



BHARAT HEAVY ELECTRICALS LIMITED

(A Government of India Undertaking)
HIGH PRESSURE BOILER PLANT
PURCHASE DEPARTMENT - FOSSIL BOILERS
THIRUCHIRAPALLI - 620014
TAMILNADU (INDIA)

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429-002/A

	Enquiry No 2681400014 - 79	Enquiry Date 12.06.2014	Due Date for Quotation 10.07.2014
Please quote Enquiry No, Date and due date in all correspondences. This is only a request for quotation and not an order. <u>Bid should be submitted in Two Parts. 1. Techno-commercial Bid (Part-I) and 2. Price Bid (Part-II) in a separate sealed cover and both the covers must be placed in a Third Cover and Sealed. Our Enquiry No, Enq. date & Enq. Due date must be written on all Three covers.</u>			

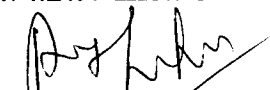
Item	Description	Unit	Quantity	Delivery Quantity	Schedule Date
10	<p>Qualifying criteria as per Part A < H> Annexure - I< /> < H> SCOPE OF SUPPLY:< /> Design ,Supply , installation , commissioning and Interfacing of Existing Straight Tube Butt MIG welding system (3 Mig Torch) with following system.</p> <p>1) PLC based controllor for Straight Tube Butt MIG welding system (3 Mig Torch).</p> <p>2) New Welding Power source 350A with 3 separate wirefeeder units & water cooled Torches.</p> <p>3) Mechanical Structure for Torch Head Base.</p> <p>4) Servo Motors for Chuck Rotation / Linear adjustment 2 axis/ Oscillation with drive.</p> <p>5) 2 Axis LM slide with ballscrew with Servo motors 2nos for Torch Head base.</p> <p>< H> As per Annexure - II< /> Note :</p> <p>1.The system should be interfaced and commissioned by THE SUPPLIER with the existing system with in stipulated time.</p> <p>2.Accessories and materials required for commissioning of the system and field elements/ cables are with supplier's scope.</p> <p>3. Vendor must visit BHEL and study the machine before quoting.</p>	NO	1.000	1.00	01.08.14

General Note:
1. Please submit your detailed offer in two part bid system i.e Part-I. Technical bid+ Checklist (Annexure-A) + unpriced bid with indicating taxes & duties (Annexure-B) in a sealed cover super scribing on the cover as "TECHNICAL & COMMERCIAL BID / PART-II"
Part-II. Priced offer in another separate sealed cover super scribing on the cover as Part-II

Both the covers shall be duly super-scribed with tender reference and

The offers should reach us 30 minutes before the time of opening of tenders. The offers will be opened at 14.30 hrs on the due date of tender in the presence of tenderers who have submitted their offer and who may like to be present for the tender opening.Late and delayed offers are liable to be rejected.

Yours faithfully,
For **BHARAT HEAVY ELECTRICALS LIMITED**



MANAGER / PURCHASE
(FOSSIL BOILERS)
Yours faithfully,



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2681400014 / 12.06.2014

due date of opening. These covers shall be put in a single cover duly super-scribed with tender reference and due date of opening and addressed to us.

2. Point-to-point confirmation to BHEL's specification and commercial terms & conditions shall be provided Annexure-A. All the Annexures should be filled and submitted along with the technical bid (no row shall be left blank), else your offer is liable for rejection.
3. Offers with validity of less than 120 days and non-acceptance of LD , RP clause, PBG & Payment terms, will lead to rejection of submitted offer.
4. If the due date of tender opening happens to be a holiday, the tenders will be opened on the next working day.
5. All clarifications may be sought at least ten days prior to tender due date, from the undersigned with due written request.
6. Order shall be placed on single vendor on cumulative L1 basis
7. BHEL reserves the right to go for a reverse auction (RA) instead of opening the submitted sealed bid, which will be decided after technical evaluation. Information and general terms and conditions covering RA are given in commercial terms and conditions (Annexure-A/Point no.16)
8. Vendors are requested to avoid the loose or spiral bound bid documents
9. Corrigendum if any, with respect to this tender will be hosted only in the website <http://www.bhel.com> or <http://tenders.gov.in>. You are requested to visit the website regularly for updates.
10. BHEL will consider MSME vendor as per Government guidelines.

List of Attachments:

1. Qualifying Criteria Annexure-I
2. Technical Specification Annexure-II
3. Commercial Terms and Conditions - Annexure-A
4. Price Format-Annexure-B
5. CA Certificate for MSE Vendors-Annexure-III

Enclosures:

**"LD clause has to be confirmed without fail."
"Payment to vendors will be made only thro E-Payment mode"**

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Yours faithfully,
For **BHARAT HEAVY ELECTRICALS LIMITED**

MANAGER / PURCHASE
(FOSSIL BOILERS)
Yours faithfully,

PART A - QUALIFYING CRITERIA FOR STBW STATION RETROFITTING**SECTION – 1:**

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 response
1.1	The BIDDER / VENDOR shall have a minimum FIVE Years of Experience in Supply or Commissioning of “ Straight Tube Butt Welding Machine ” Vendor shall indicate the actual number of years of experience in the field.	Vendor to confirm
1.2	Only those vendors fulfilling the following conditions should quote: who have Supplied or Commissioned in the last 10 years (as on the original date of tender opening) at least ONE “Straight Tube Butt Welding Machine capable of welding tubes of up to 76.1mm for tube length build-up of 24m or more by GMAW process” EITHER (i) In at least any one country other than the country of origin to establish vendor's global business activity. OR (ii) In India and the referred machine is presently working satisfactorily for more than one year after commissioning (as on the original date of tender opening). The name and contact addresses of the customers to whom the above mentioned machines were supplied / retrofitted to be furnished with details.	Vendor to confirm
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 / commissioned/ retrofitted outside the country of origin, for satisfactory performance of the machine, referred under clause 1.2 above, for a minimum period of one year from the date of commissioning (as on the original date of tender opening). Performance certificate as Original Certificate or E-mail directly from the customer may be submitted. The original certificate may be returned after verification by BHEL, if required. For obtaining the Performance certificate, a suggestive format is provided at the end of Part A.	Vendor to confirm
1.4	BHEL reserves the right to verify the information provided by the Vendor for the referred STBW 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, Board and Lodging 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. BHEL reserves the right to accept or reject the offer based on the assessment of their technical and financial capability.	Vendor to confirm

SECTION - 2:

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

S. No.	REQUIREMENTS	Vendor response
2.1	The BIDDER / VENDOR to furnish Reference List of Customers, with complete address, details of contact person, where STBW Machine has been supplied / retrofitted in the past.	Vendor to specify
2.2	Specify details of STBW Machine supplied / retrofitted to other units of BHEL, if any (Year of commissioning with details etc.)	Vendor to specify
2.3	Details on SERVICE-AFTER-SALES Set-up in India including the Address of Agents / Service Centres in India.	Vendor to specify
2.4	Any Additional data to supplement the manufacturing capability of the BIDDER for the subject equipment.	Vendor to specify

Annexure - I

SECTION – 3:

The BIDDER to note:

S. No.	REQUIREMENTS	Vendor 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.	Vendor to specify
3.2	The Technical Offer shall contain complete details against all clauses of Technical Specifications given by BHEL.	Vendor to specify
3.3	The Technical Offer shall be supported by copies of product Catalogues, Data Sheets and technical details of Bought- Out- Items.	Vendor to specify
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.	Vendor to specify
3.5	Performance Certificate from	Vendor to specify
3.6	Month and Year of Commissioning	Vendor to specify

Suggestive Format of Performance Certificate:

The Performance should be certified by the customer on **Customer's Letter Head** and submitted along with the offer.

PERFORMANCE CERTIFICATE

1.0	Straight Tube Butt Welding Supplied / Retrofitted by : (Manufacturer's name)	
2.0	Make & Model number of the Machine	
3.0	Month & Year of Commissioning	
4.0	Application for which The Machine is used	
5.0	Machine Details	
5.1	Number of MIG Torches	
5.2	Max /Min Tube Diameter can be weld on the machine.	
	Max /Min Tube Thickness can be weld on the machine	
5.3	Tube materials weld	
5.4	Max length can be built	
5.5	Load handling capacity of Platform with counter weight in waterfall rack.	
6.0	Performance of the Machine (Please tick the appropriate option)	<u>Satisfactory</u>
		Not Satisfactory
7.0	Service after sales (Please tick the appropriate option)	<u>Satisfactory</u>
		Not Satisfactory
8.0	Other remarks (if any)	
Date:		Signature & Seal of the Authority Issuing the Performance Certificate

TECHNICAL SPECIFICATIONS FOR RETROFITTING OF STRAIGHT TUBE BUTT WELDING MACHINE
[excluding water fall rack tube handling system]

S.No	PARTICULARS AND BHEL SPECIFICATION	BIDDER'S OFFER (with complete Technical Details)
1.0.0	PURPOSE & APPLICATION	Vendor to note
1.1.0	<p>The machine is designed for butt-welding of straight tubes with edge prepared ends (without tack welding) using Entirely by Pulsed GMAW Welding</p> <p>IMPORTANT NOTE:</p> <p>a) The machine is intended for Tube Build-up to 24 meters with ONE GMAW Head consisting of THREE MIG Torches with Three Cold Wire feeder.</p> <p>b) Welding of tubes of similar or dissimilar materials in steel (like carbon steel to alloy steel, alloy steel to stainless steel, Inconel etc.)</p> <p>c) Welding of tubes of various outer diameters and thicknesses.</p> <p>d) Torch have to be employed, exclusive MIG welding process and using two/three types of filler wire respectively for different material combination butt-welds.</p> <p>e) The welds produced using the above system should pass Radiography Test (RT) / Ultrasonic Test (UT) as stipulated in ASME sec. IX, ANSI B31.1, and B31.3 for welding high-pressure tube butt joints of power plant.</p>	[BIDDER is expected to give technical write up on machine design, construction and operational features to bring out the capability of the proposed equipment, to meet the BHEL specification requirements]
2.0.0	WORK PIECE / JOB DETAILS	Vendor to note
2.1.0	Only Seamless Steel Tubes (All are Outer Diameter controlled tubes with a tolerance of maximum 12% on tube wall thickness)	
2.2.0	<p>Tube Outer Diameters 28.6mm / 31.8mm / 38.1mm / 42.4mm/44.5mm / 51mm / 54.0mm / 63.5mm / 76.1mm</p> <p>Tube Wall Thickness 3mm to 15 mm</p>	
2.3.0	<p>MATERIAL SPECIFICATION</p> <p>Minimum - 4 meters Maximum - 15 meters</p> <p>Note:</p> <p>a) Small tubes known as inserts of length 80mm / 110mm with straight gripping length of 30mm have to be welded to the longer tubes. The machine to be suitable for gripping these inserts in the chucks and weld them to the longer tubes.</p> <p>b) Tube lengths less than 4 meters will be loaded manually. Tube lengths greater than 4 meters have to be feed automatically into the machine.</p> <p>Tube Material</p> <p>a. Carbon Steel: SA192, SA210Gr. A1, SA210 Gr.C</p> <p>b. Alloy Steel :SA209 T1, SA213 T11, SA213 T22, SA213 T23, SA213 T91, SA213 T92</p> <p>c. Stainless Steel:SA 213 TP304H, SA 213,TP321H,SA 213 TP347H</p> <p>d. Inconel</p> <p>Tube End Edge Preparation Style and Weld Groove Design</p> <p>a. Grade C, SA213 T11, T22 - 45 degree chamfer</p> <p>b. SA213 T91and Stainless Steel - 37.5 degree chamfer</p> <p>c. Combination of T91/SS with T22 -37.5 degree chamfer</p>	

ANNEXURE - II		PART-B
3.0.0	MACHINE OUTPUT / PRODUCTIVITY	Vendor to confirm
3.1.0	Number of radiography quality weld joints expected per shift of 8 hours, for following tubes of 10 or 12m length. Bidder has to confirm and to be proved out. 80 joints / shift of OD 47.63mm x Th. 6.0mm SA213 T11 with 0.8mm ER80S-B2 wire by Pulsed GMAW process to build a length of 24m.	
4.0.0	Existing machine	Vendor to note
4.1.0	MOVIDRIVES (chuck drive) Make : SEW EURODRIVE Type : MCS41A0030-5A3-4-00	
4.2.0	MOVIDRIVES(Horizontal) Make : SEW EURODRIVE Type : MCS41A0015-5A3-4-00	
4.3.0	MOVIDRIVES(VERTICAL) Make : SEW EURODRIVE Type : MCS41A0015-5A3-4-00	
4.4.0	MOVIDRIVES(INFEED&OUTFEED) Make : SEW EURODRIVE Type : MCF41A0015-5A3-4-00	
4.5.0	INFEED PINCH ROLLER & OUTFEED PINCH ROLLER MOTORS KW : 1.5, Frame Size : 50L, Mounting : B5, Speed : 1400	
4.6.0	CHUCK SERVO MOTOR Make : SEW EURODRIVE TYPE:KH67B DY90M/B/TH	
4.7.0	HORIZONTAL SERVO MOTOR Make : SEW EURODRIVE TYPE:DFS56L/B/TF	
4.8.0	VERTICAL SERVO MOTOR Make : SEW EURODRIVE TYPE:DFS56L/B/TF	
4.9.0	JACK MOTOR KW : 0.75	
4.10.0	WELDING POWER SOURCE: OTC - TURBO PULSE 350	
5.0.0	Scope of Supply - Design ,Supply , installation , commissioning and Interfacing of Existing Straight Tube Butt MIG welding system (3 Mig Torch) with following system.	Vendor to confirm
5.1.0	PLC based controllor for Straight Tube Butt MIG welding system (3 Mig Torch).	
5.2.0	New Welding Power source 350A with 3 separate wirefeeder units & 3 Number of water cooled Torches.	
5.3.0	Mechanical Structure for Torch Head Base.	
5.4.0	Servo Motors for Chuck Rotation / Linear adjustment 2 axis/ Oscillation with drive.	
5.5.0	2 Axis LM slide with ballscrew with Servo motors 2nos for Torch Head base.	
5.6.0	Electrical, Electronics, AC Drives & CNC/PLC Controls with Panels and Local Operator Consoles - 1 set	
6.0.0.	POWER SOURCE FOR SYNERGIC PULSED GMAW	Vendor to confirm

ANNEXURE - II

PART-B

6.1.0	<p>Type : Inverter Controlled (IGBT Based) Welding Power Source for Synergic Pulsed GMAW with 3 separate wirefeeder units(with euro adapter only) Make: OTC / DAIHEN CORPORATION,/ panasonic ONLY Process Synergic Pulsed GMAW preprogramed for 0.80 mm Wire of CS, AS & SS with gas shielding [Argon (95-98%) +CO2 (5-2%) Mix] Model Bidder to Specify Rating a. Current : 350 A or more b. Voltage : 15-36 V Duty Cycle 60% or more</p>	
6.2.0	<p>Wire feeder Details (Suitable to power source in sl.no 6.1.0) Type Bidder to Specify type & rating Model Bidder to Specify Wire size 0.8,1.0,1.2 mm Drive 4-Roll Drive (Rollers to be suitable for 0.8mm wire) Wire Feed Speed 8 m/min or more (variable from 0 to maximum) Feeder Motor Capacity Bidder to Specify Weight of Wire Spool Suitable for loading 25kg Wire Spools. Bidder to Confirm Scope of Supply: Bidder to Confirm supply of complete unit with cables, gas hoses, end connectors & protective sheath and Feed Rolls for 0.8,1.0,1.2 mm wire (each size 1 set). With Euro adapter</p>	
7.0.0	GMAW WELDING TORCH - 3 NOS	Vendor to confirm
7.1.0	<p>GMAW WELDING TORCH Type Water Cooled Make Binzel / Bernard Model Bidder to Specify Rating 450 A or more @ 100% Duty Cycle Wire size Torch fitted with Accessories for 0.8, 1.0, 1.2 mm steel wire. (1 set/each size to be supplied and include along with scope of supply) Wire feed speed 0 to 8m/min (variable from 0 to maximum) With Euro adapter</p>	
7.2.0	<p>Torch cable Length Welding cable size and length to be carefully selected in order to avoid any problem of wire feeding during, before or after the welding process and to nullify problems like early failure of wire liner, wire getting struck inside liners etc. Bidder to Confirm</p>	
7.3.0	WATER CHILLER UNIT FOR GMAW TORCHES	
i	<p>Bidder to Specify the Design Parameters a) Type – Refrigerant type water chiller b) Water Chiller Cooling Capacity (in Tons of refrigeration) - Minimum 1 Ton/Hr c) Tank Capacity – Bidder to specify d) Flow rate and pressure (in litres/min and psi or kg/cm2) e) Chiller cooling system should be direct type with inbuilt safety measures to be incorporated with indication lamp. f) Make: Werner finley/Rittal/Daikin</p>	
ii	<p>Operating Features Cooling water flow sensor & interlocks to ensure fool-proof flow of water. Welding should stop automatically in case there is any interruption in cooling water flow.</p>	

ANNEXURE - II

PART-B

ANNEXURE - II		PART-B
7.4	VERTICAL SLIDE UNIT FOR GMAW PROCESS	
7.4.1	Vertical Stroke AC servo motor controlled vertical slide assembly unit for moving the torch and entire wire Feeder sheath head vertically in Z -axis with inbuilt sensors for end position sensing. [Stroke length 300mm / Max Speed: 1000 mm/min). Bidder to Specify the stroke of the Torch and entire wire Feeder sheath head.	
7.4.2	Stroke of each wire Feeder sheath head Up/Down stroke of the torch to be Pneumatically operated. Fine adjustment shall be Motorized.	
7.4.3	Fine Adjustment Fine adjustment to be provided by Joystick Bidder to Specify the fine adjustment stroke.	
7.4.4	Height Adjustment The position of the torch tip for different diameters to be adjustable such that the torch will not collide with the tube.	
7.4.5	Interlock for collision Fool proof arrangement to be provided such that the torch shall not descend over the chuck and collide.	
7.4.6	Vertical guide ways Vertical individual wire Feeder sheath head sliding guide-ways shall be of LM guide-ways. It should be provided with slim and compact head. Aluminium or any other metal is not acceptable.	
7.5	HORIZONTAL SLIDE UNIT FOR GMAW PROCESS	
7.5.1	Movement of Torch and Positioning of wire Feeder sheath head AC Servo Motor controlled horizontal slide assembly unit for moving the torch and wire Feeder sheath head with selected wire along the tube axis with inbuilt sensors for end position sensing. [Stroke length 300mm / Max Speed: 2500 mm/min].	
7.5.2	Horizontal Stroke Bidder to Specify the stroke of the entire head mounted with Torch and of wire Feeder sheath heads.	
7.5.3	Fine Adjustment Horizontal Fine adjustment (Left/Right) to be provided in the same Joystick provided for Vertical fine adjustment. Bidder to Specify the fine adjustment stroke.	
7.5.4	Horizontal guide ways Horizontal Torch and wire Feeder sheath head sliding guide-ways shall be of steel or LM guide-ways. It should be provided with slim and compact head. Aluminium or any other metal is not acceptable. Ball screws to be used in case of motorized movement.	
7.5.5	Oscillation Function Bidder to give Technical Details	
7.5.6	Oscillation frequency 6 to 200 cycles / minute	
7.5.7	Oscillation Width 0 to 40 mm (20 mm on either side of the centre of joint)	
7.5.8	Dwell Time at Both Ends 0 to 9.9 sec (Separately Adjustable)	

ANNEXURE - II

PART-B

7.5.9	<p>Mechanical Structure for Torch head base: Bidder to provide complete general arrangement drawing, layout & technical details. Reference only.</p> <p>The machine frame shall consist of 4 Nos of Vertical Beam column of Height suitable height which in turn are connected by means of 8 Nos of Horizontal beams with suitable the dimensional length and width approximately forming the skeleton of main machine structure. These beams are fabricated, Machined to have good surface finish, with its end having cross keyway matching square flanges for face to face 90 deg matching with other beams (if required). Solid and rigid connectivity between any two beam shall be established by means of fasteners and welding. These beams are fabricated, machined and milled at the end flanges, plus keyed at its end having cross keyway matching square flanges for face to face 90 deg matching with the column. The selection of material size and bolting shall be for heavy duty application subject to the approval of BHEL Engineers.</p>	<p>BIDDER to ensure to eliminate machine operation limitations, maintenance hurdles, high amount of heat generation due to welding, ineffective weld-fume extraction, problem in viewing & monitoring all operating torches during the welding operation, etc.</p> <p>Design to ensure a perfect defect-free welding.</p>
8.0.0	OPERATION AND CONTROL SYSTEM	Vendor to confirm
8.1.0	OPERATOR'S CONTROL PANEL	
8.1.1	<p>a. SMPS 24 V for field I/Os.</p> <p>b. HMI for parameter setting with More than 10" display.</p> <p>c. Control panel with panel Cooling Fan & all panel accessories.</p> <p>d. Operator station Pendant and suitable joystick switch for fine adjustment.</p>	
8.1.2	<p>a. Torch head consists of 3 slides with pneumatic cylinders for Torch selection Vertical(up & down) movement.</p> <p>b. Angular movement for Torch by manual.</p> <p>C. Mechanical structure for Torch head assembly</p>	
8.1.3	<p>a. Servomotor Drive for Chuck Rotation with encoder feedback of the chuck rotation & bed up/down linear movement.</p> <p>b. Servomotor with Drive for Linear movement with encoder 2nos.</p> <p>c. Oscillation motor for Oscillation Width min 10 to 25 mm (Servo motor with gear box).</p>	
8.1.4	a. Supply of VFD for Infeed and out feed pinch roller motors interface with PLC.	
8.2.0	PLC SYSTEM & Servo motors	
8.2.1	<p>Make: Preferred Make –Siemens, Mitsubishi</p> <p>Vendor to specify</p>	
8.2.1	<p>Type: PLC based system with latest version</p> <p>Vendor to specify</p>	
8.2.3	<p>Model (suitable and latest version, as available at the time of purchase order placement, shall be supplied).</p> <p>Vendor to specify</p>	
8.2.4	<p>Chuck servo motor, horizontal and vertical servo motors are shall be of siemes / mitsubishi.</p> <p>Vendor to specify</p>	
8.2.5	<p>Details of optional features, recommended by vendor.</p> <p>Vendor to specify</p>	
8.2.6	<p>The system should have full alphanumeric keyboard, 10 " TFT colour display. Latest version of Touch panel is preferred for operator control.</p> <p>Vendor to Confirm(Details shall be furnished by the Vendor in the TECHNICAL OFFER)</p>	
8.2.7	All the PLC Input & Output shall be displayed in the Touch panel under the Screen of Maintenance.	

8.2.8	<p>1. Operator Shall Set the Parameter Once for a Particular Job through touch panel.</p> <p>2. Complete System shall work in the Machine by /Auto Cycle/ Manual mode.</p> <p>3. For synchronizing the chuck drive suitable Encoder / feed back device to be used.</p> <p>4. Both in feed and out feed pinch rollers should work simultaneously.</p> <p>5. After completion of joint one rotation needed to see the surface for any defects to rectify the joints.</p> <p>6. Chucks releasing automatically after welding.</p> <p>7. While welding combination of joints after completion one joint next joint selection by automatically.</p> <p>8. Welding glass/ see through glass to be provided in front of the operator.</p> <p>9. Multi color LCD touch through panel More then 10 inch Diagonal make shall be of latest / Mitsubishi/ Siemens / Fanuc.</p> <p>10. Servo motor / Drive shall be of Mitsubishi/ Siemens / Fanuc make.</p> <p>11. Any Fault In the STB welding System like Cooling Water / Gas flow Blocked, over heat etc, the same has to be Displayed & the Interlocks Shall Trip the welding system.</p>	
8.2.9	<p>Latest version of Licensed PLC Software & Touch panel software shall be supplied. The same shall be installed in the BHEL Laptop.</p>	
8.2.10	<p>Appropriate Communication cable for PLC to PC & Touch panel to PC Shall be provided for on-line program transfer & Trouble shooting.</p>	
9.0.0	<p>MACHINE LIGHTS & AIR CONDITIONING SYSTEM</p>	
9.1.0	<p>Machine Lights for sufficient illumination of complete working area should be provided for clear visibility. (Details should be furnished in the offer) Vendor to Confirm</p>	
9.2.0	<p>A spot light with sufficiently long cable should also be provided. Vendor to Confirm</p>	
9.3.0	<p>All light fittings, consumables, adapters/receptacles should have compatibility with Indian equivalents Vendor to Confirm</p>	
9.4.0	<p>Air Conditioners with Dehumidifiers of suitable / sufficient capacity to be provided for all Electrical / Electronic Panels / Cabinets including Operator's Panel considering specified ambient conditions. Detailed specifications of the same are to be submitted. Vendor to submit</p>	
10.0.0	<p>ELECTRICAL & ELECTRONICS SYSTEMS</p>	
10.1.0	<p>415V + 10% / -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 machine, as per layout recommended by Vendor. Vendor to confirm</p>	
10.2.0	<p>Tropicalization: All electrical / electronic equipment shall be tropicalized. Vendor to confirm</p>	
10.3.0	<p>All electrical & electronic control cabinets & panels should be dust and vermin proof. Vendor to confirm</p>	
10.4.0	<p>All electrical components in the cabinets should be mounted on DIN Rail Vendor to confirm</p>	
10.5.0	<p>All electrical and electronic panels including operator's panel should be provided with fluorescent lamps for sufficient illumination and power receptacles of 220Volts, 5/15 Amp AC. All adapters /receptacles should have compatibility with Indian equivalents. Vendor to confirm</p>	
10.6.0	<p>Motors & other electrical components shall conform to IEC or Indian Standards Vendor to confirm</p>	
10.7.0	<p>All cables moving with traversing axes should be installed in caterpillar / Drag chain.(MAKE: IGUS/KABLESHCELPP/GORTRAC) Additionally, all the cable trays required for laying of cables should be included in the offer. Vendor to confirm</p>	

ANNEXURE - II

PART-B

10.8.0	Vendor should ensure the proper earthing for the machine and its peripherals. Vendor to confirm	
10.9.0	In-cycle hour counter with reset facility should be provided. Vendor to confirm	
10.10.0	All Electric enclosures shall have IP 54 protection Vendor to confirm	
11.0.0	PNEUMATIC SYSTEM:	
11.0.1	The pneumatic operated elements of the machine shall work efficiently with BHEL compressed air supply at a pressure of 4.5 to 5.0 kg/cm ² in ¾ inch line.	
11.0.2	If higher air pressure is required for efficient operation of the machine, Bidder shall furnish the information for Air Booster of suitable capacity.(SMC/ FESTO/PARKER)	
11.0.3	Bidder to Specify the total air volume required for efficient operation of the complete machine.	
11.0.4	Refrigerated Air Drier to be provided to eliminate moisture content from the compressed air at the designed flow and pressure rating.(if applicable)	
11.0.5	BHEL will provide compressed air at only one point near / on the machine. Bidder shall provide suitable filter-regulator-lubrication (FRL) unit and in addition a hand wheel valve at this point	
11.0.6	Hydraulic, Pneumatic & Lubricating oil piping should be preferably metallic except places where flexible piping is essential. All the pipes required for the same shall be included in the standard scope of the machine.	
11.0.7	All Pneumatic components shall be of FESTO/SMC/PARKER only.	
11.0.8	Suitable heavy duty sliding door(moving in LM guide) with welding glass & see through glass to be provided in front of the operator with 3 nos of spare glasses (13A DIN of size around 350mm*240mm preferred). It has to be fixed in the existing machine structure - Vendor to confirm	
11.1.0	IN-BUILT SAFETY ARRANGEMENTS	
11.1.1	Following safety features in addition to other standard safety features should be provided on the machine: Vendor to confirm	
11.1.2	A detailed list of all alarms / indications provided on machine should be submitted by the Vendor. Vendor to specify	
11.1.3	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	
11.1.4	a. 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. b. Machine functions should be continuously monitored and alarm / warning indications through lights/ alarm number with messages (on PLC display and panels) should be available. Vendor to specify	
11.1.5	All the rotating parts used on machine should be statically & dynamically balanced to avoid undue vibrations and suitably guarded. Vendor to Confirm	
11.1.6	Emergency Switches at suitable locations as per International Norms should be provided. Vendor to Confirm	

ANNEXURE - II

PART-B

11.1.7	All lubricated parts like Bed, guide ways shall have provision for collecting the used Lubrication oil from machine guide ways and preventing them from spilling over on to the ground. Vendor to Confirm	
12.0.0	TOOLS FOR ERECTION, OPERATION & MAINTENANCE	
12.1.0	The Vendor shall bring special tools and equipment required for erection of the machine. 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 confirm	
13.0.0	MACHINE SPARES	
13.0.1	Itemized break-up of mechanical, electrical and electronic spares used in the machine in sufficient quantity as per recommendation of Vendor for 2 years of trouble free operation on three shifts continuous running basis shall be offered by vendor. The list is to include following, in addition to other recommended spares: (Unit Price for each item of spare shall be offered) Vendor to confirm	
13.0.2	Electrical / Electronic / PLC Spares: All types of Relays, Contactors, Proximity Switches, Push Buttons, Indicating Lamps, Semiconductor Fuses, Special Fuses, Circuit Breakers, Main Power Switch, Encoders, Spares for CNC System, Servo Motors for Feed Drives, Power Module & Control Cards for Main Drive as well as Feed Drives etc. Vendor to confirm	
13.0.3	All types of spares for 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 & suppliers to enable BHEL to procure these in advance, if required Vendor to confirm	
13.0.4	Recommended set of spares for all attachments are to be offered with details. Vendor to confirm	
13.0.5	Vendor to confirm that complete list of spares for machine and accessories, along with item part no / specification / type / model, and name & address of the spare supplier shall be furnished along with documentation to be supplied with the machine Vendor to confirm	
13.0.6	Welding Consumable spares such as Contact tips, Gas nozzles, Tip adapters, Other torch spares for atleast 3 months continuous operation shall be provided.(Shall include in scope of supply). Vendor to confirm	
13.0.7	Spare Torches, Torch cables and Wire feed conduits, Wire feed rollers may also be offered for atleast 3 months continuous operation.(Shall include in scope of supply). Vendor to confirm	
13.0.8	Mechanical & Pneumatic Spares: All types of Valves, Pressure Switches, Transducers, Flow Switches, Filters, Seals, O-rings, PU hoses, bearings, sprockets, chains etc..(Shall include in scope of supply).1 No in each type shall be supplied. Bidder to specify.	
14.0.0	DOCUMENTATION	
14.1.0	Three sets of following documents (3 Hard copies,) in English language should be supplied along with the machine Vendor to confirm.	

ANNEXURE - II		PART-B
14.2.0	Operating Manuals of Machine & PLC system Vendor to confirm	
14.3.0	Programming Manuals of Machine & PLC system Vendor to confirm	
14.4.0	Maintenance, Interface & commissioning manuals for PLC system, spindle & feed drives. Vendor to confirm	
14.5.0	Detailed Maintenance Manual of Machine with all drawings of machine assemblies / sub-assemblies / parts including Electrical / Pneumatic diagrams. All Assembly/ Sub Assembly Drawings shall be supplied with the part list also Vendor to confirm	
14.6.0	Catalogues, O&M Manuals of all bought out items including drawings, wherever applicable. Vendor to confirm	
14.7.0	Detailed specification of all rubber items, pneumatic & lube fittings Vendor to confirm	
14.8.0	Operating Manuals, Maintenance Manuals & Catalogues for supplied Voltage Stabilizer, Isolation Transformer and all supplied Accessories. Vendor to confirm	
14.9.0	PLC program printouts with comments in English. Vendor to confirm	
14.10.0	PLC program on CD & PLC data on CD Vendor to confirm	
14.12.0	Complete back up of hard disk on GHOST CD and clear written Instructions (3 copies) to take back up and reloading of a new hard disk. Vendor to confirm	
14.12.0	The vendor shall submit complete Master List of spare parts used in the machine. Vendor to confirm	
14.15.0	One additional set of all the above documentation shall be given in the form of CD/DVD (English Language). Vendor to confirm	
15.0.0	TRAINING	
15.1.0	The Vendor shall train two BHEL's Engineers in PLC/Touch Panel & VF/Servo Drives at Respective OEM Works for 2 working days on each. Vendor to confirm	
15.2.0	The Vendor shall impart training to BHEL's Machine Operators and Maintenance crew in Operation and Maintenance after the commissioning of the Machine at BHEL works for not less than 2 working days. Vendor to confirm	
15.3.0	Boarding & lodging for the BHEL Trainees shall be borne by BHEL. Vendor o Confirm	
15.4.0	Vendor to quote for training on per man per week basis for training at vendor's work Vendor to confirm	
15.5.0	Competent, English speaking experts shall be arranged by the vendor during training for satisfactory & effective training of BHEL personnel Vendor to Confirm	
16.0.0	MACHINE FOUNDATION	

ANNEXURE - II

PART-B

16.1.0	<p>a. Vendor shall submit the preliminary layout drawing for getting BHEL's approval within 4 - 6 Weeks from the date of Letter of Intent (LOI) / P.O. whichever is earlier. Complete Foundation / dynamic load shall be submitted by the Vendor within three months after getting BHEL's approval.</p> <p>b. The layout should consist of all requirements pertaining to complete machine including space requirement for Voltage Stabilizer, Isolation Transformer, & any other accessories.</p> <p>c. BHEL shall construct complete foundation for the machine as per the Vendor's recommendation and drawing.</p> <p>Vendor to submit</p>	
16.2.0	<p>a. Vendor should arrange equipments required for the testing of foundation, if required by the Vendor.</p> <p>b. The Vendor shall also indicate detailed specifications of grouting compound and Grouting procedure etc. for foundation bolts of the machine</p> <p>Vendor to confirm</p>	
17.0.0	MACHINE ERECTION & COMMISSIONING	
17.1.0	<p>Vendor to take full responsibility for supervision of the erection, vendor shall start up, test the machine, it's control & all types of other supplied equipment, carrying out machining of test pieces etc. Service requirement like power, air & water shall be provided by BHEL at only one point to be indicated by Vendor in their foundation/layout drawings. Other requirements like crane and helping personnel shall also be provided by BHEL.</p> <p>Details of these requirements should be informed by Vendor in advance</p>	
17.2.0	<p>Tools, Tackles, Test Mandrels, instruments and other necessary equipment including Laser equipment required to carry out all above activities should be brought by the Vendor.</p> <p>Vendor to confirm</p>	
17.3.0	<p>Commissioning spares, required for commissioning of the machine within stipulated time, shall be brought by the Vendor on returnable basis.</p> <p>Vendor to confirm</p>	
17.4.0	<p>Schedule of Erection and Commissioning shall be submitted with the offer.</p> <p>Vendor to confirm</p>	
17.5.0	<p>Charges, duration, terms & conditions for E&C should be furnished in detail separately by Vendor along with offer.</p> <p>Vendor to confirm</p>	
17.6.0	<p>Portion, if any, of the machine, accessories and other supplied items where paint has rubbed off or peeled during transit or erection should be repainted and merged with the original surrounding paint by the vendor. For this purpose, the Vendor shall supply sufficient quantity of touch-up paint of various colours of paint used.</p> <p>Vendor to confirm</p>	
18.0.0	AMBIENT CONDITIONS & THERMAL STABILITY	
18.0.1	<p>Total machine including CNC System and all items shall work trouble free and efficiently under following operating conditions & shall give specified accuracies.</p> <p>Power Supply: Voltage : 415 V \pm 10%, 3 Phase AC Frequency : 50 Hz \pm 3%</p> <p>The machine shall be suitable for an ambient temperature of +50 ° C and relative humidity of 85 % respectively, but both do not occur simultaneously</p> <p>[The offered machine shall be suitable for the above and details of provisions on the machine for the same are to be furnished by Vendor] Vendor to confirm</p>	

ANNEXURE - II

PART-B

18.0.2	Weather conditions are tropical, Atmosphere may be dust laden during some part of the year. Machine shall be kept in the normal shop floor condition . [The offered machine shall be suitable for the above and details of provisions on the machine for the same are to be furnished by Vendor] Vendor to confirm	
18.0.3	The machine, including attachments and accessories, should be suitable for 24 hrs. Continuous operation to its full capacity for 24 hour a day and 7 days a week throughout. Vendor to Confirm	
19.0.0	PROVE-OUT OF BHEL COMPONENTS	
19.0.1	a. The prove-out trials of the edge preparation shall be for the straight tubes for sizes given by BHEL during the technical discussions / at the time of releasing the Purchase Order. b. The production rate expected out of the machine, as detailed under the Specification Clause No. 3.0.0, will be the base. Vendor to confirm	
20.0.0	GUARANTEE TERMS	
20.0.1	Performance Guarantee for a minimum period of 24 months (for the machine in total and sub-systems or bought-out items in particular) from the date of acceptance of the machine. Vendor to confirm	
21.0.0	Vendor Shall Visit the Machine in the presence of area maintenance executive to study the layout and understand the requirement before quoting the offer. Otherwies offer liable for rejection. Date of Visit	
21.0.1	MAKE OF THE BOUGHT OUT ITEMS	
21.0.2	Makes of all bought out items shall be as follows unless otherwise specified elsewhere 1. BELTS (V - BELT, TIMING BELT& OTHER BELTS): FENNER/SKF/GATES/DUNLOP/GOODYEAR 2. POLYURETHENE TUBES & ONE TOUCH FITTINGS: FESTO/ SMC /PARKER 3. CHAINS, CONNECTING LINK&SPROCKETS: DIAMOND/ ROLON/ SKF/ TUSABAKI 4. PNEUMATIC VALVES & PUMPS, SYSTEM: FESTO/ SMC/PARKER 5. REDUCTION GEAR BOX: ELECON/BONFIGLIOLI/MAKISHINKO/SUMITOMO/SEW 6. GEARED MOTOR: BONFIGLIOLI / SEW /ELECON /MAKISHINKO/SUMITOMO 7. COOLANT PUMP: BE / SUGUNA / SEAPUMP / KSB / RAJAMONI 8. ALL COUPLINGS WITH GUARDS: SKF/FENNER/HYDAX 9. PILLOW BLOCKS, PLUMMER BLOCKS,PULLEYS,BEARINGS & LM GUIDES : THK/SKF/IKO/NTN/HIWIN 10. FASTNERS: UNBROKO/TVS/ OF HIGH TENSILE GRADE 10.8/12.9 11. LUBE SYSTEM: SKF/VOGEL/CENLUB Any other make shall be specified by the bidder and get approved by BHEL executives while quoting itself.	

BHARAT HEAVY ELECTRICALS LIMITED TIRUCHIRAPALLI
CAPITAL PURCHASE

Annexure-A

ACCEPTANCE OF COMMERCIAL TERMS AND CONDITIONS BY THE VENDORS.

(This should be essentially filled in and sent along with the techno-commercial offer without fail. If this check list is not filled and submitted along with techno-commercial offer (Part I) or if the vendor does not confirm acceptance to the terms and conditions proposed herein, BHEL reserves the right to reject such offers)

CHECK-LIST FOR VENDORS

SI No	DESCRIPTION
1.	<p>The Bidders shall submit their offer in TWO INNER ENVELOPES as indicated below which shall be sealed in one outer envelope.</p> <ul style="list-style-type: none">❖ Envelope I: This sealed envelope should contain all the copies of technical bid together with un-priced commercial bid. This envelope should be clearly marked "Part I - Technical and commercial bid", indicating Enquiry No., Due Date and Address & Reference of the Bidder.❖ Envelope II: This sealed envelope should contain price details. This envelope should be clearly marked "Part II - Price bid", indicating Enquiry No., Due Date and Address & Reference of the Bidder. This part should contain the schedule of price particulars and must be co-related to the technical details provided in Part I. <p>All the two envelopes (Part I&II) shall be put in one cover, duly sealed, super scribing as "Part I and Part II of Enquiry No., due date of opening" and the address and reference of the Bidder. The offer received without the above guidelines, will not be considered for opening.</p> <p>The above offer should reach this office on or before the due date by 14.00 Hrs (IST). Late offers will not be considered. Tender should not be addressed to any Individual's name but only by designation to:</p> <p style="text-align: center;">DGM / CAPITAL PURCHASE / MFG 24 BUILDING, 4TH FLOOR BHARAT HEAVY ELECTRICALS LIMITED HIGH PRESSURE BOILER PLANT TIRUCHIRAPALLI - 620 014 TAMIL NADU, INDIA</p> <p>Tenders should be free from CORRECTIONS AND ERASURES. Corrections if any, must be attested. All amounts shall be indicated both in words as well as in figures. In case of any difference between amount quoted in words and figures, amount quoted in words shall prevail.</p> <p>Offers should be in ENGLISH and accompanied by detailed technical literature, catalogue and detailed dimensional drawings in ENGLISH or otherwise, the offers will not be considered.</p>
2.	<p><u>OPENING OF TENDERS</u></p> <p>The Part I- Technical & commercial bid would be opened on the Tender opening date.</p> <p>Part-II, Price bid of technically suitable Bidders alone would be opened after complete evaluation of Part-I. Hence the Bidders are required to submit their best competitive price in the price bid in a sealed cover (Part-II). In case of necessity BHEL reserves the right to go for a reverse auction (RA) instead of opening the submitted sealed bid, which will be decided after technical evaluation. Information and general terms and conditions covering RA are given in this Annexure- I (Point no.16).</p> <p>Date and time of Price Bid (Part-II) opening / RA conducting date shall be intimated to the technically and commercially acceptable bidders only. Clarifications if any required by BHEL for Technical evaluation would be sought from bidders before opening of Part II - Price Bid/ RA</p>
3.	<p><u>TAXES AND DUTIES :</u></p> <p>All Taxes and Duties payable as extra to the quoted price should be specifically stated in offers along with CST & TIN No / Tariff No. etc., failing which the purchaser will not be liable for payment of such Taxes and Duties. Our TIN No. 33243560005, TNGST No. 3560005, CST. No. 239383 Dt. 11-06-1991 & BHEL ECC No. AAACB4146PXM012, Service Tax Reg No (STC)- AAACB4146PST006. Assessment circle Tiruverambur.</p> <p>Cenvat credit & VAT credit (for Indian Bidders only): If any Excise Duty is payable, the chapter head / sub-head reference and the rate of the duty should be quoted. If the tenderer is availing CENVAT credit for his input materials, the effect of proforma credit should be passed on to the purchaser</p> <p>Income Tax applicable Any service charges payable towards supervision of E&C, training, performance prove-out etc., will be released after deduction of Income Tax as per Indian Income Tax Act / as per the Govt. of India rules and TDS certificate will be issued by BHEL for such deductions. Applicable service tax on E&C charges will be payable extra. The liability of depositing the same to the Govt. will be of the supplier</p>

No row shall be left blank. Please indicate NA, in case the item is “not applicable”		Vendor's confirmation
	Validity: Validity of the offer should be 120 days from the date of tender opening.	
4.	<p>Release of Purchase Order:</p> <ul style="list-style-type: none"> ➤ Purchase Orders (separate for supply and I&C portion if applicable) will be released on the successful vendor (L1 vendor) ➤ Order shall be placed on single vendor on cumulative L1 basis. ➤ This tender is composite in nature and cannot be split-up to more than one vendor. Hence the entire work will be awarded to only lowest bidder of the tender. Work cannot be split-up and given to MSE vendor if they are L2 or above ranking in the tender. 	
5.	<p>Payment terms for Supply Portion 80% Payment after receipt and acceptance of material and balance 20% within 45-90 days after receipt, acceptance and commissioning of supply material against submission of 10%PBG for order value.</p> <p>Installation & Commissioning Portion (if applicable only): 100% of the Erection / commissioning charges (in case contract involves erection /commissioning) shall be paid only on completion of such erection / commissioning at BHEL</p> <p style="color: red;">Any deviation in the above payment term will attract loading as mentioned below. “Base rate of SBI (as applicable on the date of bid opening. Techno-commercial bid opening in case of two part bids) + 6% shall be considered for loading for the period of relaxation sought by bidders.</p>	
6.	<p>Performance Bank Guarantee (PBG): The Bidder, in the event of an order, should furnish a Bank Guarantee from an Indian Bank approved by BHEL, at no extra cost in a format prescribed by BHEL, along with the order, for an amount equivalent to 10% (Ten percent) of the value of the contract. The PBG shall be valid for a period of 18 months from the date of dispatch or 12 months from the date of receipt / acceptance / commissioning of the equipment at BHEL, Tiruchi whichever is more, with a claim period of two months.</p> <p>The Performance Bank Guarantee shall be obtained from any one of the following banks which is a member bank in our consortium of banks.</p> <p>LIST OF CONSORTIUM BANKS 1.DEUTSCHE BANK 2.HDFC BANK 3.ANZ GRINDLAYS BANK 4.CITI BANK 5.STANDARD CHARTERED BANK 6.BANK OF AMERICA 7.ABN AMRO BANK 8.IDBI LTD 9.ICICI BANK LTD 10.THE HONGKONG AND SHANGHAI BANKING .CORPORATION LTD.</p> <p>LIST OF NATIONALISED BANKS 1.ALLAHABAD BANK 2.ANDHRA BANK 3.BANK OF INDIA 4.BANK OF BARODA 5.BANK OF MAHARASTRA 6.BHARATH OVERSEAS BANK 7.CANARA BANK 8.CENTRAL BANK OF INDIA 9.CORPORATION BANK 10.DENA BANK 11.INDIAN BANK 12.INDIAN OVERSEAS BANK 13.OREINTAL BANK OF COMMERCE 14.PUNJAB NATIONAL BANK 15.PUNJAB & SIND BANK 16.STATE BANK OF INDIA 17.STATE BANK OF TRAVANCORE 18.STATE BANK OF MYSORE 19.STATE BANK OF BIKANER & JAIPUR 20.STATE BANK OF HYDERABAD 21.STATE BANK OF PATIALA 22.STATE BANK OF MAHARASTRA 23.STATE BANK OF SOURASTRA(SBI-13.09.08) 24.SYNDICATE BANK 25.UCO BANK 26.UNION BANK OF INDIA 27.UNITED BANK OF INDIA 28.VIJAYA BANK</p> <p><u>If PBG is issued by a Foreign counter part of the BHEL consortium Indian Bank, in case of claim against the PBG , it will be lodged in any one of the Indian counters of the Foreign Bank which issued the PBG.</u></p>	
7.	<p>Liquidated damages (LD): The delivery of the goods specified in the purchase order should be made within the time prescribed. LD for delay in ‘Supply’ and/or ‘I&C’ will be applicable to the delays attributed to vendor. LD will be considered separately for ‘Delivery’ and ‘I &C’. Where the seller supplies or dispatches the goods, beyond the delivery period Liquidated damages shall be applicable 0.5% of the total order value per week or part thereof subject to a maximum of 10% of the total order value.</p> <p>The rate of LD for delayed E&C shall be @ 0.5% per week of delay of total PO value (Supply + I &C) in I &C subject to a maximum of 10% of total PO value (Supply + I&C).</p> <p>For staggered delivery schedule, LD shall be 0.5% of the undelivered portion per week of the delay or part thereof subject to a maximum of 10% of the total order value.</p> <p>Any deviation from the above LD clause, loading will be applied to the extent to which it is not agreed by the bidder (at offered value).</p>	
8.	<p>Risk Purchase: Alternatively the purchaser at his option will be entitled to terminate the contract and to purchase elsewhere at the risk and cost of the seller either the whole of the goods or any part which the supplier has failed to deliver or dispatch within the time stipulated as aforesaid or if the same were not available from the best and the nearest available substitute. The supplier shall be liable for any loss which the Purchaser may sustain by reason of such risk purchases.</p>	
9.	<p>Delivery terms and evaluation process: Indian Bidders should submit their offer on FOR BHEL, Tiruchy basis. Packing & Forwarding and Freight & Insurance charges from works to BHEL, Tiruchy to be indicated separately if extra from basic rate. Applicable % of ED & Sales Tax , Commissioning Charges should be clearly indicated.</p> <p style="background-color: yellow;">Evaluation of offers shall be on the basis of delivered cost (Net cash outflow to BHEL)</p>	

10.	<p>Guarantee: Vendors shall provide a guarantee for a period of 12 months from the date of commissioning of the equipment or 18 months from date of supply, whichever is earlier. The date of B/L or AWB shall be taken as the date of supply. Also, a PBG has to be given which shall cover the guarantee period (with additional 2 months as claim period). Normally No deviation permitted and the deviated offers are liable for rejection.</p>	
11.	<p>Short shipment / Warranty replacement: In case of any short shipment in the main equipment / spares, Customs Duty levied on such supplies, shall be borne by the supplier. Any warranty replacement during the warranty period shall be on FOR, BHEL, Tiruchirappalli, basis.</p>	
12.	<p>Inspection & Testing: All goods shall be subject to inspection by BHEL or its authorized representatives at supplier's works or at BHEL stores or at any other place in India indicated by BHEL as the case may be. The supplier will not charge for the facilities provided for inspection of goods. In case of machine tools, the machine would be inspected and proved at supplier's works prior to dispatch however, final inspection and acceptance of the machine will be carried after installation of the machine at BHEL, Tiruchirappalli.</p>	
13.	<p>Test certificates / Operating and Maintenance manuals: The Bidders shall clearly mention in their offer, that Test Certificates and Operating Maintenance Manuals, etc., as called for in the Technical Specification, in the required number of copies will be provided at no extra cost.</p>	
14.	<p>Payment through Bank is not preferred. In case of Payment through Bank is opted by Supplier, BHEL prefers documents submission through bank with copy of LR and door delivery of Goods to Site/Stores with Consignee copy attached. In this case Loading will be 3% on the offered value. Offers of indigenous Suppliers with payment terms as LC/Advance Payment are liable for rejection.</p>	
15.	<p>BHEL will consider the ranking after the loading is applied as referred above wherever deviations are observed.</p>	
16.	<p>Reverse Auction (RA): BHEL reserves the right to conduct on-line internet Reverse Auction ie. ONLINE BIDDING (THROUGH A SERVICE PROVIDER) for finalizing the Tender. This decision will be communicated to the technically qualified vendors after technical evaluation. Details / General terms / guidelines for conduct of RA are shown below Vendors are requested to confirm their acceptance for BHEL proceeding with RA route for finalization of the enquiry.</p> <ol style="list-style-type: none"> 1. For the proposed reverse auction, technically and commercially acceptable bidders only shall be eligible to participate. 2. BHEL will engage the services of a service provider who will provide all necessary training and assistance before commencement of on line bidding on internet. 3. BHEL will inform the vendor in writing in case of reverse auction, the details of Service Provider to enable them to contact & get trained. 4. Business rules like event date, time, start price, bid decrement, extensions etc. also will be communicated through service provider for compliance. 5. Vendors have to fax the Compliance form in the prescribed format (provided by Service provider) before start of Reverse auction. Without this, the vendor will not be eligible to participate in the event. 6. BHEL will provide the calculation sheet (e.g., EXCEL sheet) which will help to arrive at "Total Cost to BHEL" like Packing & forwarding charges, Taxes and Duties, Freight charges, Insurance, Service Tax for Services and loading factors (for non-compliance to BHEL standard Commercial terms & conditions) for each of the vendor to enable them to fill-in the price and keep it ready for keying in during the Auction 7. Reverse auction will be conducted on scheduled date & time. 8. At the end of Reverse Auction event, the lowest bidder value will be known on the network. 9. The lowest bidder has to Fax/e-mail the duly signed Filled-in prescribed format as provided on case-to-case basis to BHEL through Service provider within 24 hours of Auction without fail. 10. Any variation between the on-line bid value and the signed document will be considered as sabotaging the tender process and will invite disqualification of vendor to conduct business with BHEL as per prevailing procedure. 11. In case BHEL decides not to go for Reverse Auction procedure for this tender enquiry, the Price Bids and price impacts, if any, already submitted and available with BHEL shall be opened as per BHEL's standard practice. 12. BHEL reserves the right to negotiate if need be, with the "L1" vendor of the Reverse Auction 13. <u>BHEL reserves the right not to consider offers from vendors not complying with the RA process for finalization of the enquiry.</u> 14. If the Bidder or any of his representatives are found to be involved in Price manipulation/ cartel formation of any kind, directly or indirectly by communicating with other bidders, action as per extant BHEL guidelines, shall be initiated by BHEL and the results of the RA scrapped/ aborted. <p>In case BHEL decides to go for reverse auction, the H1 bidder(s) (whose quote is highest in online sealed bid) may not be allowed to participate in further RA process.</p>	
17.	<p><u>Special Provisions for Micro and Small Enterprises (MSE)</u></p> <p>MSE suppliers can avail the intended benefits only if they submit along with offer, attested copies of either EM II (Entrepreneur Memorandum Part II) certificate having deemed validity (five years from the date of issue of acknowledgement in EM II) or valid NSIC certificate or EM II certificate along with attested copy of a CA certificate (Format enclosed as per Annexure - III) applicable for the relevant financial year (latest audited), certifying quantum of investment in plant and machinery within the permissible limit as per the act for relevant status (Micro or small) where the deemed validity of EM II is over. Date to be reckoned for determining the deemed validity will be the last date of technical bid submission. Offer/s received without these documents will lead to consideration of their offer at par with other bidders and MSE status of such suppliers shall be shifted to Non MSE supplier.</p>	

18.	<ul style="list-style-type: none"> ➤ Point to point confirmation for the Technical Specification enclosed to be provided. If there are any deviations, the same should be clearly specified. Offers received without confirmation to our specifications will be liable for rejection. If needed additional sheets shall be used. ➤ Equipment offered shall be "New". Re-built / Re-conditioned / Used equipment's will not be accepted. Incomplete offers will not be considered for further processing Fixed price: ➤ BHEL reserves its right to reject a tender due to unsatisfactory past performance in the execution of a contract at any of BHEL projects / units. ➤ BHEL shall be at liberty to reject or accept any tender, part or in full, at their own discretion and any such action is not liable for any question or claim against BHEL. ➤ All Equipment's / Services including concerned personnel for carrying out the erection and commissioning of the equipment shall be arranged by the vendor. If any Services are availed from BHEL, it is only on chargeable basis unless otherwise specified. ➤ The vendor shall provide necessary drawings, Test Certificates and Operating Maintenance Manuals etc., as called for in the Technical Specification, in the required number of copies at no extra cost ➤ The Supplier shall arrange for securely protecting and packing the stores to avoid loss or damages during transit. 		
19.	Company Details & Contact		
	Full Address of the company for future correspondence. (Copy of address proof & PAN card shall be attached along with Part-I)		
	Company Email ID:	Phone No.:	
	Fax No	PAN No	
	CST /TIN No	Service Tax No.	
	Name of the contact person:	Mobile No.:	
	e-mail ID		
20.	TO BE CONFIRMED BY VENDOR		
	Country of origin:		
	Station of dispatch/Port of Shipment		
	Delivery Terms (For destination or Ex-works)		
21.	Packing & Forwarding Charges, if any (in % or Lumpsum) ie. extra from basic rate		
	% of Excise Duty with cess		
	% of TAX (CST/VAT) (TNGST with FORM-17 or CST with C-FORM)		
	(If applicable only)		
	Installation & commissioning charge is inclusive (or) exclusive on basic rate		
	Service tax applicable extra or not		
	Freight & Transit Insurance charges (if any, in Lumpsum (or) percentage) from Dispatching station to BHEL Tiruchirappalli, (Note:If the delivery terms is Ex Works the materials has to be sent through BHEL approved carrier only, in this case the Freight & Insurance will be borne by BHEL)		
22.	Delivery from the date of Letter of Intent / Purchase Order. (This should be inclusive of Order acceptance, drawing approval and time period required for dispatch (B/L or AWB date) etc.,		
23.	Weight & Cubage of package: Approximate Net weight of the total consignment: Approximate Gross weight of the total consignment: Approximate volume of the total consignment:		
For any queries / clarifications the bidders may contact us through our FAX NO. +91 431 2520719 or through e-mail <pgavictor@bheltry.co.in>			

NOTE

- a) Your specific acceptance to our Payment terms, LD, Risk Purchase Clause & Submission of PBG for 10% of the order value are essential for consideration of your offer. Otherwise your offer is liable for rejection.
- b) No row shall be left blank. Please indicate NA, in case the item is "not applicable"

Declaration:-

I/We have gone through and understood the 'General guidelines & instructions to bidders for submitting offer' enclosed as a part of the Tender and confirm that our offer has been made in line with the same.

Name:

Signature with date:

(AFFIX OFFICIAL SEAL HERE)

Designation:

(PLEASE AFFIX YOUR SIGNATURE WITH SEAL ON EACH PAGE)

MODEL PRICE BID FORMAT FOR INDIAN BIDDERS

Enquiry No. & Date:

Bidder's Offer No. & Date:

Sl No	Description of item	Unit (SET /No)	QTY	Rate /Qty in Rs. (excluding of all taxes)	VAT/CST in % (TNGST with FORM-17 or CST with C-FORM)	ED in %	Service Tax in %	Total Value in Rs. (inclusive of all taxes)
	Supply portion							
	Service portion- if exclusive from basic price (available in scope only)							
	Packing & Forwarding charges (if any) in percentage (or) Lumpsum							
	FOR Dispatching station value in Rs.							
	Percentage of Freight & transit insurance charges, if any (Lumpsum or %) Freight & Insurance charges from Dispatching station to BHEL, Tiruchirappalli (Note:If the delivery terms is Ex Works the materials has to be sent through BHEL approved carrier only, in this case the freight & Insurane will be borne by BHEL)							
	Approximate Net weight of the total consignment							
	Approximate Gross weight of the total consignment							
	Approximate Dimensions of the Consignment							

Signature & Seal of Vendor

The price bid should be submitted only as per the above format. No row shall be left blank. Please indicate NA, in case the item is "not applicable"

Certificate by Chartered Accountant on letter head

This is to Certify that M/S
(hereinafter referred to as 'company') having its registered office at
is registered under MSMED Act 2006, (Entrepreneur
Memorandum No (Part-II) dtd:.....,
Category: (Micro/Small)). (Copy enclosed).

Further verified from the Books of Accounts that the investment of the company as on
date..... as per MSMED Act 2006 is as follows:

1. **For Manufacturing Enterprises:** Investment in plant and machinery (i.e. original cost
excluding land and building and the items specified by the Ministry of Small Scale Industries vide its
notification No.S.O.1722(E) dated October 5, 2006 :
Rs.....Lacs
2. **For Service Enterprises:** Investment in equipment (original cost excluding land and building and
furniture, fittings and other items not directly related to the service rendered or as may be notified under the MSMED
Act, 2006:
Rs.....Lacs

The above investment of Rs.....Lacs is within permissible limit of
Rs.....Lacs forMicro / Small (~~Strike off which is not applicable~~)
Category under MSMED Act 2006.

Date:

(Signature)

Name -

Membership number -

Seal of Chartered Accountant