories shall be available for at least ten years after supply of the machine. If machine or control is likely to become obsolete in this period, the vendor should inform BHEL sufficiently in advance and provide drawings of parts / details of spares & Vendors to enable BHEL to procure these in advance, if required.	Vendor to confirm
5.4	Vendor to confirm that complete list of spares for machine and accessories, along with specification / type / model, and name & address of the spare Vendor shall be furnished along with documentation to be supplied with the machine.	Vendor to furnish
6.0	<b>DOCUMENTATION:</b>	
6.1.0	<b>The following documents shall be furnished along with the offer :</b>	
6.1.1	<u><b>Tilting Turn Table:</b></u> <ol style="list-style-type: none"> <li>GA drawing of the offered turn table with dimensions</li> <li>Turn table rotation, tilting &amp; clamping mechanism.</li> <li>Makes of the bought-outs</li> <li>Construction features</li> </ol>	Vendor to furnish

**Part B :**

Clause	PARTICULARS AND BHEL SPECIFICATION	BIDDERS OFFER With Technical Details
6.1.2	<p><b><u>Adjustable Roller Positioner:</u></b></p> <p>a. GA drawing of the offered adjustable roller positioner with dimensions</p> <p>b. Roller positioner Pitch &amp; height adjustment and stability mechanism.</p> <p>c. Makes of the bought-outs</p> <p>d. Construction features</p>	Vendor to furnish
6.2.0	<p><b>After placement of order</b>, the vendor shall submit the GA drawings with major dimensions, BOM and Electrical circuit with BOM for BHEL approval.</p>	Vendor to confirm
6.3.0	<p><b>3 sets of the following documents shall be furnished during inspection and supply :</b></p>	
6.3.1	<p><b><u>Tilting Turn Table:</u></b></p> <p>a. GA drawing with BOM</p> <p>b. Turn table rotation, tilting &amp; clamping mechanism.</p> <p>c. The operator instruction manual</p> <p>d. Electrical Circuit with BOM</p> <p>e. Maintenance instruction manual</p> <p>f. Guarantee / warranty cards of all bought-outs</p> <p>g. Programming manual of supplied VFD drive</p>	Vendor to confirm

**Part B :**

Clause	PARTICULARS AND BHEL SPECIFICATION	BIDDERS OFFER With Technical Details
6.3.2	<p><b><u>Adjustable Roller Positioner:</u></b></p> <p>a. GA drawing with BOM</p> <p>b. Roller positioner Pitch &amp; height adjustment and stability mechanism.</p> <p>c. Makes of the bought-outs</p> <p>d. Guarantee / warranty cards of all bought-outs</p>	Vendor to confirm
6.3.3	<p>Sub-assembly / Arrangement drawings with bill of materials and critical dimensions for the following:</p> <p>b) Table rotation / clamping arrangement.</p> <p>c) Table rotation drive arrangement.</p> <p>d) Table Tilting drive arrangement.</p> <p>e) Positioner Pitch adjustment arrangement</p> <p>f) Positioner height adjustment arrangement</p>	Vendor to confirm
<b>7.0</b>	<b>ACCEPTANCE:</b>	
7.1	<p><b>Acceptance at vendor's works</b> - The turn table &amp; adjustable roller positioner shall be offered for inspection by BHEL at vendor's works prior to dispatch.</p> <p>All features of the turn table (weight carrying capacity, rotation speeds, tilting with load etc.) and roller positioner (weight carrying capacity, pitch &amp; height adjustment, stability etc.) shall be demonstrated.</p>	Vendor to confirm

**Part B :**

Clause	PARTICULARS AND BHEL SPECIFICATION	BIDDERS OFFER With Technical Details
7.2	<b>Acceptance at BHEL</b> - During commissioning the vendor should demonstrate all features of the turn-table & adjustable roller positioner as listed in 7.1	Vendor to confirm
8.0	<b>Installation and commissioning at BHEL</b> – Installation and commissioning of the turn tables at BHEL shall be in the scope of vendor	Vendor to confirm
9.0	The supplier shall arrange training for two maintenance persons at VFD supplier's work in India on VFD's maintenance, programming & troubleshooting for a minimum period of not less than two days. The travelling expenses, boarding & lodging of BHEL persons will be borne by BHEL.	Vendor to confirm
10.0	<b>Painting</b> : All non-working surfaces and control panels shall be given a primer coat & two coats of paint with <b>SYNTHETIC ENAMEL GLOSSY FINISH APPLE GREEN PAINT AS PER IS 5/1994. Shade: (ISC) NO-281.</b> All unpainted surfaces shall be protected from rust during transit.	
11.0	<b>PACKING</b> – The turn tables shall be packed rigidly to avoid any transit damage and dispatched	Vendor to confirm
12.0	<b>GUARANTEE:</b> 12 months from acceptance of the turn tables at BHEL or 18 months from dispatch whichever is earlier.	Vendor to confirm

Part B :

Clause	PARTICULARS AND BHEL SPECIFICATION	BIDDERS OFFER With Technical Details
<b>13.0</b>	<b>GENERAL</b>	
13.1	Turn table Model:	Vendor to specify
13.2	Total connected load (KVA):	Vendor to specify
13.3	Floor area required (Length, Width, Height) for complete turn table:	Vendor to specify
13.4	Total weight of the turn table	Vendor to specify
13.5	Floor area required (Length, Width, Height) Roller Positioner	Vendor to specify
13.6	Total weight of the Roller Positioner	Vendor to specify
13.7	Painting of turn table, Roller Positioner & Electrical Panels :	Vendor to specify