



An ISO 9001
Company

Bharat Heavy Electricals Limited

(High Pressure Boiler Plant)

Tiruchirappalli – 620014, TAMIL NADU, INDIA

MATERIALS MANAGEMENT

TITLE: Dismantling, Re-erection, Retrofitting, Commissioning and prove out of CROSS Deep hole drilling machine	Phone: +91 431 2577645/2577331 Fax : +91 431 252 07 19 Email : rba@bheltry.co.in srchandran@bheltry.co.in Web : www.bhel.com , http://tenders.gov.in
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	Reference Number: Enquiry 2681000067	Enquiry Date: 15.11.10	Due date for submission of quotation: 30.11.10
You are requested to quote the Enquiry number date and due date in all your correspondences. This is only a request for quotation and not an order			

BHEL requires suppliers for Dismantling, Re-election, Retrofitting, Commissioning and prove out of CROSS Deep hole drilling machine details as per the technical specification (Annexure A & B) .

BHEL commercial terms & conditions with Technical specifications 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) under enquiry reference "2681000067"	
Tenders should reach us before 14:00 hours on the due date Technical bid 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 Manager / Capital Purchase/ Manufacturing



ENQUIRY
(INDIGENOUS)

BHARAT HEAVY ELECTRICALS LIMITED

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

PHONE :2577645
GRAMS : BHARATELEC
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Web:

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429-002/A

Vendor Code :	Enquiry No	Enquiry Date	Due Date for Quotation
Vendor Name :	2681000067 - 79	15.11.2010	30.11.2010
Please quote Enquiry No, Date and due date in all correspondences. This is only a request for quotation and not an order			

Item	Description	Unit	Quantity	Delivery Quantity	Schedule Date
10	Dismantling, Re-erection, Retrofitting, commissioning and Prove out of CROSS Deep hole drilling machine. Scope of work: Dismantling and Re-erection, Retrofitting, commissioning and Prove out. Detailed specification as per Annexure-A & Annexure-B RETROFITTING OF CNC CROSS DRILLING M/C.	NO	1.000	1.00	30.03.11

General Note:

- 1.,PLEASE SUBMIT YOUR DETAILED OFFER IN THREE PART BID SYSTEM ie.PART-1, EMD AMOUNT. ONE LAKH FIFTY THOUSAND ONLY IN ONE SEPARATE SEALED COVER.PART-II, TECHNICAL AND COMMERCIAL (UNPRICED BID) IN ANOTHER SEALED COVER.PART-III,PRICED OFFER IN ANOTHER SEPARATE SEALED COVER. NON SUBMISSION OF EMD AMOUNT WILL LEAD TO REJECTION OF SUBMITTED OFFER..
2. DETAILED INSTRUCTIONS, CONDITIONS OF THE CONTRACT AND COMMERCIAL TERMS & CONDITIONS ARE PROVIDED IN ANNEXURE-I. THE ANNEXURES-II & ANNEXURE- III(WITHOUT PRICE) SHOULD BE FILLED & SUBMITTED ALONG WITH PART-II ie.TECHNICAL BID,ELSE YOUR OFFER IS LIABLE FOR REJECTION.
- 3.PAYMENT TERMS WILL BE STRICLY FOLLOWED AS PER OUR PAYMENT TERMS INDICATED IN THE COMMERCIAL TERMS AND CONDITIONS.OTHER PAYMENT TERMS ARE NOT ACCEPTABLE.
4. OFFERS a) DEMANDING ADVANCE PAYMENT, b) DEMANDING EXEMPTION OF EMD AMOUNT (Rs.1,50,000/-) & PBG c)NON-ACCEPTANCE FOR PARTICIPATING IN REVERSE AUCTION d)WITH OFFER VALIDITY OF LESS THAN 4 MONTHS WILL LEAD TO REJECTION OF SUBMITTED OFFER.
- 5.ANY CLARIFICATIONS OR PRE-BID MEETING MAY BE SOUGHT BY BIDDER FROM THE UNDERSIGNED WITH DUE WRITTEN REQUESTS AT LEAST SEVEN DAYS PRIOR TO TENDER DUE DATE.
- 6.IF THE DUE DATE OF TENDER OPENING HAPPENS TO BE A HOLIDAY/STRIKE, THOSE TENDERS WILL BE OPENED ON NEXT WORKING DAYS.

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.

VIGILANCE AWARENESS WEEK
25TH OCT-1ST NOV 2010
IF YOU HAVE ANY COMPLAINT /GRIEVANCES
YOU MAY CONTACT GM/VIGILANCE
PHONE:0431-2577862 2520334

Yours faithfully,
For BHARAT HEAVY ELECTRICALS LIMITED

R. BASHEER AHAMED
General Manager



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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PHONE :2577645
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2681000067 / 15.11.2010

GENERAL NOTE FOR THE ENQ ON REVERSE AUCTION

1. 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 ANNEXURE-I.

2. REVERSE AUCTION IS DONE THROUGH INTERNET/E-MAIL . HENCE VENDORS SHALL MAKE THEMSELVES EQUIPPED WITH EMAIL , FAX AND INTERNET FACILITIES.

3. IN CASE OF GOING FOR REVERSE AUCTION VENDORS WILL BE SUITABLY INFORMED ABOUT THE WORKING PROCEDURES OF REVERSE AUCTION AND BHEL WILL PROVIDE ALL THE RELEVANT DETAILS TO ENABLE THE VENDOR TO PARTICIPATE.

List of Attachments:

1. Annexure-A Scope of Supply
2. Annexure-B Qualifying Criteria
1. Annexure-1 Commercial terms and conditions-three pages
2. Annexure-II Commercial confirmations-Two pages
3. Annexure-III Model Price bid format
4. Annexure-IV EMD/SD Details-one Page

Enclosures:

"LD clause has to be confirmed without fail."

"Payment to vendors will be made only thro E-Payment mode"

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 tenders 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.

VIGILANCE AWARENESS WEEK

25TH OCT-1ST NOV 2010

IF YOU HAVE ANY COMPLAINT /GRIEVANCES

YOU MAY CONTACT GM/VIGILANCE

PHONE-0431-2577982,2520334

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

R. BASHEER AHAMED
MANAGER / PURCHASING
FOSSIL BOILERS
Bharat Heavy Electricals Ltd.,
Thiruchirappalli - 620 014.

Dismantling, Re-erection, Retrofitting, commissioning and Prove out of CROSS Deep hole drilling machine.		
Sl.No	Description	Vendor acceptance
1	Scope of work: Dismantling and Re-erection, Retrofitting, commissioning and Prove out. Detailed specification is as follows.	
1.1	Machine Details: Supplier : AVEY/CROSS USA Drilling capacity : 32 mm No. of Spindles : 3 Depth of drilling (max) : 1000 mm Horizontal column travel(x-axis) : 5000 mm Vertical head travel(y-axis) : 4000 mm Spindle feed slide travel (Z-axis): 1400 mm Coolant system(for each spindle) : 10 cub.M/hr Floor Space : 12.5x17 m Spindle Power : 15 hp each	
2.0	Major sub-assemblies of the machine Machine configuration is equivalent to heavy duty floor borer and Machine lay out as per drawings 0M-04D-03-0501, 0502 & 0503, enclosed for reference. Machine consists of the following assemblies:	
2.1	Machine bed with X- axis base and drive motors, gear box, rack & pinion drive, telescopic cover, etc	
2.2	Column with Y axis ball screw assembly with motor, gear box and counter weight.	
2.3	Saddle with Z- axis ball screw & motor assembly.	
2.4	CNC system, Electrical control panels, field elements, etc.	
2.5	Work table	
2.6	Spindle assembly and accessories (Motors, Chip box, Pitch plate and nose assembly etc.)	
2.7	Cable drag chain assembly with hydraulic hoses and electrical cables.	
2.8	Chip conveyor assembly about 9 m long	
2.9	Primary tank, secondary tank and pump accessories for cutting oil system (capacity 8000 litres).	
2.1	Hydraulic power pack with 100 liters of oil	
2.11	Oil Chiller assembly.	
3.0	Scope of work for dismantling and re-erection. Machine shifting work involves the following activities:	
3.1	The vendor shall Carry out geometrical accuracy test and laser calibration test before dismantling to ascertain the existing accuracy level and shall record in the presence of BHEL engineers and ensure the same or improved accuracy after erection and retrofit. Reports are to be submitted.	

Dismantling, Re-erection, Retrofitting, commissioning and Prove out of CROSS Deep hole drilling machine.		
Sl.No	Description	Vendor acceptance
3.2	Dismantle the machine along with all accessories from the existing location - Bldg.77.	
3.3	Clean all the components and sub-assemblies thoroughly.	
3.4	Shift /transport and re-erect the dismantled machine sub-assemblies at the new location - Building 109 New ATP shop.	
3.5	Align the spindle assembly, Pitch plate and nose assembly for the required pitch.	
3.6	Install all the accessories like hydraulic system, lubrication system, cutting oil system, filtration and oil chilling system, etc. according to the new location and lay out, any pipe line and structural work required are to be carried out. The materials for the same will be provided by BHEL free of cost.	
3.7.0	The Vendor has to adhere to the following during execution:-	
3.7.1	During erection of machine if any damaged/worn-out items are found, they need to be replaced in consultation with BHEL engineer. The required parts will be given by BHEL free of cost.	
3.7.2	For dismantling and re-erection of machine, crane available in the shop including slings will be given by BHEL free of cost.	
3.7.3	For transportation of materials to the new location, BHEL will arrange trailer free of cost. However, the man power required for slinging, loading and un-loading will be the scope of the vendor.	
3.7.4	Welding machine & gas cutting set, if required will be provided by BHEL free of cost.	
3.7.5	Consumables like cotton waste, kerosene, electrode, cutting gas, etc will be provided by BHEL free of cost.	
3.7.6	Straight edge, Spirit levels, Dial indicators etc. shall be brought by the vendor on returnable basis.	
3.7.7	All the scrap / waste generated during above dismantling, shifting and erection work in both the old and new locations are to be moved to the designated waste bins and the area to be cleaned properly by the vendor.	
3.7.8	Vendor has to bring skilled man power and helpers so as to complete the job within stipulated period. The numbers of employees who may be deployed for carrying out the work shall be indicated in the	
3.8.0	Note:- On receipt of order the vendor shall mobilise the team for the geometric accuracy test, laser test, dismantling & re-erection of the machine in a week. This is to enable maintaining the installation period and to take up the retrofitting of the machine immediately on receipt of the retrofitting materials.	

Dismantling, Re-erection, Retrofitting, commissioning and Prove out of CROSS Deep hole drilling machine.		
Sl.No	Description	Vendor acceptance
4.0	Scope of work for Supply, Retrofitting, commissioning and Prove out:	
4.1	The existing CNC CROSS Deep hole Drilling machine is having GE FANUC 11M CNC system. X - axis is provided with AC Servo motors, AC Servo drives (Master - Slave arrangement), Y & Z - axes are provided with DC servomotors of INLAND make with KIRLOSKAR make DC Servo drives. The 3 spindles are provided with DC motors of GE make with DC drives. The work involves supply, retrofitting the existing machine with AC servomotors and AC digital drives for the 3 axes, with AC motor & AC drive for the 3 spindles and a suitable CNC system for the 3 axes & 3 spindles. The instrument rack / pinion and encoder feedback elements for X and Y axes are to be replaced with electronic linear scale with associated cabling, wiring, etc.	
4.2.0	TECHNICAL SPECIFICATIONS OF THE EXISTING CNC SYSTEM, DRIVES AND MOTORS:	
4.2.1	SYSTEM: GE FANUC - 11M	
4.2.2	MOTORS:	
4.2.2.1	SPINDLE - 1 DRIVE: General Electric make Adjustable Speed Drive. MOTOR: GE make Kinematic DC Motor, 15 HP, 1150/3450 RPM, 240 Volts, Armature Current: 54.7A, Field Current: 4.24/1.2A / 120 Volts, Tacho: 45 V (AC) / 1000 RPM, TYPE: CD288AT, Model: 5CD174TA046A802	
4.2.2.2	SPINDLE - 2 DRIVE: ABB make DC drive Type: DCS 500 (DCS 5020140-51-210) MOTOR: GE make Kinematic DC Motor, 15 HP, 1150/3450 RPM, 240 Volts, Armature Current: 54.7A, Field Current: 4.24/1.2A / 120 Volts, Tacho: 45 Volt (AC)/1000 RPM, TYPE: CD288AT, Model: 5CD174TA046A802	
4.2.2.3	SPINDLE - 3 DRIVE: ABB make DC drive Type: DCS 502 (502-0140-55) MOTOR: GE make Kinematic DC Motor, 15 HP, 1150/3450 RPM, 240 Volts, Armature Current: 54.7A, Field Current: 4.24/1.2A / 120 Volts, Tacho: 45 Volt (AC)/1000 RPM, TYPE: CD288AT, Model: 5CD174TA046A802	
4.2.2.4	X - AXIS DRIVE: REXROTH INDRAMAT make AC Servo drive # 2 Nos. Type : DKC01.3-100-7-FW, DKC11.3-100-7-FW (Master & Slave arrangement) MOTOR: REXROTH INDRAMAT make Permanent magnet AC Servo Motor, 28NM, 21.9A, INS.CLASS.F, RPM 4500 MAX, Type: MHD 112B-024-NPO-BN	

Dismantling, Re-erection, Retrofitting, commissioning and Prove out of CROSS Deep hole drilling machine.		
Sl.No	Description	Vendor acceptance
4.2.2.5	Y - AXIS DRIVE - KIRLOSKAR make CRUISER MK II PWM Servo Amplifier Module, Type: CCA-MK II, RATING-50 A MOTOR: INLAND make DC Servo Motor, 1400 RPM (max), Torque: 27.1 (Cont.) lb ft, 135.7 lb ft (peak), Current: 26.6A (Cont.), 135A (peak), DC Tacho: 19 Volts/1000 RPM, Type: TT-5302-100-B	
4.2.2.6	Z - AXIS DRIVE - KIRLOSKAR make CRUISER MK II PWM Servo Amplifier Module, Type: CCA-MK II, RATING-50 A MOTOR: INLAND make DC Servo Motor, 1200 RPM (max), Torque: 30 lb ft, 160 lb ft (peak), Current: 36.5A (Cont.), 200A (peak), DC Tacho: 18.9 volts/1000 RPM, Type: TT-5302-100-A	
4.2.2.7	COOLANT MOTOR - 1 No. (at filter unit) 28HP, 1460 RPM, 34.2A Max.	
4.2.2.8	HYDRAULIC PUMP MOTOR 7.5HP, 1450 RPM, 11.4 Amps.	
4.2.2.9	MOTOR FOR HIGH PRESSURE COOLANT PUMP - 3 Nos. (FOR THE 3 SPINDLES), 18.5 kW, 33.0 Amps, 1465 RPM.	
4.2.2.10	MOTOR FOR SUMP PUMP 10HP, 4.8AMPS, 2850 RPM.	
4.2.2.11	MOTOR FOR PIT SUMP PUMP 3HP, 2850 RPM.	
4.2.2.12	MOTOR FOR CHIP CONVEYOR 0.5HP, 1460 RPM, 0.73 AMPS	
4.2.2.13	BLOWER MOTOR FOR SPINDLE 3HP, 3460 RPM, 7.8/3.9 AMPS.	
4.2.2.14	MOTOR FOR MAGNETIC FILTER 0.37KW, 1380 RPM.	
4.2.3.0	FEED BACK ELEMENTS:	
4.2.3.1	X - axis Incremental Rotary Encoder along with Rack & Pinion arrangement, Type: A860-0301-T001, 2000 P, Make: FANUC	
4.2.3.2	Y - axis Incremental Rotary Encoder along with Rack & Pinion arrangement, Type: A860-0301-T001, 2000 P, Make: FANUC	
4.2.3.3	Z - axis Incremental Rotary Encoder, Type: A860-0301-T001, 2000P, Make: FANUC	
4.2.3.4	Spindle Incremental Rotary Encoder - 3 Nos. (1 No. for each Spindle) ROD 320, 2500 PPR, Make: HEIDENHAIN	
4.2.3.5	Load Cell - 3 Nos. (1 for each spindle) Make: DATA Instruments U.S.A., Model: JP 2000 Capacity: 0 - 2K LBS	

Dismantling, Re-erection, Retrofitting, commissioning and Prove out of CROSS Deep hole drilling machine.		
Sl.No	Description	Vendor acceptance
4.2.3.6	Signal Conditioner (Amplifier) - 3 Nos.(1 for each Load cell) Make: TYCO Instruments Division, U.S.A., Model: 101	
4.2.3.7	Metering Unit - 3 Nos. (1 for each Load cell) Make: General Electric Full Scale Deflection: 5V DC, 0 To 2000 Pounds / 0 To 900 Kg	
4.2.3.8	Metering Relay control unit - 3 Nos.(1 for each Load cell) MAKE:GE, Indent No: D1255K16, Power supply: 120 V, 6.8 VA, Relay contact: 5A, 120V AC	
5.0	SCOPE OF RETROFIT INVOLVING MATERIAL SUPPLY:	
5.1	Replacing the existing GE FANUC 11M system with compatible CNC system of Siemens/Fanuc make only. The CNC system offered shall be of latest one with availability of spares & service support in India.	
5.2	Replacing the existing AC servo motors & AC drives (Analog) in X axis (2 nos.) with AC servo motors & AC digital servo drives.	
5.3	Replacing the DC Servo motor & DC servo drive in Y, Z - axis with new AC servo motor & AC digital Servo drive. The new AC Servo motor offered for Y - axis shall have in-built brake.	
5.4	Replacing the D.C. Spindle motors (3 Nos.) & D.C. drives (3 Nos.) with new AC Spindle motors & AC drives.	
5.5	Replacing the existing Load cells - 3 Nos. & Analog Thrust meters - 3 Nos. with new Load cells & Digital Thrust meters and interfacing the same with the new CNC system. The new Thrust meters offered shall have the following features: settable thrust, Over thrust trip, Reset facility.	
5.6	A Suitable capacity SMPS power supply unit, Line Filter & Choke for the system & drives.	
5.7	A Suitable capacity Isolation Transformer & Servo controlled voltage stabilizer for the complete machine.	
5.8	Replacing the existing Rack, Pinion & rotary encoder arrangement in X & Y axes with Linear scales. The effective travelling distance of X and Y axes are as follows: X - axis: 5000mm, Y - axis: 4000mm.	
5.9	Replacing the existing external Rotary encoders in the three spindle motors & Z - axis motor with new Rotary encoders. For each spindle, speed indicating meters (analog/digital type) shall be provided. Also for each spindle, the current drawn by the respective Spindle motor shall be indicated through an Ammeter (analog/digital type).	

Dismantling, Re-erection, Retrofitting, commissioning and Prove out of CROSS Deep hole drilling machine.		
Sl.No	Description	Vendor acceptance
5.10	Necessary mounting arrangements for fixing the Linear scales in place of the existing Rack & Pinion arrangement for X, Y axes. Necessary mounting & coupling arrangement for fixing the external Rotary encoders for Z axes and for fixing the X,Y,Z axes Servo motors & the three spindle motors.	
5.11	Replacing the existing switchgears in the control panel with a new one.	
5.12	Replacing the existing field elements like Pressure switches (11 Nos.), limit switches, etc., with a new one. The existing solenoid valves shall be retained.	
5.13	The existing Power, control & feedback cables are to be replaced with a new one. The power & control cables shall be of flexible	
5.14	Conduits & cable trays required for complete panel & machine wiring. All cables moving with traversing axes should be installed in Caterpillar/ Drag chain.	
5.15	Machine lamp with suitable fittings.	
5.16	Floor mounting type electrical control panel of Rittal make of suitable size to accommodate the proposed AC drives, other control elements & switchgears. The inside of the panel shall have CFL fittings for illumination, and 230V, 5A power socket.	
5.17	Air cooler of suitable rating for the Main control panel shall be to maintain the temperature at 22 deg C.	
5.18	A remote pendent / HHU (Hand held unit) at Operator platform. In the remote pendent/HHU the following features are to be provided: X,Y,Z axis position display, MPG Unit, Lamp indication for CNC Alarm, Z-axis chip box parting, Z-axis chip box closing, chip box advanced, drill bushings advanced, chip box returned, drill bushings returned, Switch for selecting advance chip box, advance drill bushings, return chip box, return drill bushings, single block On/Off, Block delete, Option stop, Dry run, axis inhibit, Block restart, auto, manual, home, tool datum, cycle start, cycle stop, X,Y,Z - axis selector switch, rapid, increment, decrement, feed rate override selector switch.	
5.19	A UPS of capacity to give a minimum back up of 15 minutes for the CNC system, in case of sudden power failure to be provided.	
5.20	A Machine Operator Panel (MOP), which houses the CNC Display and Programming Unit & Functional keys, to be provided near the Main control panel. In the MOP, the following features are to be provided: Machine Control On/Off, Alphanumeric keys for programming, Single block On/Off, Block delete, Option stop, Axis inhibit, Reset Tool count, Key for locking 'editing of part program', remote, edit, MDI, cycle start, Cycle stop, Emergency stop, Emergency	

Dismantling, Re-erection, Retrofitting, commissioning and Prove out of CROSS Deep hole drilling machine.		
Sl.No	Description	Vendor acceptance
5.21	For online troubleshooting, a portable Communication unit along with required communication cables for communicating with the offered CNC/PLC shall be supplied . The portable communication unit shall be loaded with required communication software and shall have the following features: USB port, PCMCIA port, RS 232 communication port, 320 GB hard disk, 4 GB RAM, INTEL Processor, DVD Read/Writer, Ethernet port, TFT display of 14".	
5.22	Required mounting frames, couplings, transmission elements like timing belt, pulley, etc. for installation / interfacing the new motors, feedback elements with the existing mechanical systems.	
5.23	Any other element not specifically mentioned but required to complete the retrofit and commission the system.	
6.0	SCOPE OF RETROFIT INVOLVING INSTALLATION & INTERFACING	
6.1	Fixing the newly supplied components, drives, field elements and interfacing/wiring them with machine/panel.	
6.2	Proving out the performance of the machine after assembling the machine with the new drives & new CNC system.	
6.3	Commissioning the newly supplied Load cells & Thrust meters and proving out their performance with the new system.	
6.4	In X - axis, presently the two AC motors & two AC drives are used as Master - Slave to minimize the error due to backlash. The same Master - Slave arrangement to be used & established by using the new Digital drives & Servo motors.	
6.5	Laser calibration before retrofitting the machine to find out the accuracy & repeatability and proving out the same after retrofitting through laser calibration. (Ref. Std: VDI/DGO-3441 shall be followed)	
6.6	Wherever required, earthing of the newly installed components to be provided.	
7.0	Vendor has to adhere to the following for Retrofitting:-	
7.1	The system should be suitable for 415V, +/- 10%, 3 phase, 3 wire system (without neutral) and the electrical control panel should be neatly wired with proper ferrule numbering.	
7.2	The servomotors, servo drives & CNC system shall be of SIEMENS, FANUC make only. The Spindle motors & drives shall be of SIEMENS / FANUC / ABB / REXROTH INDRAMAT make.	
7.3	The Linear scale shall be of HEIDENHAIN make and the rotary encoders shall be of SIEMENS / FANUC / HEIDENHAIN make.	
7.4	All the new motors shall have built-in encoders.	

Dismantling, Re-erection, Retrofitting, commissioning and Prove out of CROSS Deep hole drilling machine.		
Sl.No	Description	Vendor acceptance
7.5	Other than the axes motors & Spindle motors, all other motors in the existing system shall be retained. The supplier to consider these motors while designing the Electrical system & to provide the necessary switchgears.	
7.6	All electrical control panels, cabinets should be dust & vermin proof.	
7.7	The control voltage used in the system shall be 24V DC, except for solenoid valves, which uses 110V AC.	
7.8	The electrical components in the control panel & cabinets shall be mounted on DIN rails.	
7.9	All electrical switchgears like contactors, relays, OLR, limit switches, push buttons etc. shall be of Siemens / L&T / Telemecanique make.	
7.10	Leaflets providing technical details of the system & its features are to be submitted along with the offer for technical assessment.	
7.11	For the successful bidder, the machine's existing PLC logic and electrical circuit diagram shall be given by BHEL for writing the logic for the new CNC system. Also the machine's mechanical drawings will be given for dismantling & assembling the various components.	
7.12	The vendor shall visit & inspect the machine before giving their offer.	
7.13	The successful bidder shall submit the drawings for approval before procurement / manufacturing.	
7.14	The supplier shall offer the materials for pre-dispatch inspection at supplier's work.	
7.15	The retrofitting work is to be done at BHEL - Trichy only. The vendor shall carry out geometrical accuracy test before retrofitting to ascertain the existing accuracy level and record the same in the presence of BHEL engineers. The vendor shall ensure the same accuracy or improved accuracy after erection and retrofit. The vendor shall submit the accuracy test reports.	
7.16.0	Three hard copies and one soft copy (in CD) of O&M Manuals giving the following details are to be provided along with the supply of components:	
7.16.1	Electrical Circuit diagrams & PLC ladder logic.	
7.16.2	Catalogues of all Bought out items.	
7.16.3	Mechanical drawings involved in the above retrofitting.	
7.16.4	CNC System manuals for commissioning, operation, programming and maintenance.	
7.16.5	Detailed write up giving procedure for Uploading / downloading NC, PLC data to communication unit.	
7.17	After commissioning, the backup of NC & PLC data shall be given in a suitable storage medium (like CD, Flash card).	

Dismantling, Re-erection, Retrofitting, commissioning and Prove out of CROSS Deep hole drilling machine.		
Sl.No	Description	Vendor acceptance
7.18	The supplier shall give training for 2 BHEL Maintenance engineers & 2 Operators at system supplier's work for a minimum period of five days for each on programming, operation & maintenance. The Boarding, lodging and travelling expenses shall be borne by BHEL.	
7.19	The laser calibration report(Repeatability, Position accuracy, pitch, yaw and roll) before and after retrofitting is to be submitted.	
7.20	The supplier should bring the required tools and accessories for the above said retrofitting work.	
7.21	General industrial safety norms / BHEL industrial safety norms shall be adhered by the vendor and their employees such as usage of personal protective equipments, safety belts, helmets, shoes etc. All work permits like permit to work at height to be obtained, where ever it is necessary.	
7.22	The Bidder shall visit the shop & the machine and get acquainted about the machine and to assess the quantum of work with BHEL engineers before giving the offer and should declare the acquaintance of the job in the bid.	
8.0	Different stages in work execution:	
8.1	Completion of machine dismantling.	
8.2	Shifting & completion of first stage of machine re-erection comprising sub-assemblies not involved in retrofit.	
8.3	Supply of subassemblies and components identified for retrofit.	
8.4	Completion of installation of retrofit items and balance portion of machine erection.	
8.5	machine commissioning and performance prove out	
9.0	Specific condition to be adhered by the vendor:	
9.1	No deviation from the specification.	
9.2	No deviation of the makes of the components specified.	
9.3	Adherence to the repeatability, position accuracy and process capability of the existing machine after retrofitting.	
9.4	Strict adherence to the time schedule.	
9.5	No deviation from the configuration and technical parameters.	
9.6	Bidder shall indicate the quantum of manpower to be deployed.	
9.7	Bidder shall declare acquaintance of the machine at the site in the offer.	

Qualification criteria for ENQ.NO.2681000067 DT:15.11.10		
S.No	Description	Vendor to specify details
1	Only those vendors, who have experience and carried out the following activities are eligible to participate in the tender:	
1.1	Supplied and commissioned new as OEM or undertaken retrofitting / up-gradation work of CNC machines with multi axis & spindle involving CNC system, axis & spindle motor and drive for at least three machines in the past ten years and such machine should be working satisfactorily for a minimum period of one year after completion of commissioning, up-gradation / retrofitting of the system, as on the date of opening of this tender.	
1.2	Erection and commissioning of similar capacity CNC machines for at least two machines in the past ten years and such machine should be working satisfactorily for a minimum period of one year after commissioning.	
2.0	The vendor should submit following details which are necessary for qualifying their offer.	
2.1	Name and postal address of the customer or company where similar up-gradation /retrofitting /erection & commissioning has been done.	
2.2	Name and designation of the contact person of the customer.	
2.3	Phone, FAX no and email address of the contact person of the customer.	
2.4	Month and year of up-gradation / retrofitting, / erection & commissioning.	
2.5	Details of CNC system, servo and spindle motors and drives retrofitted.	
2.6	Along with Technical offer, the Vendor should submit one performance certificate from the customer for the satisfactory performance of the CNC system, drive and motors supplied to them.	
2.7	BHEL reserves the right to verify the information provided by vendor. In case the information provided by vendor is found to be false / incorrect, the offer shall be rejected.	
2.8	The vendor should produce solvency certificate from a scheduled bank for a value of Rs.50,00,000/-	

CAPITAL PURCHASE
COMMERCIAL TERMS AND CONDITIONS

1.0 QUOTATIONS

The Bidders shall submit the offer in **THREE INNER ENVELOPES** as indicated below which shall be sealed in one outer envelope.

Envelope I : This sealed envelope should contain the required EMD amount of **Rs.1,50,000/-**

Envelope II : This sealed envelope should contain all the copies of technical bid together with un-priced commercial bid. This envelope should be clearly marked **"Part II - Technical and commercial bid"**, indicating Enquiry No., Due Date and Address & Reference of the Bidder.

Envelope III : This sealed envelope should contain **price details**. This envelope should be clearly marked **"Part III - Price bid"**, indicating Enquiry No., Due Date and Address & Reference of the Bidder.

All the three envelopes (Part I,II & III) shall be put in one cover, duly sealed, super scribing as Part I ,Part II and Part III of Enquiry No., due date of opening and the address and reference of the Bidder.

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:

MANAGER / CAPITAL PURCHASE / MFG
BHARAT HEAVY ELECTRICALS LIMITED
HIGH PRESSURE BOILER PLANT
TIRUCHIRAPALLI - 620 014
TAMIL NADU, INDIA

Tenders should be free from **CORRECTION AND ERASURES**, Corrections if any, must be attested. All amount shall be indicated both in words as well as in figures. Where there is difference between amount quoted in words and figures, amount quoted in words shall prevail.

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.

2.0 PART I (TECHNICAL & COMMERCIAL BID)**2.1 Technical**

This part shall include / indicate the following :

- 2.1.1. Offer should contain complete scope of supply with all technical details, specifications, delivery and other commercial terms and conditions.
- 2.1.2. Point by point confirmation for the Technical Specification enclosed to be provided. if there are any deviation, the same should be clearly specified. Offers received without confirmation to our specification will be liable for rejection.
- 2.1.3. List of customers to whom same or similar equipment have been supplied along with performance certificates to be enclosed.
- 2.1.4. Relevant catalogues to be attached
- 2.1.5. List of spares parts (with part numbers) for two years operation and maintenance should be attached.
- 2.1.6. Information on shipping weight and cubage (length, width & height) to be provided.
- 2.1.7. Incase of foreign bidder offer, the Principal's technical offer should be enclosed.

2.2 Commercial

This part shall include / indicate the following :

- 2.2.1. Station of dispatch/Port Of Shipment
- 2.2.2. Terms of payment
- 2.2.3. Taxes & duties applicable.
- 2.2.4. Delivery Schedule
- 2.2.5. Offer validity
- 2.2.6. Country of origin
- 2.2.7. Percentage of agency commission if any along with a copy of Agency agreement.
- 2.2.8. A copy of "Un-Priced Part III" i.e., a copy of the Price Bid **without the price details** to be enclosed.

3.0 PART III (PRICE- BID)

This part should contain the schedule of price particulars and to be co-related to the technical details provided in Part II.

4.0 OPENING OF TENDERS

The part I – EMD would be opened on the tender opening date and if EMD is not furnished the offer will be duly rejected.

The Part II- Technical & commercial bid would be opened on the Tender opening date.

The Part III - Price bid of Technically suitable Bidders alone would be opened. The Technically suitable Bidders would be informed about the tender opening date.

Clarifications if any required by BHEL for Technical evaluation would be sought from Bidders before opening of Part III - price bid.

5.0 **GENERAL**

5.1. Incomplete offers will not be considered.

5.2. **Fixed price:** Prices quoted by the bidder shall be fixed and not subject to any escalation whatsoever during the period of bid validity and execution of the Purchase Order. A bid submitted with an adjustable price will be treated as non - responsive and rejected. Prices shall be written in words and figures. In the event of difference, the price in words shall be valid and binding. Unit prices shall be considered correct in the event of any discrepancy with regard to total price.

5.3. **Bid currency:** Indian bidders should submit the prices only in Indian Rupees. Foreign bidders may submit their bid in their home currency.

5.4. **Terms of Delivery:** Bidders are required to quote their best delivery period. Foreign Bidders should submit their offer for net **FOB Nearest Sea / Air Port**. Indian Bidders should submit their offer for **FOR Despatching station**.

5.5. **Taxes and Duties :** All Taxes and Duties payable as extra to the quoted price should be specifically stated in offers along with CST & TNGST No / Tariff No. etc., failing which the purchaser will not be liable for payment of such Taxes and Duties. Our T.N.G.S.T No. 356005 Dt. 04-04-1995, C.S.T. No. 239383 dt. 11-06-1991 and TIN NO.33243560005..

5.6. **Validity:** The offers for main equipment and spares shall be kept open for acceptance for **120 days (one hundred and twenty days)** from the date of opening of the tender (Part I).

5.7. **Terms of Payment:**

5.7.1. **Indian Bidders**

5.7.1.1. The preferred payment terms are indicated below:

SUPPLY PORTION:

100% payment, within 45 to 90 days, after receipt / acceptance / commissioning of equipment at BHEL, Tiruchi.

or

80% value of the goods will be paid within 45 to 90 days against dispatch documents negotiated through bank. Balance **20%** against submission of supplementary invoice will be paid on acceptance / commissioning of goods and also against remittance of required Security Deposit to BHEL in accordance with the terms of the Contract.

All bank charges are to vendor's account only.

ERECTION & COMMISSIONING PORTION:

100% of the Erection / commissioning charges (in case contract involves erection/commissioning) shall be paid only on completion of such erection / commissioning at BHEL and also against remittance of required Security Deposit to BHEL in accordance with the terms of the Contract

5.7.3 **Common to both Indian & Foreign Bidders**

E&C charges will be released after deduction of Income Tax as per the Govt. of India rules. The TDS certificate will be issued by BHEL. 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.

5.8. **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 proforma prescribed by BHEL, alongwith the order, for an amount equivalent to **10% (Ten percent)** of the value of the contract. The PBG shall be valid for period of 18 months from the date of despatch or **12 months** from the date of receipt / acceptance / commissioning of the equipment at BHEL, Tiruchi which ever is more, with a claim period of two months.

The Performance Bank Guarantee shall be obtained from any one of the following banks who is a member bank in our consortium of banks.

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.

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

5.9 **Liquidated damages :** It is clearly understood among the parties to the contract the

"Time is the essence of the contract ". Therefore, the delivery of the goods specified in the purchase order should be made within the time prescribed. Where the seller supplies or despatches the goods, beyond the delivery period specified the purchaser will have no obligation to accept the goods. If accepted liquidated damages at the rate of 1/2% of the value of goods delayed for each week of delay subject to a maximum of 15% of the order value will be levied. Liquidated damages @ ½% per week subject to a maximum of 15% of the Erection Charges shall be applicable for delay in the Period for completion of the Retrofitting / Reconditioning work

- 5.10 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 despatch within the time stipulated as aforesaid or if the same were not available, the best and the nearest available substitute therefor. The supplier shall be liable for any loss which the Purchaser may sustain by reason of such risk purchases.
- 5.11 Agency commission :** In case of Foreign Bidders, agency commission if any, payable to their Indian Agents, shall shown separately in the Offer. This will be paid by us in India, in Indian Rupees, on satisfactory completion of the Contract. Copies of current Agency Agreement / Authorization Letter in respect of Agency Commission shall be furnished alongwith offer. For calculation of Rupee equivalent of Agency Commission, exchange rate as prevailing on the date of offer will be taken.
- 5.12 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.
- 5.13 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.
- 5.14 Cenvat 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..
- 5.15 Packing and marking :** The Supplier shall arrange for securely protecting and packing the stores to avoid loss or damages during transit.
- 5.16 Purchase preference** will be given to CPSUs as per Government guidelines.
- 5.17** 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.
- 5.18 Earnest Money Deposit** shall be payable as per the instructions furnished in the **Annexure-IV**. Otherwise the offer will be rejected.
- 5.19 Security Deposit** shall be payable as per the instructions furnished in the Annexure.
- 5.20 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 governing RA are given below.
- 5.21 GENERAL TERMS AND CONDITIONS OF RA**
- Against this enquiry for the subject item/system with detailed scope of supply as per enquiry specifications, BHEL may resort to "REVERSE AUCTION PROCEDURE" i.e., ON LINE BIDDING ON INTERNET.
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 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.

For any queries / clarifications the bidders may contact us through our FAX NO. +91 431 2520719 or through e-mail rba@bheltry.co.in and <srchandran@bheltry.co.in>

Bharat Heavy Electricals Limited, Trichirapalli – 620 014**MM : CAPITAL PURCHASE****(To be filled and submitted along with offer)**

BHEL Commercial Terms and Conditions for Indigenous Supplies	Vendor's Confirmation / Comments
EMD for Rs 1,50,000/- shall be payable as per the instructions furnished in the annexure. Otherwise the offer will not be considered. Pay order / DD No / Cash receipt no & date may be furnished	
Security Deposit shall be payable by the successful vendors as per the instructions furnished in the Annexure-IV	
Security Deposit will be refunded within 30 days after successful completion of Contract by the successful vendor.	
Technical confirmation to BHEL's Specification as called for in BHEL Format shall be furnished. If needed additional sheets shall be used.	
Prices shall be quoted item wise only as per the model format enclosed. An unpriced copy shall be submitted along with technical bid where in the applicable Taxes and Duties Shall be clearly specified	
Prices shall be quoted on "FIRM PRICE" basis only. The prices should be only on F.O.R / Despatching station basis inclusive of Packing & Forwarding charges if any. Applicable % of ED & Sales Tax , Freight & Insurance, Installation & Commissioning Charges should be clearly indicated.	
Validity of offer shall be for a minimum period of 120 days from the date of Tender opening	
Delivery period (for supply portion) from the date of Letter of Intent / Purchase order shall be clearly mentioned in the offer.	
Period for completion of the Retrofitting / Reconditioning (erection & Commissioning) work at BHEL shall be clearly specified in the offer	
Liquidated damages @ ½% per week subject to a maximum of 15% of the order value shall be applicable for delay in deliveries.	
Liquidated damages @ ½% per week subject to a maximum of 15% of the Erection Charges shall be applicable for delay in the period of completion of the Retrofitting / Reconditioning works.	
Following Risk Purchase clause shall be applicable: 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 or if the same were not available, the best and the nearest available substitute therefore. The supplier shall be liable for any loss which the Purchaser may sustain by reason of such risk purchases.	
Submission of Performance Bank Guarantee (PBG): Vendor should provide a performance bank guarantee(PBG) for 10% of the total Purchase order value valid for a period of 12 months from the date of commissioning (or) 18 months from the date of dispatch whichever is later with an additional claim period of 2 months. This PBG shall form one of the documents for effecting payment. The PBG shall be submitted in non-judicial stamp paper value of not less than Rs.80/- issued by any one of the following banks who is a member bank in our consortium of banks.	
Payment terms for supply portion: * 100% payment will be made within 45 to 90 days after receipt and acceptance / commissioning of goods at BHEL. against submission of PBG for 10% of Order value with required validity. (or) * 80% value of the goods will be paid within 45 to 90 days against dispatch documents negotiated through bank. Balance 20% will be paid within 45 to 90 days from the date of acceptance / commissioning of goods against submission of supplementary invoice and also against submission of PBG for 10% of Order value with required validity. All bank charges are to vendor's account only.	
Erection / commissioning Charges: Erection / commissioning shall be done at free of cost. If any charges, 100% of the Erection / commissioning charges (in case contract involves erection/commissioning) shall be paid only on completion of such erection / commissioning at BHEL and also against remittance of required Security Deposit to BHEL in accordance with the terms of the Contract	
The equipment shall be guaranteed for a period of 12 months from the date of commissioning.	

ANNEXURE-II

Equipment will be inspected and proved at vendor's works prior to dispatch. However final inspection and acceptance of equipment will be after installation at BHEL,Trichy.	
All Equipments / Services including concern Personal for carrying out the erection and commissioning of the Equipment shall be arranged by the vendor. If any Services is 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.	
Any warranty replacement during warranty period shall be supplied free of charge on FOR BHEL, Trichy basis.	
Offers should be submitted only in sealed cover super-scribing clearly the Enquiry reference and due date.	
MANDATORY Details Required For Conducting Reverse Auction (Please fill up all columns)	
Delivery Terms (<i>Ex-works Basis (or) For Destination Basis</i>)	
% of Excise Duty with cess	
% of TAX (CST/VAT) (TNGST with FORM-17 or CST with C-FORM)	
Packing & Forwarding Charges (in % or Lumpsum)	
Percentage of 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)	
Erection & commissioning charge is inclusive (or) exclusive of basic rate	
% of Service Tax if applicable	
As per Clause 5.20 of Commercial terms and conditions (Annexure-II) acceptance for participation in Reverse auction (RA). Yes/No to be indicated	
Name of the person for participating reverse auction.	
Land Line Number	
Fax Number	
Mobile Number	
E-mail ID	
Pan No	
TIN No	
CST No	

NOTE:-

- It is confirmed that all the terms and conditions stipulated in the Enquiry have been fully understood by us and all clarifications & details have been obtained.
- Your offer should be indicating applicable if any P&F Charges, % of ED, Sales Tax -CST or VAT, Service Tax), Freight, Insurance and Installation and Commissioning Charges etc., as per our Price Format.
- 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. Other wise your offer is liable for rejection.
- No row shall be left blank. Please indicate NA, in case the item is "not applicable"**NOTE:-

Signature & Office Seal of the vendor

MODEL PRICE BID FORMAT FOR INDIAN BIDDERS

Enquiry No. & Date:

Bidder's Offer No. & Date:

Sl No.	Description of item	Unit	QTY	Basic Rate in Rs.	ED in %	Service Tax in %	VAT/CST in % (TNGST with FORM-17 or CST with C-FORM)	Value in Rs.
1	Supply portion							
3	Installation & Commissioning							
	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 & Insurance 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"

EARNEST MONEY DEPOSIT

Earnest Money is to be paid by the Tenderer either in **Cash** (as permissible under Income Tax Act), **Pay Order** (or) **Demand Draft** drawn in favour of Bharat Heavy Electricals Ltd, Trichirapalli payable at Trichirapalli.

EMD by the Tenderer will be forfeited as per Tender Documents if

- 1) After opening the Tender, the Tenderer revokes his Tender within the validity period or increases his earlier quoted rates
- 2) The Tenderer does not commence the work within the period as per LOI/Contract. In case the LOI/Contract is silent in this regard then within 15 days after award of the Contract.

EMD given by all unsuccessful Tenderers shall be refunded normally within 15 days of acceptance of award of work by the successful Tenderer.

EMD shall not carry any interest.

SECURITY DEPOSIT

The successful Tenderer should pay Security Deposit before start of the work and the Rate of Security Deposit will be as below.

Value of Contract	Rate of Security Deposit
Upto Rs.10 Lakhs	10%
Above Rs.10 lakhs and upto Rs.50 lakhs	Rs.1 Lakh + 7.5% of the amount exceeding Rs.10 Lakhs
Above Rs.50 lakhs	Rs.4 Lakhs + 5% of the amount exceeding Rs.50 Lakhs

Security Deposit may be furnished in any one of the following forms.

- i) Cash (as permissible under the Income Tax Act)
- ii) Pay Order, Demand Draft in favour of Bharat Heavy Electricals Limited, Trichirapalli payable at Trichirapalli
- iii) Local Cheques of Scheduled Banks, subject to realization
- iv) Securities available from Post Offices such as National Savings Certificates, Kisan Vikas Patras etc (Certificate should be held in the name of Contractor furnishing the security and duly pledged in favour of BHEL and discharged on the back)
- v) Bank Guarantee from Scheduled banks / Public Financial Institutions as defined in the Companies Act subject to a maximum of 50% of the total Security Deposit value. The balance 50% has to be remitted either by cash or in the other form of security. The Bank Guarantee format should have the approval of BHEL.
- vi) Fixed Deposit Receipt issued by Scheduled banks / Public Financial Institutions as defined in the Companies Act. The FDR should be in the name of the Contractor, A/C BHEL, duly discharged on the back.
- vii) Security Deposit will also be recovered at the rate of 10% from the running bills. However in such cases at least 50% of Security Deposit shall be paid by the Contractor before start of the work and the balance 50% will be recovered from the running bills.
- viii) EMD of the successful Tenderer shall be converted and adjusted against Security Deposit.

Note: Acceptance of security Deposit against sl.no.(iv) and (vi) above will be subject to hypothecation or endorsement on the documents infavour of BHEL. However BHEL will not be liable or responsible in any manner for the collection of interest or renewal of the documents or in any other matter connected therewith.

Security deposit shall not carry any interest. Security Deposit shall not be refunded to the Contractor except in accordance with the terms of the Contract.