



Bharat Heavy Electricals Limited

(High Pressure Boiler Plant)

Tiruchirappalli – 620014, TAMIL NADU, INDIA

An ISO 9001
Company

CAPITAL EQUIPMENT / MATERIALS MANAGEMENT

ENQUIRY- CORRIGENDUM 6	Phone: +91 431 257 79 38 Fax : +91 431 252 00 31 Email : tvenkat@bheltry.co.in Web : www.bhel.com
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NIT NO. 15718	Enquiry Number: 2851300032	Enquiry Date: 27.11.2013	Revised Due date for submission of quotation: 19.03.2014
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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: CNC Four Roll Plate Rolling Machine, Qty (01 No.)

Details of Corrigendum

1. Part A Revised as per Corrigendum 6
2. AMENDMENT TO CLAUSE Nos. 2.1 & 2.3 (Sub clause Nos. 2.3.7, 2.3.8, 2.3.9, 2.3.28, 2.3.29, 2.3.30 and 2.3.31) of PART – B as per Corrigendum 6
3. Tender Due Date is extended to 19.03.2014

All other terms & conditions and specifications as published in the NIT 15718 remain unchanged.

BHEL's General guidelines / instructions (refer MM/CE/GT/001) 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 "2851300032"

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**


2/3/2014
DGM/ Capital Equipment / MM

L.N. SEKAR,
Dy. General Manager,
Capital Equipment / MM
BHEL, Tiruchirappalli-620 014.

4 ROLL PLATE ROLLING MACHINE (Capacity –30 mm)**PART – A (REVISED)****SECTION- 1: Qualifying Criteria**

The BIDDER has to compulsorily meet the Qualifying Criteria indicated in Section 1 to get qualified. Otherwise the technical offer will not be considered.

S No.	REQUIREMENTS	VENDOR'S RESPONSE
1.1	The BIDDER / VENDOR (OEM) shall have a minimum of TEN Years of Continuous Experience in the Design, Manufacture & Supply of '4 ROLL PLATE ROLLING MACHINE'. Vendor shall indicate the actual no. of years of experience in the field	
1.2	<p>Only those vendors (OEMs) should quote, who have commissioned in the past (10) years (on the original date of opening of Tender) at least ONE '4 ROLL PLATE ROLLING MACHINE' having the following features:</p> <ol style="list-style-type: none"> 1. Rolling of 30mm thick and 3000mm wide plate to min. ID 2050mm, 360N/mm² plate yield strength, 500N/mm² UTS. 2. Pre-bending of 18mm thick and 3000mm wide plate and rolling to min. ID 620mm. 360N/mm² plate yield strength, 500N/mm² UTS. 3. Max. out of parallelism of rollers 0.1mm. 4. Control of roller positions and movement through CNC Digital with hydraulic system. 5. Guidance of side rolls: planetary /Linear 6. CNC control of full machine. 7. Cone rolling facility. 8. All movement and rolling of rolls shall be hydraulic. <p>either (i) in at least one country other than the country of origin to establish vendor's (OEM's) global business activity or (ii) in India ; and the referred machine is presently working satisfactorily for more than one year after commissioning (on the original date of opening of Tender). The name and contact addresses of the customers to whom the machine has been supplied has to be furnished with details.</p> <p>BHEL reserves the right to accept or reject the OEMs based on the assessment of their technical and financial capability.</p>	

S No.	REQUIREMENTS	VENDOR'S RESPONSE
1.3	Vendor has to submit at least ONE PERFORMANCE CERTIFICATE from their customers in India or from the customers to whom the machine was supplied outside the country of origin, for satisfactory performance of the machine as given under Clause 1.2 above, for a minimum period of one year (on the original date of opening of Tender). (Original Certificate or through E-mail directly from the customer). The original performance certificate may be returned after verification by BHEL, if required. For obtaining the Performance certificate, a suggestive format is provided.	
1.4	BHEL reserves the right to verify the information provided by the Vendor for the referred machine at their referred customer's works. It shall be the responsibility of the vendor to facilitate the visit of BHEL's team at their referred customer works .The Travel and Boarding expenses for BHEL Personnel shall be borne by BHEL. In case the information provided by vendor is found to be false/ incorrect, the offer shall be rejected.	

SECTION - 2:

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

S No.	REQUIREMENTS	VENDOR'S RESPONSE
2.1	The BIDDER / VENDOR to furnish reference list of Customers, with complete address, details of contact person, where CNC 4 ROLL PLATE ROLLING MACHINES have been supplied in the past.	
2.2	Specify details of CNC4 ROLL PLATE ROLLING MACHINES supplied to other units of BHEL, if any (Year of commissioning with all parameters etc.)	
2.3	Details on SERVICE-AFTER-SALES Set-up in India including the Address of Agents / Service Centres in India.	
2.4	Any additional data to supplement the manufacturing capability of the BIDDER for the subject equipment.	

SECTION – 3:

The BIDDER to note:

S No.	REQUIREMENTS	VENDOR'S RESPONSE
3.1	The BIDDER / VENDOR shall submit the offer in TWO parts. 1. Technical Offer [with PART A & PART B] 2. Commercial Offer and Price bid.	
3.2	The Technical Offer shall contain complete details against all clauses of Technical Specifications given by BHEL.	
3.3	The Technical Offer shall be supported by copies of product Catalogues, Data Sheets and technical details of Bought- Out- Items.	
3.4	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.	

Suggestive Format of Performance Certificate:

The Performance certificate should be produced on **Customer's Letter Head** and submitted along with the offer. **It shall be line with clause no. 1.2 of part-A.**

PERFORMANCE CERTIFICATE

1.0	Machine Supplied by (Manufacturer's name)	
2.0	Make & Model number of the Machine	
3.0	Month & Year of Commissioning	
4.0	Application for which m/c is used	
5.0	Machine Details	
5.1	CNC 4 Roll rolling machine	
5.2	Top roll diameter	
5.3	Bottom roll diameter	
5.4	Side roll diameter	
5.5	Max plate thickness that can be rolled (YS-360N/mm ²) 3000mm wide plate	
5.6	Max plate thickness that can be pre-bend (YS-360N/mm ²) 3000mm wide plate	
5.7	Hydraulic system and make	
5.8	CNC rolling system and cone forming	
5.9	Max. out of parallelism of rollers 0.1mm.	
5.10	Control of roller positions and movement through CNC Digital with hydraulic system.	
6.0	Performance of the Machine (Please tick the appropriate option)	Not Satisfactory
		Average
		Good
		Satisfactory
7.0	Service after sales (Please tick the appropriate option)	Not Satisfactory
		Average
		Good
		Satisfactory
8.0	Other remarks (if any)	

	Date:	Signature & Seal of the Authority Issuing the Performance Certificate
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CORRIGENDUM TO NIT 15718 - T.No. 285130032**PROCUREMENT OF CNC FOUR ROLL PLATE ROLLING MACHINE 1 NO**

The following clauses are revised and the changes to be read are given below :

Scope: - Supply, Erection & Commissioning of **CNC 4 Roll Plate Rolling machine** for BHEL complying with the specification as below.

PRESENT NIT			TO BE READ AS	
S no	Technical Specification	Technical parameters	Technical Specification	Technical parameters
2.1	<p>MACHINE CONFIGURATION: The rolling machine shall be able to roll plates and form cones. The machine shall be 4 roll rolling with both CNC and manual control. All drives and force generation shall be hydraulic. Electronic parallelism system for the rolls to be provided. Bottom and side rolls shall be tiltable in both sides to conveniently do the cone rolling. Use of hydraulic motors fitted with heavy duty planetary gear boxes for the rotation of rollers. Use of planetary guides with heavy duty pivots to guide the movement of side rolls to be furnished in detailed. Use of side supports for supporting the plates on the machine. Use of extra heavy duty permanent lubricated self-aligning spherical roller bearings. Hydraulic yoke movement. 56-60 HRC, induction hardened, ground finish rolls crowned to compensate deflection. Suitable hydraulic power pump and filter unit with all its accessories shall be supplied with machine.</p>	Vendor to confirm and explain the offered machine in detail	<p>MACHINE CONFIGURATION: The rolling machine shall be able to roll plates and form cones. The machine shall be 4 roll rolling with both CNC and manual control. All drives and force generation shall be hydraulic. Mechanism for Parallelism of the rolls to be provided. Bottom and side rolls shall be tiltable in both sides to conveniently do the cone rolling. Use of hydraulic motors fitted with heavy duty planetary gear boxes for the rotation of rollers. Mechanism of the movement of side rolls (PLANETARY GUIDES / LINEAR SLIDES) to be furnished in detail. Use of side supports for supporting the plates on the machine. Use of extra heavy duty permanent lubricated self-aligning spherical roller bearings. Hydraulic yoke movement. 56-60 HRC, induction hardened, ground finish rolls crowned to compensate deflection. Suitable hydraulic pump and filter unit with all its accessories shall be supplied with machine.</p>	Vendor to SPECIFY and explain the offered machine in detail

2.3	CAPACITY AND SIZE			
2.3.7	Nominal rolling diameter, ID for 24mm thick, 3000mm in length plate shall be 620mm	Vendor to (C&S)	Nominal rolling diameter. ID for 24mm thick, 3000mm wide plate shall be 620mm	Vendor to (C&S)
2.3.8	Working in pre bending mode, ID for 22mm thick, 3000mm in length plate shall be min. 2000mm	Vendor to (C&S)	Working in pre bending mode, ID for 22mm thick, 3000mm wide plate shall be min. 2000mm	Vendor to (C&S)
2.3.9	Working in pre bending mode, ID for 18mm thick, 3000mm in length plate shall be 620mm	Vendor to (C&S)	Working in pre bending mode, ID for 18mm thick, 3000mm wide plate shall be 620mm	Vendor to (C&S)
2.3.28	Lower roll and side roll parallelism control shall be through hydraulic and CNC digital control system and high precision linear encoders provided and details to be furnished	Vendor to (C&S)	Lower roll and side roll parallelism control shall be provided and details to be furnished	Vendor to specify and explain mechanism
2.3.29	Operation of side rolls shall be through hydraulic and CNC digital control system and high precision guiding through heavy duty planetary guides. No torsion bars	Vendor to (C&S)	Operation of side rolls shall be through hydraulic and CNC digital control system. Mechanism of high precision guiding shall be explained in detail.	Vendor to Specify and Details to be furnished
2.3.30	Out of parallelism of any two rolls shall not be more than max. 0.05mm	Vendor to (C&S)	Out of parallelism of any two rolls shall not be more than max. 0.1mm	Vendor to (C&S)
2.3.31	Cone bending feature shall be hydraulic and CNC controlled. Vendor to specify plate thickness , width and angle to be formed	Vendor to (C&S)	Cone bending feature shall preferably be hydraulic and CNC controlled. Vendor to specify plate thickness , width and angle to be formed	Vendor to specify and explain mechanism