



Bharat Heavy Electricals Limited

(High Pressure Boiler Plant)

Tiruchirappalli – 620014, TAMIL NADU, INDIA

MATERIALS MANAGEMENT / CAPITAL EQUIPMENT

An ISO 9001
Company

ENQUIRY	Phone: +91 431 257 70 49 Fax : +91 431 252 07 19 Email : csguna@bheltry.co.in Web : www.bhel.com
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	Enquiry Number:	Enquiry Date:	Due date for submission of quotation:
	2620900070	09.03.2009	08.04.2009

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

Item	Description	Quantity	Delivery (Item required at BHEL on)
10	Thermal Gravimetric Analyser as per the technical specification & commercial conditions applicable (to be downloaded from web site www.bhel.com or http://tenders.gov.in)	01 No.	31.10.2009

BHEL commercial terms & conditions with Price Bid and Bank Guarantee formats can be downloaded from BHEL web site <http://www.bhel.com> or from the Government tender website <http://tenders.gov.in> (public sector units > Bharat Heavy Electricals Limited page) under Enquiry reference “2620900070”.

Tenders should reach us before 14:00 hours on the due date
Tenders will be opened at 14:30 hours on the due date
Tenders would be opened in presence of the tenderers who have submitted their offers and who may like to be present

Yours faithfully,
For BHARAT HEAVY ELECTRICALS LIMITED

Sr.Manager / MM / Capital Equipment

QUALIFYING CRITERIA

The BIDDER / VENDOR have to necessarily provide the following details, for making an assessment of the firm's capability and competency.

The bid consists of 3 parts namely Qualifying Criteria, Technical bid and Price bid. Vendor shall submit Qualifying Criteria & Technical bid together in a sealed cover. Price bid shall be in a separate sealed cover. BHEL will consider Technical bid only if the vendor/bidder qualifies. BHEL will consider Price bid only if the Technical bid is found acceptable.

[The BIDDER is expected to give complete details against each clause in the table given below and wherever necessary an additional sheet may be attached giving clear reference number to cover the required details]

Name of the product: BHEL uses the title “CRC EQUIPMENT” in this document. Please refer Technical Specification attached herewith for further details

S. No.	PARTICULARS	VENDOR's RESPONSE
1.0	The BIDDER / VENDOR shall have a minimum of FIVE Years of Continuous Experience in the Design, Manufacture & Supply of “ CRC EQUIPMENT ”. Please indicate the actual experience. This is a qualifying criteria.	
2.0	YEAR of launch of the Model quoted against this ENQUIRY	
3.0	Is there any other model launched after the quoted Model? Otherwise, indicate the likely year in which the next model is likely to be launched.	
4.0	Number of “ CRC EQUIPMENT ” supplied, installed and commissioned till date in India. Please furnish contact person name, address, phone number, fax number and mail id .Please mention that how many are used for coal analysis purpose.	
5.0	Number of “ CRC EQUIPMENT ” supplied, installed and commissioned till date outside India. Please furnish contact person name, address, phone number, fax number and mail id. Please mention that how many are used for coal analysis purpose.	

Committee Members	Name & Design.	Signature	Initial
	Kannan K/DGM/CR/CRC		
	Lawrence Dr A /Mgr/Labs		
For Specifications having reference numbers	CRC- 7,	DATE : 05 – 01 –2008	

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**Ref: CRC Eqpt: QC-A
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6.0	Please enclose Performance Certificate from atleast Five Indian customers for the model quoted. This certificate should not have been received prior to 01.Jan.2007. This is a qualifying criteria.	
7.0	Details of Design Set-Up and Technology Back-Up assured from the PRINCIPAL Equipment Maker.	
8.0	Details on Service-after-Sales set-up in India including the addresses of Agents/Service Centre in India.	
9.0	The BIDDER / VENDOR shall assure a continuous support for SPARES and SERVICE for TEN Years, from the date of commissioning of the equipment at BHEL Works. This is a qualifying criteria	
10.0	The " <u>Technical Bid</u> " shall have vendor's responses along with Product Catalogue, Data Sheets in ORIGINAL and complete technical details of 'Bought-Out-Items' with copies of Product Catalogue. All Technical & Commercial terms can be here. NO PRICE DETAIL IS ENTERTAINED HERE.	

Committee Members	Name & Design.	Signature	Initial
	Kannan K/DGM/CR/CRC		
	Lawrence Dr A /Mgr/Labs		
For Specifications having reference numbers	CRC- 7,	DATE : 05 – 01 –2008	

11.0	<p>The “Price Bid” shall have Price Part with following options.</p> <p>In case the offered model requires PC with special hardware and software, then bidder should include the same in their scope. The scope includes 17” TFT monitor, Laser printer B/W, Windows XP+ services packages also.</p> <p>In case the offered model requires only general PC hardware and software, then bidder should include only the application software in their scope. Bidder should give detailed Hardware and Software specification for arranging at BHEL.</p> <p><u>Option 1(Incase bidder supplies PC):</u> Basic Equipment. All PC hardware and software. All software CDs (1 set) with valid license. Installation & Maintenance manuals (2 Hard copies & 1 set of CDs) Mandatory spares. Consumables. AMC</p> <p><u>Option 2(Incase bidder does not supply PC)</u> Basic Equipment. Application software CDs 1 set with valid license. Responsibilities of interfacing BHEL supply PC with Basic Equipment(including interconnecting cables) Installation & Maintenance manuals (2 Hard copies & 1 set of CDs) Mandatory spares. Consumables. AMC</p>	
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Committee Members	Name & Design.	Signature	Initial
	Kannan K/DGM/CR/CRC		
	Lawrence Dr A /Mgr/Labs		
For Specifications having reference numbers	CRC- 7,	DATE : 05 – 01 –2008	

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Technical Specifications For Thermal Gravimetric Analyzer

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Sl. No.	Particulars	BHEL specifications	Bidder's offer [With complete technical details]
1	Confirmation for each point of specification.	Vendor is requested to give specific confirmation for each point. Deviations if any shall be clearly indicated.	
2	Ambient Condition	The uncontrolled ambient room conditions are- a) Temperature: 10 to 50 ° C, b) Relative Humidity: 100 % c) Dusty	
3	Scope of Vendor	<ol style="list-style-type: none"> 1. Design, Manufacture, Testing, at vendor's works. 2. Original software, Installation & Maintenance manuals, Consumables, Mandatory Spares. 3. UPS(if required) 4. Training, Installation, Commissioning & Proving performance at BHEL Trichy. 5. On-site Guarantee, On-site Annual Maintenance Contract. 	
4.1	Temperature	<ul style="list-style-type: none"> • Temperature range (Furnace) RT.... 1600° C • Operating Temperature RT ...1500° C 	
4.2	System design	Top loading with sample at the top and balance at the bottom in a vertical fashion.	
4.3	Furnace	Furnace with integrated protective tube, gas tight heating chamber, air cooled and integrated thermocouple type R /S, motorized furnace movement for ease of Handling.	
4.4	Balance features	<ul style="list-style-type: none"> • Measuring range of 20 grams • Sample weight up to 10grams 	
4.5	TG resolution	1µg	
4.6	TG baseline drift	<ul style="list-style-type: none"> • 0.25µg/hr (isothermal) • 0.0011mg (dynamic) 	
4.7	Measurement modes	<ul style="list-style-type: none"> • TGA up to 1500° C or Simultaneous TG/DTA up to 1500° C is also acceptable. 	

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		<ul style="list-style-type: none"> • Resolution of 1micro gram over the entire weighing range. • Balance drift better than 5µg/hr. 	
4.8	Atmospheric conditions	<ul style="list-style-type: none"> • Dynamic with air, inert gases and also vacuum up to 10-2mbar, with automatic evacuation cycles. • Integrated Mass flow controller for accurate gas Flow, and gas switching. 	
4.9	Temperature resolution	0.001° C	
4.10	Temperature accuracy	better than 0.5° C	
4.11	Temperature calibration	up to 5 points	
4.12	Furnace cooling	1500 ° C to 50 ° C in less than 30 minutes	
4.13	Sample pans	<ul style="list-style-type: none"> • Alumina, Pt and Aluminium. 3.4ml volume pans of alumina if needed. • Desirable to have the upgrade to evolved gas analysis using MS and FTIR later. 	
4.14	Standard software features	<ul style="list-style-type: none"> • Routine evaluations such as glass transition. Peak Area, peak temperature and mass loss steps. • Specific heat determination, edit possibility with Full access to the user. 	
4.15	Data System	<p>In case the offered model requires PC with special hardware and software, then bidder should include the same in their scope. The scope includes 17" TFT monitor, Laser printer B/W, Windows XP+ services packages also.</p> <p>In case the offered model requires only general PC hardware and software, then bidder should include only the application software in their scope. Bidder should give detailed Hardware and Software specification for arranging at BHEL</p>	
4.16	Power supply	230V +/- 10% AC/1 Ph/50Hz- 1 Feeder	
5	Along with offer the following details in hard copies shall be indicated.	<ol style="list-style-type: none"> a) Scope and interconnection diagrams-2 copies. b) Catalogs-2 copies. c) Dimensional details for preparing Civil Engg Drawings-2 copies. d) Mandatory spares with Unit price if 	

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		<p>applicable.</p> <p>e) Consumables along with unit price if applicable.</p> <p>f) Power supply requirement.</p> <p>g) Instrument air and compressed air if required.</p> <p>h) PC configuration.</p> <p>i) Vents and drains if required.</p> <p>j) Space requirement around the equipment.</p> <p>k) List of software.</p>	
6	Installation and Commissioning	The Equipment with all Accessories is to be installed & commissioned at BHEL Works, free of cost, by the service engineer of the supplier.	
7	Performance Prove-Out at BHEL	The Supplier's Service Engineer has to conduct demonstration & calibration of the Equipment with Accessories.	
8	Inspection & Training at Vendor works.	BHEL's Inspection is applicable. Complete Training for BHEL Engineers is to be given on Operation & Maintenance free of cost.	
9	Training on Operation & Maintenance at BHEL works.	Complete Training for BHEL Engineers is to be given on Operation & Maintenance of the offered equipment at BHEL works, free of cost.	
10	Onsite Performance Guarantee	The Equipment & Accessories (including Bought-Out Items) are to be guaranteed for its performance for a minimum period of one year from the date of performance acceptance at BHEL Works.	
11	Draft and Final Installation and O&M manual in ENGLISH Language	1No Draft Installation, Operation & Maintenance Manual. It shall contain Electric Schematics, Circuit Diagrams, PCB Drawings, Trouble Shooting Charts, Mechanical Sub-Assemblies, Rating of Bought-Out Items, etc. BHEL will review its completeness and inform supplier to make necessary corrections if applicable and ask to furnish 2 more final sets. In addition, one soft copy in CD to be supplied.	

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12	Annual Maintenance Contract - AMC	The bidder has to quote for AMC through trained service personnel in India for a period of three years after the expiry of ORIGINAL WARRANTY period. Technical Service for Preventive and breakdown Maintenance , Trouble Shooting and Re- Commissioning of the Equipment INCLUDING the Cost of SPARES and Consumables .Please consider 4 visits per year.	
13	AMC - RESPONSE	The bidder has to furnish / indicate the response time for the service engineer to be at BHEL works, from the time of reporting breakdown through e-mail or telefax.	