



Bharat Heavy Electricals Limited

(High Pressure Boiler Plant)

Tiruchirappalli – 620014, TAMIL NADU, INDIA

CAPITAL EQUIPMENT / MATERIALS MANAGEMENT

ENQUIRY	Phone: +91 431 257 76 53 Fax : +91 431 252 00 31 Email : skaruna@bheltry.co.in Web : www.bhel.com
NOTICE INVITING TENDER	

TWO PART BID	Enquiry Number:	Enquiry Date:	Due date for submission of quotation:
Tender to be submitted in two Parts	2631600005	30.01.2016	25.02.2016

You are requested to quote the Enquiry number date and due date in all your correspondence. 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	Description	Quantity
10	10T Capacity Flat Turn Table as per the technical specification & commercial conditions applicable (to be downloaded from web site www.bhel.com or http://tenders.gov.in).	01 No.


Important points to be taken care during submission of offer

1. The Checklist for Acceptance of Commercial Terms & Conditions to be filled and enclosed along with the offer failing which, the offer will not be considered for evaluation.
2. All updates, amendments, corrigenda, etc., (if any), for each tender will be posted only on the above websites from time to time, as and when required, until each tender is opened. There will be no publication of such updates, amendments, corrigenda, etc., through newspapers or any other media.

BHEL's General guidelines / instructions (refer MM/CE/GENL/001/EMD) including bank guarantee formats and list of consortium banks, commercial terms check-list 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) under above Enquiry reference

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**


Sr. Engineer / MM / Capital Equipment

Part A: MCTD 2015-16:ATP:

PART A

QUALIFYING CRITERIA FOR THE SUPPLY OF FLAT “TURN TABLE” WITH **TILTING BASE FOR **25°** INCLINATION OF CAPACITY 10,000 KG.” 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.

S. No.	PARTICULARS	BIDDER's RESPONSE
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 Turn-Tables of weight carrying capacity of 10 Tons or more.	
3	List of customers to whom Turn-Tables were 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: MCTD 2015-16:ATP:

SECTION – II

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

S. No.	REQUIREMENTS	BIDDER'S RESPONSE
1.0	Only those Bidders (OEMs) should quote, who have supplied and commissioned at least ONE Turn-Table, of capacity 10,000 kgs or higher, in the past five years (as on the original date of opening of Tender) and such machine should presently be working satisfactorily for more than one year after commissioning (as on the original date of opening of Tender).	
	The Bidder should submit following information where the turn-tables have been supplied:	
1.1	Name and postal address of the customer or company where similar equipment are installed.	
1.2	Name and designation of the contact persons of the customers.	
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	
2.0	Along with the Technical offer, the Bidder should submit <u>minimum of one Performance certificate 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 SECTION – IV)	
3.0	Offers of only those Bidders who meet the above Qualifying Criteria will be considered for further evaluation.	
4.0	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: MCTD 2015-16:ATP:

SECTION – III

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

S. No.	REQUIREMENTS	BIDDER'S COMPLIANCE
1	The BIDDER shall submit the offer in TWO PARTS-Technical [with PART A & PART 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: MCTD 2015-16:ATP:

SECTION – IV**PERFORMANCE CERTIFICATE**
(On Customer's Letter Head)

1. Supplier of the Turn-table :
2. Make & Model of the Turn-table :
3. Month & Year of Commissioning :
4. Application for which the 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: MCTD:2015-16:ATP:Specification for flat “Turn Table” with **Tilting** base for **25°** inclination of Capacity 10,000 Kg.”

Qty: 1 No.

Part B :

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Clause	PARTICULARS AND BHEL SPECIFICATION	BIDDERS OFFER With Technical Details
2.9	Central Hole: Dia. 300 mm (max)	Vendor to specify
2.10	Table should be with concentric circular marking for rapid centering / setting and clamping of work piece.	Vendor to confirm
2.11	Table equipped with efficient Built in Earthing for 1000A and carried on large diameter preloaded cross roll bearing.	Vendor to confirm
3.0	<u>Construction:</u>	
3.1	Framework and table should be of rigid steel construction / casting and minimum thickness of any component of the table /frame shall not be less than 25 mm thickness. There should not be any vibration and noise level should be less than 85dB with in a distance of 1M.	Vendor to confirm
3.2	Provision shall be made available to clamp the table with the tilting base, access and clamping / de clamping shall be easier. Fasteners shall be designed to carry the weight of the table along with the job.	Vendor to confirm
3.3	Operation of Tilting base shall be by manual using screw jack mechanism. Suitable locking arrangement shall be provided to maintain the tilted position during operation.	Vendor to confirm
3.4	An angular scale graduated with an LC of 0.5 degrees shall be fitted to indicate the angle of tilt.	Vendor to confirm
3.5	The Turn table shall be used for Submerged Arc Welding / Cladding. The bearings, gears and other parts having movement are to be suitably protected to avoid ingress of flux. The bearings and moving parts shall be self-lubricated.	Vendor to confirm
3.6	Job temperature during welding / cladding may rise up to 300°C. The temperature on bearings and gears may also rise up to 150°C. Hence, suitable materials, lubrication and protection to withstand the temperature.	Vendor to confirm

PART B: MCTD:2015-16:ATP:Specification for flat “Turn Table” with **Tilting** base for **25°** inclination of Capacity 10,000 Kg.”

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Clause	PARTICULARS AND BHEL SPECIFICATION	BIDDERS OFFER With Technical Details
3.7	Suitable Lifting arrangements shall be provided separately for both the Turn Table and the Tilting Base (with table clamped condition).	Vendor to confirm
3.8	Positional stability: The Turn table should be stable at any tilted position of the table with the Job mounted condition.	Vendor to confirm
3.9	Earthing: Table shall be equipped with efficient Built in Earthing for 1000A. Standard slewing ring is to be provided and to be protected from damage due to welding current. The bearings of table and Slewing rings shall be of reputed makes of SKF/ FAG (INA)/ TIMKEN/NTN/IKO is only acceptable.	Vendor to confirm
4.0	ELECTRICAL:	
4.1	415V ± 10%, 50HZ ± 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 be of energy-efficient IE2 class and conform to IEC or Indian Standards. Preferred makes of motors are SIEMENS /ABB/ Kirloskar/ Crompton Greaves/ Bharat Bijlee/ Hindustan. Any other makes suggested by the vendor is subject to the acceptance by BHEL.	Vendor to confirm
4.3	The KW rating of the motor to be specified	Vendor to specify
4.4	All pneumatics, if any shall be of Festo/SMC make and hydraulics, if any shall be of EATON/Parker/Rexroth or any other reputed make acceptable to BHEL. Hydraulic hose makes of GATES/PARKER/Aeroquip or any other make acceptable to BHEL	Vendor to confirm

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Clause	PARTICULARS AND BHEL SPECIFICATION	BIDDERS OFFER With Technical Details
4.5	The variable frequency drives shall be of SIEMENS/ ABB/ Mitsubishi/ Yaskawa/ Toshiba/ Parker/ Schneider/ Fuji Electric. Any other makes suggested by the vendor is subject to the acceptance by BHEL. THD(V) and THD(I) values shall be within the limits mentioned under IEEE 519-1992 standard which deals with study and application of harmonic limits on power systems.	Vendor to confirm
4.6	BHEL prefers to have standard reputed gear boxes used in the machine. Gear boxes shall be of Radicon / Crompton Greaves / Bonfiglioli/ Shanthy gears/ Allroyd/ Elecon/ New Allenberry or any other reputed make is subject to the acceptance by BHEL.	Vendor to confirm
4.7	The electrical control panel shall be fitted with a multifunction energy meter with 4 digit LED display, RS 485 port for transferring the data to the energy management application , 3 phase LED indicators and real time monitoring facility of 3Ph V, I, F, kVA, kW, kWh, kVAR, kVARh, PF (Min, Max, RMS Values). The above energy meter shall be compatible for replacement with other reputed makes such as L&T/ Schneider/ Fluke/ Yokogawa/ Siemens.	Vendor to confirm
4.8	All the cable trays required for laying of cables should be included in the offer.	Vendor to confirm
4.9	Wiring: 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
4.10	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: (a) Emergency push button (b) Forward / Reverse / Off - selector switch for rotation	Vendor to confirm

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Clause	PARTICULARS AND BHEL SPECIFICATION	BIDDERS OFFER With Technical Details
	(c) Forward / Reverse / Off - selector switch for table (d) Auto / Manual selector switch (e) On / Off push buttons (f) Single turn Potentiometer with graded scale for varying the rotational speed.	
The vendor shall provide the following information in line with ISO 50001 guidelines while designing equipment specifications:		
4.11	The actual / expected energy (or other fuel) consumption of the machine during the following conditions shall be specified by the supplier: 1. At 100% load 2. At 75% load 3. At 50% load 4. At 25% load 5. No load	

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Clause	PARTICULARS AND BHEL SPECIFICATION	BIDDERS OFFER With Technical Details
4.12	<p>Vendor shall provide the following data for estimating Life Cycle Cost Analysis (for information only):</p> <ol style="list-style-type: none">1. Estimated life of the product / machine in years2. Major spares / consumables to be used in the machine3. Frequency of changing / replacing the spares / consumable4. Percentage cost of the spares / consumables as compared to the total machine / product cost.5. Percentage running cost of the product / machine per year as compared to the total machine cost. <p><u>Note:</u></p> <p>a. If the above data cannot be given for the total product, the data can be worked out for the sub-assemblies such as motors, pumps, hydraulic valves, VFDs, PLCs, power supply modules and other energy consuming electrical / electronic components.</p> <p>b. Normal machine working hours for a single day may be considered as 16 hours / 2 production shifts.</p> <p>c. Vendor may also submit the life cycle cost study reports (with relevant calculations) along with the offer.</p>	
5.0	<p>Spares: 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.</p>	Vendor to furnish
5.1	<p>Mechanical & Hydraulic Spares: Bearings, Clutches, gears and all types of Pumps, Valves, Pressure Switches / Transducers, Filters, Seals, ‘O’ Rings, Hydraulic Hoses, etc.</p>	Vendor to furnish

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Clause	PARTICULARS AND BHEL SPECIFICATION	BIDDERS OFFER With Technical Details
5.2	Electrical Spares: 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
5.5	Vendor to provide tools required for Operation and maintenance of the Turn table assembly -1set	Vendor to furnish
6.0	a. DOCUMENTATION:	
6.1.0	The following documents shall be furnished along with the offer : b. GA drawing of the offered turn table with dimensions c. Turn table rotation, & job clamping mechanism. d. Tilting base, operation mechanism, locking and clamping arrangement with table e. Earthing arrangement f. Makes of the bought-outs items a. Construction features	Vendor to furnish

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Clause	PARTICULARS AND BHEL SPECIFICATION	BIDDERS OFFER With Technical Details
6.2.0	<p>After placement of order, the vendor shall submit the GA drawings with major dimensions, BOM and Electrical circuit with BOM for BHEL approval within 1 month of ordering by BHEL.</p> <p>Mechanical drawings:</p> <ul style="list-style-type: none">b. Pneumatic or hydraulic circuit if any,c. Table rotation / Job clamping arrangement.d. Table rotation drive arrangement.e. Tilting base, operation mechanism, locking and clamping arrangement with tablef. Positioner Pitch adjustment arrangement <p>Positioner height adjustment arrangement</p>	Vendor to confirm
6.3.0	<p>3 sets of the following documents with one copy in CD form (SOFT COPY) shall be furnished during inspection and supply :</p>	

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Clause	PARTICULARS AND BHEL SPECIFICATION	BIDDERS OFFER With Technical Details
6.3.1	a. GA drawing with BOM b. Turn table rotation, & clamping mechanism. c. The operator instruction manual d. Electrical Circuit with BOM e. Maintenance instruction manual f. Guarantee / warranty cards and catalogues/datasheets of all bought-outs g. Programming manual of supplied VFD drive g. Valid calibration reports/test certificates from NABL approved laboratories for any measuring instrument used.	Vendor to confirm
6.3.2	Sub-assembly / Arrangement drawings with bill of materials and critical dimensions for the following: h. Table rotation / Job clamping arrangement. i. Table rotation drive arrangement. j. Tilting base, operation mechanism, locking and clamping arrangement with table k. Positioner Pitch adjustment arrangement Positioner height adjustment arrangement	Vendor to confirm

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Clause	PARTICULARS AND BHEL SPECIFICATION	BIDDERS OFFER With Technical Details
7.0	ACCEPTANCE:	
7.1	Acceptance at vendor's works The turn table & Tilting base shall be offered for inspection by BHEL at vendor's works prior to dispatch. All features of the turn table (weight carrying capacity, rotation speeds, with load etc.) and Tilting Base (weight carrying capacity, height adjustment, stability, locking etc.) shall be demonstrated.	Vendor to confirm
7.2	Acceptance at BHEL - During commissioning the vendor should demonstrate all features of the turn-table & Tilting Base as listed in 7.1	Vendor to confirm
8.0	Installation and commissioning at BHEL – Installation and commissioning of the turn tables at BHEL shall be in the scope of vendor. All tools and tackles, machines like welding, grinding etc.. Required for erection & commissioning the turntable at BHEL is in vendor scope.	Vendor to confirm
9.0	The supplier shall arrange training for two maintenance persons at BHEL on VFD's maintenance, programming & troubleshooting.	Vendor to confirm
10.0	Painting: All non-working surfaces and control panels shall be given a primer coat & two coats of paint with SYNTHETIC ENAMEL GLOSSY FINISH APPLE GREEN PAINT AS PER IS 5/1994. Shade: (ISC) NO-281. All unpainted surfaces shall be protected from rust during transit.	Vendor to confirm
11.0	PACKING – The turn tables shall be packed rigidly to avoid any transit damage and dispatched	Vendor to confirm

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Clause	PARTICULARS AND BHEL SPECIFICATION	BIDDERS OFFER With Technical Details
12.0	GUARANTEE: 12 months from acceptance of the turn tables at BHEL or 18 months from dispatch whichever is earlier.	Vendor to confirm
13.0	GENERAL	
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	Total weight of the Tilting Base	Vendor to specify

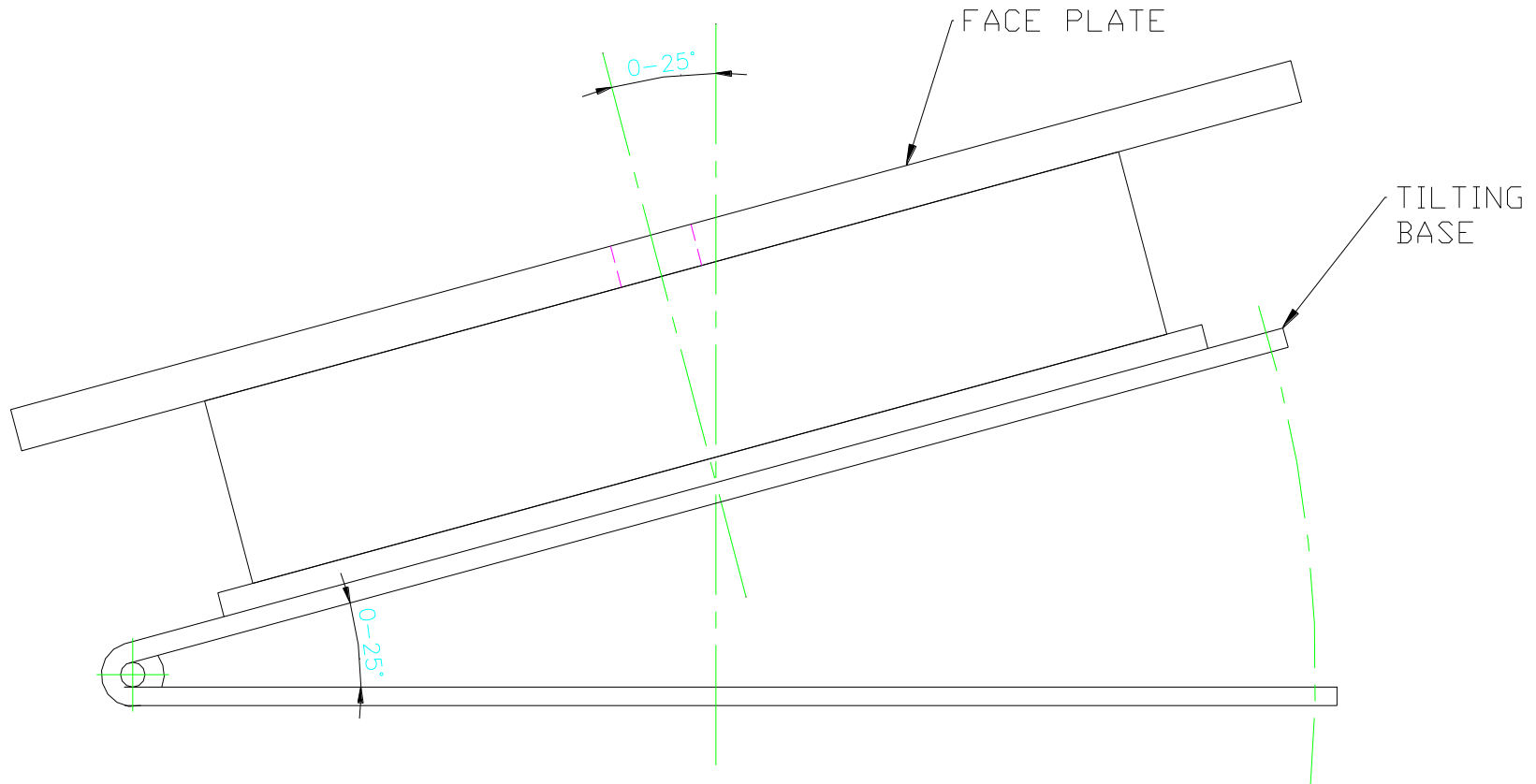
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SKETCH-1 : TURN TABLE WITH TILTING BASE