



An ISO 9001
Company

Bharat Heavy Electricals Limited

(High Pressure Boiler Plant)

Tiruchirappalli – 620014, TAMIL NADU, INDIA

CAPITAL EQUIPMENT / MATERIALS MANAGEMENT

ENQUIRY	Phone: +91 431 257 79 38 Fax : +91 431 252 07 19 Email : tvenkat@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	2851400029	19.04.2014	21.05.2014

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	C-Frame Hydraulic Press – 50 Ton as per the technical specification & commercial conditions applicable (to be downloaded from web site www.bhel.com or http://tenders.gov.in)	2.00 Nos

Important points to be taken care during submission of offer

1. Material shall be delivered to
Indigenous Vendors:
FOR, BHEL, Stores
Power Equipment Fabrication Plant
Bharat Heavy Electricals Limited
Mundipar – 441 804, Taluka: Sakoli, District: Bhandara, Maharashtra State
2. Delivery required 5 months from the date of purchase order.
3. Erection and Commissioning period required 1 Week from the date of intimation by BHEL.
4. EMD for this Tender will be (INR) : 1,00,000.00
5. Compliance Form No: BND/IND/06 to be filled and enclosed along with the offer failing which, the offer will not be considered for evaluation.
6. Vendor should submit all Technical documents in duplicate.
7. 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 Enquiry reference "2851400029".

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. Manager / Capital Equipment / MM

PART A
C-FRAME HYDRAULIC PRESS

SECTION – I: QUALIFYING CRITERIA

The BIDDER has to compulsorily meet the Qualifying criteria indicated in SECTION –I to get qualified. Otherwise the technical offer will not be considered.

S. No.	REQUIREMENTS	Vendor's Response
1.0	Only those vendors (OEMs), who have manufactured, supplied and commissioned at least one C-Frame Hydraulic Press of 50T capacity or higher in the past ten years (on the date of opening of tender) are only eligible to quote. Such supplied machine should at present be working satisfactorily for at least one year after its commissioning (on the date of opening of this Tender). However, if referred machine(s) has/ had been supplied to BHEL, then the machine should be presently working satisfactorily for more than six months (on the date of opening of Tender) after its commissioning and acceptance in BHEL.	
1.1	Vendor has to submit at least One Performance Certificate from their customers on customer's letter head, for satisfactory performance of C-Frame Hydraulic Press as said in 1.0 above which was supplied to them during the past ten years and is working satisfactorily for a minimum period of one year after commissioning (as on date of opening of this tender). For obtaining the Performance certificate, a suggestive format is provided.	
	The vendor should submit the following information from whom the performance certificate was obtained.	
1.2	Name and postal address of the customer or company where such machine is installed.	
1.3	Name and designation of the contact person	
1.4	Phone No, FAX No and email address of the contact person	
1.5	BHEL reserves the right to verify the above information provided by vendor. In case the information provided is found to be false/ incorrect, the offer shall be rejected.	

SECTION – I I

The BIDDER / VENDOR are requested to provide the following information:

S. No.	REQUIREMENTS	Vendor's Response
1.0	The BIDDER to furnish Reference List of Customers, with full address, details of contact person, where C-FRAME HYDRAULIC PRESS have been supplied in the past.	
2.0	Details of C-FRAME HYDRAULIC PRESS supplied to other BHEL units, if any. (Year of commissioning & capacity	
3.0	Details on SERVICE-AFTER-SALES Set-Up in India including the Address of Agents / Service Centers in India.	
4.0	Any Additional Data to supplement the manufacturing capability of the BIDDER for the subject equipment.	

SECTION – III

The performance certificate should be **on Customer's Letter Head** and submitted along with the offer.

SAMPLE FORMAT OF PERFORMANCE CERTIFICATE

1. Machine Supplied by(Manufacturer's name)		
2. Machine supplied to (Customer's name)		
3. Make & Model Number of the Machine		
4. Month & Year of Commissioning		
5. Application for which the Machine is used		
6	a) Capacity b) Stroke c) Pressing speed	
7. Performance of the Equipment (Please tick appropriately)		Satisfactory Not Satisfactory
7. Service after sales (Please tick appropriately)		Satisfactory Not Satisfactory
Date:		Signature & Seal of the Authority Issuing the Performance Certificate

PART - B: Technical Specification for C-Frame Hydraulic Press

NOTE:-	
1. The "Offered" Column and where applicable, the "Deviations" & "Remarks" Column of this format shall be filled in by the Vendor and submitted along with the offer. Inadequate / incomplete, ambiguous, or unsustainable information against any of the clauses of the specifications/requirements shall be treated as non-compliance.	
2. The offer and all documents enclosed with offer should be in English language only.	
ADDRESS OF THE SUPPLIER :	
TELEPHONE NOS.:	ADDRESS OF THE INDIAN
FAX NOS.:	TELEPHONE NOS.:
E-MAIL ADDRESS :	FAX NOS.:
	E-MAIL ADDRESS :

SCOPE: SUPPLY, ERECTION & COMMISSIONING OF C-FRAME HYDRAULIC PRESS COMPLYING WITH REQUIREMENTS AS BELOW :

SL.NO.	DESCRIPTION FOR REQUIREMENT	FOR VENDOR		
		OFFERED	DEVIATIONS	REMARKS
1.0 PURPOSE				
1.1 "C-Frame Hydraulic Press" is required for bending of various components of carbon steel/ alloy steel material of varying thickness & size in the shape of cylindrical/ conical/ contour bending.	Vendor to note & accept			
2.0 SPECIFICATION:	Vendor to note & accept			
2.1 Frame Structure:				
2.1.1 "C" type rigid frame to facilitate maximum access to tool area for tool clamping & component feeding	Vendor to offer & confirm			
2.1.2 The frame should be fabricated by ultrasonically tested quality plates of suitable thickness to withstand load & longer life of the press.	Vendor to offer & confirm			
2.1.3 The frame should be stress relieved after welding & then machined to get required accuracies like parallelism & perpendicularity between pillar, bed etc.	Vendor to offer & confirm			
2.1.4 The frame should be designed to achieve maximum rigidity to retain dimensional accuracy & long working life in continuous rated duty.	Vendor to offer & confirm			

SL.NO.	DESCRIPTION FOR REQUIREMENT		FOR VENDOR		
			OFFERED	DEVIATIONS	REMARKS
2.1.5	Precision machined & hardened guides to offer precision accuracy & alignment which further reduces wear.	Vendor to offer & confirm			
2.20	Technical Specification:				
2.2.1	Pressing capacity- min. 50 T	Vendor to offer & confirm			
2.2.2	No of main hydraulic cylinder- 1 no	Vendor to offer & confirm			
2.2.3	Stroke- 400 mm (nominal),	Vendor to offer & confirm			
2.2.4	Throat- min. 250 mm ,	Vendor to offer & confirm			
2.2.5	Daylight- min. 625 mm,	Vendor to offer & confirm			
2.2.6	Size of Table- min. 500 x 625mm,	Vendor to offer & confirm			
2.2.7	Details of T slots-	Vendor to offer			
2.2.8	Working height- 725-775 mm,	Vendor to offer & confirm			
2.2.9	Pressing speed- 18-22 mm/sec,	Vendor to offer & confirm			
2.2.10	Fast approach speed- min. 100 mm/sec,	Vendor to offer & confirm			
2.2.11	Fast return speed- min. 175 mm/sec,	Vendor to offer & confirm			
2.2.12	Total height	Vendor to offer			
2.2.13	Overall dimension	Vendor to offer			
2.2.14	Motor:				
2.2.14.1	Motor capacity (T type, KW, rpm)	Vendor to offer			
2.1.14.2	Make of motor-	Vendor to offer			

SL.NO.	DESCRIPTION FOR REQUIREMENT		FOR VENDOR		
			OFFERED	DEVIATIONS	REMARKS
2.2.15	Pump:				
2.2.15.1	Pump capacity	Vendor to offer			
2.1.15.2	Make of pump -	Vendor to offer			
3.0 OPERATOR'S PANEL :					
3.1	Swiveling type floor-mounted or Fixed type machine-mounted operator's panel having complete machine control system with display of required configuration should be provided at suitable location for safe, convenient and efficient operation of the machine. Layout showing complete details should be submitted.	Vendor to offer			
4.0 MACHINE LIGHTS :		Vendor to offer & submit			
4.1	Machine Lights for sufficient illumination of complete working area including operator's panel should be provided for clear visibility	Vendor to offer			
5.0 HYDRAULIC SYSTEM : (Details to be submitted by vendor)		Vendor to offer & submit			
5.1	The system should be centralized & re-circulating type. Location of hydraulic tank to be mentioned.	Vendor to offer			
5.2	Tank capacity	Vendor to Inform			
5.3	Filtration system: Details to be submitted like drain filter, pressure side filter should have replaceable filter elements and filter clogging indication & alarm	Vendor to offer			
5.4	Automatic shut off provision for safety (details to be submitted)	Vendor to offer			
5.5	Failure indication- for all operations	Vendor to offer			
5.6	Refrigerated type cooling & of sufficient capacity for hydraulic system to ensure oil temperature not exceeding to 40 degree celcius Irrespective of ambient temperature at continuous operation of press	Vendor to offer			
5.7	Details of Hydraulic pump: Flow/ Pressure/ make/ type	Vendor to offer			
5.8	Complete hydraulic system should be designed to avoid any leakage or spillage	Vendor to confirm			

SL.NO.	DESCRIPTION FOR REQUIREMENT	FOR VENDOR		
		OFFERED	DEVIATIONS	REMARKS
5.9	Sufficient stages/ no of filters should be used to avoid frequent clogging of the filters and other maintenance related problems	Vendor to offer/ confirm		
5.10	Hydraulic oil (Type, make & equivalent oils)	Vendor to offer		
5.11	All hydraulic components should be Rexroth/ Vickers/ Bosch make (Details to be submitted)	Vendor to offer		
5.1	First filling of all required Oils & Grease: First filling of all required Oils & Grease etc. to be supplied by vendor. Detail of oils to be submitted	Vendor to offer		
6.0	ELECTRICAL :			
6.1	Voltage = 415V +10% / -10% , Frequency= 50Hz +3 / -3 . No. of phases = 3 phase with neutral. Power Supply source, as above, will be provided by BHEL at a single point near the machine, as per layout recommended by Vendor. All types of cables, connections, circuit breakers etc. required for connecting BHEL's power supply point to different parts of the machine/control cabinets shall be the responsibility of vendor. Requirement of grounding/earthing with required material details should be informed by vendor well in advance so that same could be incorporated during construction of foundation.	Vendor to accept.		
6.2	Tropicalisation: All electrical / electronic equipment shall be tropicalized to suit specified ambient & operating conditions.	Vendor to confirm		
7.0	SAFETY ARRANGEMENTS : Following safety features in addition to other standard safety features should be provided on the machine:	Vendor to confirm		
7.1	Machine should have adequate and reliable safety interlocks / devices to avoid damage to the machine, work piece and the operator due to the malfunctioning or mistakes.	Vendor to confirm		
7.2	A detailed list of alarms/ indications provided on the machine should be submitted by the vendor.			
7.3	All the pipes, cables etc. on the machine should be well supported and protected. These should not create any hindrance to machine operator's movement for effective use of machine.	Vendor to confirm		

SL.NO.	DESCRIPTION FOR REQUIREMENT	FOR VENDOR		
		OFFERED	DEVIATIONS	REMARKS
7.4	Emergency Switches at suitable locations as per International Norms should be provided.	Vendor to confirm		
7.5	Oil pipe lines should not run with electrical cable in the same trench.			
8.0	ENVIRONMENTAL PERFORMANCE OF THE MACHINE :			
	The Machine should conform to following factors related to environment :	Vendor to confirm		
8.1	Maximum noise level shall be 85 dB(A) at normal load condition, 1meter away from the machine with correction factor for back ground noise, if necessary. This will be measured as per international standards like DIN 45635-16, if required.	Vendor to confirm		
8.2	No hazardous chemicals shall be required to be used in the machine.	Vendor to confirm		
8.3	If any safety / environmental protection enclosure is required it should be built in the machine by the vendor.	Vendor to confirm		
8.4	Paint of the machine should be oil / coolant resistant and should not peel off and mix up with coolant.	Vendor to confirm		
9.0	LEVELLING & ANCHORING SYSTEM :			
9.1	Complete set of anchoring materials including foundation bolts, nuts, washers, fixators, leveling shoes etc for alignment of table/ ram and to fix the press to the foundation should be supplied. Details to be submitted.	Vendor to offer		
10.0	TOOLS FOR ERECTION, OPERATION & MAINTENANCE :			
10.1	Tools and equipment required for erection of the machine shall be brought by the vendor. Necessary tools like Torque Wrench, Spanners, Keys, grease guns etc.for operation and maintenance of the machine should be supplied. List of such tools should be submitted with offer	Vendor to offer & submit		
11.0	SPARES & TOOLINGS:			
11.1	SPARES- Itemised breakup of mechanical, hydraulic, electrical and electronic spares used on the machine in sufficient quantity as per recommendation of Vendor for 2 years of trouble free operation on three shifts continuous running basis should be offered by Vendor.	Vendor to offer		

SL.NO.	DESCRIPTION FOR REQUIREMENT	FOR VENDOR		
		OFFERED	DEVIATIONS	REMARKS
11.2	TOOLS-(optional) 1. 1 set of universal die & punch for 90° bend as per below- a) V-Block Punch- Height- Width- length- Die- Height- Width- length- and V-Width 2. Flattening Tool for straightening of components - 1no	Vendor to confirm and specify the dimensions in drawing		
12.0	DOCUMENTATION : Three sets of following documents (Hard copies) in English language shall be supplied along with the machine	Vendor to offer		
12.1	Operating manuals of Machine	Vendor to offer		
12.2	Detailed Maintenance manual of machine with all drawings of machine assemblies/sub-assemblies/parts including Electrical / Coolant / Hydraulic circuit diagrams. All Assembly/ Sub Assembly Drawings shall be supplied with the part list also. Detailed description of hydraulic circuit to understand complete working of the press, function and actual operating setting of all hydraulic components should be submitted.	Vendor to offer		
12.3	Drawings for all supplied clamping jaws, tool holders, coolant connections, tailstock center, adapters, sleeves etc.	Vendor to offer		
12.4	Catalogues, Operation & Maintenance Manuals of all bought out items including drawings, wherever applicable.	Vendor to offer		
12.5	One additional set of all the above documentation on CD ROM, wherever possible.	Vendor to offer		
13.0	PROVEOUT :			
13.1	Complete & successful bending of components as mutually agreed to the specified design accuracy shall be done by the vendor after erection & start up of the machine at BHEL works.			
14.0	TRAINING :			

SL.NO.	DESCRIPTION FOR REQUIREMENT	FOR VENDOR		
		OFFERED	DEVIATIONS	REMARKS
14.1	BHEL Persons should be trained at vendor's works as per mutually agreed time for the area given below: (a) Operation for the machine (b) Electrical & Electronic maintenance for machine & other supplied equipments (c) Mechanical & Hydraulic maintenance of the machine & other supplied equipments	Vendor to offer		
14.2	Pre-dispatch inspection of the machine shall also be carried out by the team during their stay at vendor's works for the training. Fare for to and fro journey, boarding & lodging for the trainees shall be borne by BHEL.	Vendor to note		
15.0	FOUNDATION :			
15.1	Vendor shall submit the preliminary layout drawing for getting BHEL's approval within one month from the date of Letter of Intent (LOI)/ P.O. Soil condition data will be furnished by BHEL alongwith the approval. Complete Foundation Design including details, like Static/ Dynamic load details etc. and final Layout Drawings shall be submitted by the supplier within three months after getting BHEL's approval. The Layout should consist of all requirements pertaining to complete machine and all accessories. BHEL shall construct complete foundation for the machine under supervision of supplier and at supplier's responsibility. Vendor should arrange equipment required for the testing of foundation, if required by the vendor. The vendor shall also indicate detailed specifications of grouting compound and grouting procedure etc. for foundation bolts of the machine.	Vendor to offer		
16.0	ERECTION & COMMISSIONING :			
16.1	Supplier to take full responsibility for carrying out the erection, start up, testing of machine, it's control & all types of other supplied equipment etc. Service requirement like power, air & water shall be provided by BHEL at only one point to be indicated by supplier in their foundation/layout drawings. Being green field project, other requirements like crane and helping personnel shall also be arranged by supplier, in case BHEL cannot provide the same.	Vendor to offer/ confirm		
16.2	Successful proving of BHEL components by the supplier shall be considered as part of commissioning.	Vendor to offer		

SL.NO.	DESCRIPTION FOR REQUIREMENT	FOR VENDOR		
		OFFERED	DEVIATIONS	REMARKS
16.3	Tools, Tackles, Test Mandrels, instruments and other necessary equipment required to carry out all erection & commissioning activities to be arranged and brought by the supplier. Out of the complete supply, all tools, tackles, mandrels etc. which may be required by BHEL to maintain the machine, after commissioning, shall not be taken back by vendor. Vendor to offer accordingly.	Vendor to offer		
16.4	Commissioning spares, required for commissioning of the machine within stipulated time, shall be brought by the supplier on returnable basis.	Vendor to offer		
16.5	Schedule of Erection and Commissioning shall be submitted with the offer.	Vendor to submit		
17.0	OPERATING CONDITIONS & THERMAL STABILITY : Total machine and all supplied items should work trouble free and efficiently under following operating conditions and should give specified accuracies.	Vendor to offer & confirm		
17.1	Power Supply (AC): Voltage = 415V +10% / -10% , Frequency=50Hz +3 / -3 , No. of phases = 3 phase with neutral. Ambient Operating Conditions: Temperature = 5 to 45 degree Celsius , Relative Humidity = 95% max.	Vendor to accept & confirm		
18.0	MACHINE ACCEPTANCE: (Tests/Activities to be Performed by Vendor)			
18.1	Tests/Activities to be carried out at supplier's works on the machine before dispatch : All these activities shall be part of pre-dispatch inspection of the machine which shall be carried out by BHEL's team during their stay at vendor's works for the training. Report of the same shall be submitted to BHEL.	Vendor to accept & offer		
18.1.1	Demonstration of specified/ offered Geometrical accuracies as per test chart/ standard and specified values.	Vendor to accept		
18.1.2	Demonstration of all features of the machine, control system & accessories.	Vendor to accept		
18.2	Tests/Activities to be carried out at BHEL works while commissioning the machine :	Vendor to accept & offer		
18.2.1	Demonstration of specified/ offered Geometrical accuracies as per test chart/ standard and specified values.	Vendor to accept		
18.2.2	Full load test to demonstrate the maximum power & bending capacity of the machine.	Vendor to accept		
18.2.3	The machine should be tested for continuous running of 48 hrs. If any breakdown occurs during the test, the test should be repeated for 48 hours from that time.	Vendor to accept & submit		

SL.NO.	DESCRIPTION FOR REQUIREMENT	FOR VENDOR		
		OFFERED	DEVIATIONS	REMARKS
18.2.4	Demonstration of specified/ offered Geometrical accuracies as per test chart/ standard and specified values.	Vendor to accept		
18.2.5	One week supervision, by vendor's expert, of independent operation of machine by BHEL after complete installation & testing	Vendor to accept		
18.2.6	Training of BHEL's machine operators in operation of complete machine & accessories etc. by the supplier's experts during their stay at BHEL works for commissioning of the machine.	Vendor to accept		
19.0	PACKING :			
19.1	Road Transport worthy & rigid packing for all items of complete machine	Vendor to accept & offer		
20.0	GUARANTEE :			
20.1	Guarantee for complete machine for 24 months from the date of acceptance of the machine.	Vendor to offer		
21.0	GENERAL :			
21.1	Machine Model No.	Vendor to inform		
21.2	Total connected load (KVA)	Vendor to inform		
21.3	Floor area required (Length, Width, Height) for complete machine & accessories	Vendor to inform		
21.4	Painting of Machine / Electrical Panels : RAL 6011 Apple Green (Polyurethane Paint)	Vendor to offer		
21.5	Total weight of the machine	Vendor to inform		
21.6	Weight of heaviest part of machine	Vendor to inform		
21.7	Weight of the heaviest assembly/ sub-assembly of the Machine	Vendor to inform		
21.8	Dimensions of largest part/ sub-assembly/ assembly of the machine	Vendor to inform		
21.9	Vendor to submit, along with offer, reference list of customers where similar machines have been supplied mentioning broad specifications of the supplied machine etc	Vendor to submit		
22.0	SPECIAL REQUIREMENT-			
22.1	Leakage test of all Hydraulic pipe lines at 1.5 times of maximum working pressure to be witnessed by BHEL representative at supplier's works.			
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