



An ISO 9001  
Company

## Bharat Heavy Electricals Limited

(High Pressure Boiler Plant)

Tiruchirappalli – 620014, TAMIL NADU, INDIA

CAPITAL EQUIPMENT / MATERIALS MANAGEMENT

<b>ENQUIRY</b>	Phone: +91 431 257 76 53 Fax : +91 431 252 00 31 Email : <a href="mailto:skaruna@bheltry.co.in">skaruna@bheltry.co.in</a> Web : <a href="http://www.bhel.com">www.bhel.com</a>
<b>NOTICE INVITING TENDER</b>	

TWO PART BID	Enquiry Number:	Enquiry Date:	Due date for submission of quotation:
Tender to be submitted in two Parts	<b>2731600004</b>	<b>25.01.2016</b>	<b>26.02.2016</b>

You are requested to quote the Enquiry number date and due date in all your correspondence. This is only a request for quotation and not an order.

**Please note that under any circumstances both delayed offer and late offers will not be considered. Hence vendors are requested to ensure that the offer is reaching physically our office before 14.00 hrs on the Date of tender opening.**

Item	Description	Quantity
10	<b>Fully Automated Universal Hardness Tester</b> as per the technical specification & commercial conditions applicable (to be downloaded from web site <a href="http://www.bhel.com">www.bhel.com</a> or <a href="http://tenders.gov.in">http://tenders.gov.in</a> )	<b>01 No.</b>

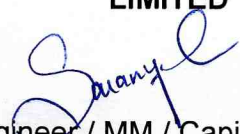
### Important points to be taken care during submission of offer

1. The Checklist for Acceptance of Commercial Terms & Conditions to be filled and enclosed along with the offer failing which, the offer will not be considered for evaluation.
2. All updates, amendments, corrigenda, etc., (if any), for each tender will be posted only on the above websites from time to time, as and when required, until each tender is opened. There will be no publication of such updates, amendments, corrigenda, etc., through newspapers or any other media.

**BHEL's General guidelines / instructions (refer MM/CE/GENL/001/EMD) including bank guarantee formats and list of consortium banks, commercial terms check-list can be downloaded from BHEL web site <http://www.bhel.com> or from the Government tender website <http://tenders.gov.in> (public sector units > Bharat Heavy Electricals Limited page) under above Enquiry reference**

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. Engineer / MM / Capital Equipment

**Qualifying Criteria : PART – A**

<b><u>Part A- Qualifying Criteria</u></b>		
<b><u>SECTION-I</u></b>		
<b>Sl.No</b>	<b>Description</b>	<b>Bidders response</b>
<b>1</b>	BIDDER to provide the Profile of their Company	
<b>2</b>	The Bidder (OEM) shall have a minimum of five Years of Continuous Experience in the field of Design, Manufacture and Supply of <b><u>Universal hardness Tester.</u></b>	
<b>3</b>	List of customers to whom Universal hardness Testers were supplied, installed and commissioned till date.	
<b>4</b>	Details on SERVICE-AFTER-SALES Set-Up in India including the Addresses of Agents / Service Centres in India.	
<b>5</b>	Any Additional Data to supplement the manufacturing capability of the BIDDER for the subject equipment.	
<b><u>SECTION-II</u></b>		
<b>6</b>	Only those bidders (OEMs) should quote, who have supplied and commissioned at least one number of the type of Universal hardness Tester (in this case turret type, automated hardness tester) and such equipment should presently be working satisfactorily for more than one year after commissioning (on the date of opening of Tender)	
<b>7</b>	The Bidder should submit following information where the Universal hardness Testers have been supplied:	
<b>8</b>	Name and postal address of the customers or companies where the quoted model of equipment is installed.	
<b>9</b>	Name and designation of the contact person of the customers.	

**Qualifying Criteria : PART – A**

Sl.No	Description	Bidders response
10	Phone, FAX no and email address of the contact person of the customers.	
11	Month and Year of commissioning of the equipment.	
12	The application for which the equipment is supplied	
13	Along with the Technical offer, the Bidder should submit <b>one</b> <u>Performance certificates from the customers for the satisfactory performance of the equipment supplied as per clause 6 above</u>	
14	Offers of only those Bidders who meet the above Qualifying Criteria will be considered for further evaluation.	
15	BHEL reserves the right to verify the information provided by Bidder. In case the information provided by Bidder is found to be false/ incorrect, the offer shall be rejected.	
<b>SECTION – III</b>		
16	The BIDDER shall submit the offer in TWO PARTS-Technical [PART A & PART B] & Commercial and Price Bid.	
17	The offer shall contain a comparative statement of Technical Specifications given by BHEL and the offered details submitted by the Bidder, against each clause.	
	Merely stating 'CONFIRMED' or 'COMPLIES' or 'YES' or 'NO-DEVIATION' or similar words wherever 'Bidder to Specify' details in the technical comparative statement may lead to disqualification of the Technical Offer.	
18	The Technical Offer shall be supported by product Catalogues & Data Sheets and also technical details of Bought-Out-Items with copies of Product Catalogue to the extent possible.	
19	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 of the inclusion of all the accessories, tooling's, attachments, auxiliary parts, spares, consumables, etc. with the main and basic equipment, to meet the technical specification requirements.	
20	BIDDER has to indicate the Country of Origin for the supply of equipment.	

Qualifying Criteria : PART – ASECTION – IV

The performance certificate should be produced **on Customer's Letter Head.**

PERFORMANCE CERTIFICATE

1. Supplier of the equipment	
2. Make & Model of the equipment	
3. Month & Year of Commissioning	
4. The Universal Hardness Tester shall be able to carry out Tests in accordance to: VICKERS : ISO 6507 – 1, ASTM E384, IS 1501 ROCKWELL & ROCKWELL SUPERFICIAL : EN ISO 6508 –2, ASTM E 18,IS 1586 BRINELL : ASTM E 10, EN ISO 6506–1, IS 1500	Yes / No Yes / No Yes / No
5. Turret head installed	Yes / No
6. External computer linked	Yes / No
5. Performance of the equipment (Strike off whichever is not applicable)	Satisfactory / Good / Average / Not Satisfactory
6. Any Other remarks	
Date:	Signature & Seal of the Authority issuing the Performance Certificate

**TECHNICAL SPECIFICATION : PART – B**

Clause	PARTICULARS AND BHEL SPECIFICATION	BIDDERS OFFER (With Technical Details)
1.0	<p><b><u>Purpose:</u></b> To carry out fully automated hardness testing on different components of different materials, sizes and shapes.</p> <p>Application includes the following:</p> <ul style="list-style-type: none"> <li>Ferrous and non-ferrous metals</li> <li>Flat and cylindrical components</li> <li>Hardness distribution mapping and curves for welded samples and components</li> <li>Castings and forgings</li> <li>Heat treated surfaces, hot and cold mount metallographic samples.</li> <li>Fasteners, sheets, tubes and pipes.</li> </ul> <p>Basic equipment capable of carrying out Brinell, Vickers, Rockwell and Rockwell Superficial hardness complying with National/international standards as described in the subsequent specification. It shall have</p> <ul style="list-style-type: none"> <li>· Computer controlled system with external monitor unit with provisions for exporting test results, printing and data connectivity.</li> <li>· Automatic loading with auto zoom focus module for automatic measurement of hardness</li> <li>· Automatic Heavy duty Turret system for holding multiple indenters and lenses which can be swivelled both manually and automatically,</li> <li>· Motorized X-Y stage for fully automatic hardness measurement of multiple spots in a sample or multiple samples</li> <li>· Safety systems like emergency stop button, limit switches or specimen protection sensor/alarm to be provided to avoid accidental collision of sample with test head, overloading, and to ensure safety of operating personnel.</li> </ul>	

**TECHNICAL SPECIFICATION : PART – B**

Clause	PARTICULARS AND BHEL SPECIFICATION		BIDDERS OFFER (With Technical Details)
<b>2.0</b>	<b><u>Scope of Supply:</u></b>		Bidders response
	1. Universal Hardness tester as per the specifications described in subsequent clauses	1 no.	Bidder to confirm
	2. Essential accessories as per the specifications	1 set	Bidder to confirm
	3. Essential spares for two years trouble free Operation & Maintenance	1 set	Bidder to confirm
	4. Essential consumables two years trouble free Operation	1 set	Bidder to confirm
	5. Documents as specified in clause 11 and 12	3 sets	Bidder to confirm
<b><u>2.1.0</u></b>	<b><u>Universal Hardness Tester specification:</u></b>		
<b>2.1.1</b>	The Universal Hardness Tester shall be able to carry out Tests in accordance to:		
	VICKERS	ISO 6507 – 1, ASTM E384, IS 1501	Bidder to confirm
	ROCKWELL & ROCKWELL SUPERFICIAL	EN ISO 6508 –2, ASTM E 18,IS 1586	Bidder to confirm
	BRINELL (with ball Ø1,2.5mm,5mm)	ASTM E 10, EN ISO 6506–1, IS 1500	Bidder to confirm

**TECHNICAL SPECIFICATION : PART – B**

Clause	PARTICULARS AND BHEL SPECIFICATION	BIDDERS OFFER (With Technical Details)
2.1.2	<b>Loading System:</b> Loading system must be essentially automatic with load cell closed loop control and shall ensure highest possible degree of accuracy and repeatability. Details of loading system shall be provided. <b>The test force error must be better than 1%</b>	Bidder to confirm
2.1.3	<b>Test load range:</b> [(9.8 N to 2450 N) / (1kg to 250 kg)]	Bidder to confirm & Specify the range
2.1.4	<b>Additional test force:</b> To be specified	Bidder to Specify the range
2.1.5	<b>Test force selection:</b> Both Automatic and manual	Bidder to confirm
2.1.6	<b>Test height:</b> 200mm (minimum) excluding sample support anvil	Bidder to confirm & Specify the range
2.1.7	<b>Depth of throat:</b> 150mm(min.)	Bidder to confirm & Specify the range
2.1.8	<b>Height adjustment:</b> Motorized Mode; can be	Bidder to Specify
	Fixed anvil/movable test head or	
	Fixed test head/movable anvil, both driven through motor	
2.1.9	<b>Least count:</b> Min 0.1 unit for Rockwell, 0.1 unit for Vickers and 1 unit for Brinell	Bidder to confirm & Specify the range
2.1.10	<b>Dwell time:</b> To be specified	Bidder to Specify
2.1.11	Vickers test procedure – Details to be provided like range of loads used, test cycle time for each indentation etc.	Bidder to provide details
2.1.12	Brinell test procedure – Details to be provided like range of loads used, test cycle time for each indentation etc.	Bidder to provide details
2.1.13	Rockwell test procedure – Details to be provided like range of loads used, test cycle time for each indentation etc.	Bidder to provide details

**TECHNICAL SPECIFICATION : PART – B**

Clause	PARTICULARS AND BHEL SPECIFICATION	BIDDERS OFFER (With Technical Details)
	<b>Turret system</b>	
<b>2.1.14</b>	<b>Turret position:</b> 6 positions (minimum) able to hold at least 2 multiple indenters and 2 different lenses	Bidder to Specify
<b>2.1.15</b>	<b>Turret swivel:</b> Automatic (motorised) Details of turret orientation, swivelling speed, manual override, technical documents to support turret durability etc. to be provided.	Bidder to provide details
	<b>Optics</b>	
<b>2.1.16</b>	<b>Optical system:</b> High quality optical system to ensure highly accurate and repeatable image and hardness evaluation with integrated autofocus and auto-zoom module. Details of optical zoom to be provided.	Bidder to provide details
<b>2.1.17</b>	<b>Objective lenses:</b> Lenses 2.5X, 4X, 10X, 20X and 40X. If any of the above lenses not compatible with the machine model, then appropriate lenses to be supplied to measure large and small indentations within the field of view on screen without hassle.	Bidder to confirm & Specify
<b>2.1.18</b>	<b>Evaluation Camera:</b> High resolution camera 4MP or better with electronic Zoom module, auto brightness adjustment/ auto illumination & integrated auto focus.	Bidder to confirm & Specify
	<b>Overview camera/sample image camera/Second camera/Macro camera:</b> To define test points, starting points etc. on the sample in X-Y stage for automatic hardness mapping. Details like field of view, resolution etc. to be provided.	Bidder to provide details
<b>2.1.19</b>	<b>Illumination system:</b> Only LED system of illumination to be provided. A high quality, long life and automatic brightness adjustable illumination system is to be employed; Suitable illumination systems to be provided for softer and non-ferrous materials etc.	Bidder to confirm & Specify
	<b>External computer &amp; Display</b>	
<b>2.1.20</b>	Operating System(OS) : Windows based (Windows 8.1 or latest)	Bidder to provide details
	Processor details(Intel® Core™ i7- Processor or better or similar processor of AMD make)	
	Mother board details: Preferably Intel make	
	RAM: 4 GB(min.)	
	Storage capacity: 200 GB or more	
	DVD reader cum writer	
	Monitor for computer: 22” LED(min)	

**TECHNICAL SPECIFICATION : PART – B**

Clause	PARTICULARS AND BHEL SPECIFICATION	BIDDERS OFFER (With Technical Details)
	Multimedia Keyboard, Optical mouse, Interconnecting cables, Software and OS CDs	
	Laser Printer to print A4 size papers and its accessories with latest specifications should be included in the supply	
	<b>Data Connectivity</b>	
2.1.21	Sufficient ports for Internet, Ethernet connection, RS232, USB shall be available in the machine or computer to ensure seamless data transfer and direct printout of test results. Minimum of 2XUSB ports, 1XRS232 and suitable ports for LAN, WAN connection is required. Other connectivity details like External digital(DVI) connectivity, HDMI etc. to be specified Data connection (Communication) cable between the analyser and computer.	Bidder to provide details
2.1.22	<b>Software:</b> Shall have <ul style="list-style-type: none"> <li>• automatic hardness measurement</li> <li>• hardness conversion module</li> <li>• Statistical data and processing tools like X-charts, histogram etc.</li> <li>• Report generator with images</li> <li>• Geometric correction factor for concave and convex surfaces</li> <li>• Mosaic function to stitch multiple images to a single image</li> <li>• Defining automatic test cycles for hardness mapping</li> <li>• Facility to export data to other formats like .xls/.doc/.pdf etc.</li> </ul> Software shall be upgraded if there is an update at the time of supply – without cost implications. System shall be preloaded with essential software like MS office, Adobe PDF reader, Notepad, system drivers, machine drivers etc.	Bidder to provide details
	All software shall be original and original CDs should be issued to BHEL.	Bidder to confirm
2.1.23	<b>Indenters- must be supplied with certificates traceable to national/ International accreditation</b>	Bidder to confirm
	Brinell indenter with indenter holder and tungsten carbide balls of Ø1, 2.5, 5.0 mm.	Each 1no.
	Vickers Square pyramid 136° diamond indenter with holder	2 no.
	Rockwell class A diamond cone indenter 120° with holder	2 no.
	Rockwell indenters for B scale and superficial hardness- Ø 1/16", 1/8", ¼" and ½" with holders	Each 1no.

**TECHNICAL SPECIFICATION : PART – B**

Clause	PARTICULARS AND BHEL SPECIFICATION	BIDDERS OFFER (With Technical Details)																								
<b>2.1.24</b>	<p><b>Test blocks- must be supplied with certificates traceable to national/ International accreditation</b></p> <table border="1" data-bbox="302 363 1794 852"> <tr> <td data-bbox="302 363 1368 416">Brinell test block-1mm/30kgf (200-400 HBW)</td> <td data-bbox="1368 363 1794 416">1 no.</td> </tr> <tr> <td data-bbox="302 416 1368 469">Brinell test block-2.5mm/187.5kgf (200-400 HBW)</td> <td data-bbox="1368 416 1794 469">2 no.</td> </tr> <tr> <td data-bbox="302 469 1368 521">Vickers test block-HV<sub>1kgf</sub>(200-400 HV)</td> <td data-bbox="1368 469 1794 521">1 no.</td> </tr> <tr> <td data-bbox="302 521 1368 574">Vickers test block-HV<sub>5kgf</sub>(200-400 HV)</td> <td data-bbox="1368 521 1794 574">1 no.</td> </tr> <tr> <td data-bbox="302 574 1368 627">Vickers test block-HV<sub>10kgf</sub> (200-400 HV)</td> <td data-bbox="1368 574 1794 627">2 no.</td> </tr> <tr> <td data-bbox="302 627 1368 679">Vickers test block-HV<sub>30kgf</sub>(200-400 HV)</td> <td data-bbox="1368 627 1794 679">1 no.</td> </tr> <tr> <td data-bbox="302 679 1368 732">Rockwell test block; 10-30 HRB</td> <td data-bbox="1368 679 1794 732">1 no.</td> </tr> <tr> <td data-bbox="302 732 1368 785">Rockwell test block-50-90 HRB</td> <td data-bbox="1368 732 1794 785">1 no.</td> </tr> <tr> <td data-bbox="302 785 1368 837">Rockwell test block-20-40 HRC</td> <td data-bbox="1368 785 1794 837">2 no.</td> </tr> <tr> <td data-bbox="302 837 1368 890">Rockwell test block; Range: 41-65 HRC</td> <td data-bbox="1368 837 1794 890">3 no.</td> </tr> <tr> <td data-bbox="302 890 1368 943">Rockwell test block for N and T scale- Each 1 no.</td> <td data-bbox="1368 890 1794 943">Each 1no.</td> </tr> <tr> <td data-bbox="302 943 1368 995">Rockwell test block: 20-35 HRC</td> <td data-bbox="1368 943 1794 995">1 no.</td> </tr> </table>	Brinell test block-1mm/30kgf (200-400 HBW)	1 no.	Brinell test block-2.5mm/187.5kgf (200-400 HBW)	2 no.	Vickers test block-HV <sub>1kgf</sub> (200-400 HV)	1 no.	Vickers test block-HV <sub>5kgf</sub> (200-400 HV)	1 no.	Vickers test block-HV <sub>10kgf</sub> (200-400 HV)	2 no.	Vickers test block-HV <sub>30kgf</sub> (200-400 HV)	1 no.	Rockwell test block; 10-30 HRB	1 no.	Rockwell test block-50-90 HRB	1 no.	Rockwell test block-20-40 HRC	2 no.	Rockwell test block; Range: 41-65 HRC	3 no.	Rockwell test block for N and T scale- Each 1 no.	Each 1no.	Rockwell test block: 20-35 HRC	1 no.	Bidder to confirm
Brinell test block-1mm/30kgf (200-400 HBW)	1 no.																									
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Rockwell test block: 20-35 HRC	1 no.																									
<b>2.1.25</b>	<p><b>Anvil:</b> Flat support to hold samples of at least 50kg weight. - 1 no. ; Test tables shall have suitable mounts to test large size components also.</p> <p>Self centering V-anvils/ prism anvils to support cylindrical components <math>\varnothing</math>10mm to <math>\varnothing</math>80mm– 1 no.</p> <p>Spot anvil to hold thin specimens – 1 no.</p>	Bidder to confirm																								
<b>2.1.26</b>	<p><b>X-Y stage:</b> Automatic Motorized X-Y stage movement.</p> <p>X-Y stage size: 150X150mm(min.); X-Y stroke: 100X50mm(min.); X-Y stage accuracy: 1<math>\mu</math>m or better</p> <p>Min. sample weight in XY stage: 50kg(min.)</p> <p>Details of movement control by Joystick or software etc. to be provided.</p> <p><b>Z-Stage:</b> Height adjustment by motorized mode; Z-stage movement resolution: To be specified</p>	Bidder to confirm																								

**TECHNICAL SPECIFICATION : PART – B**

Clause	PARTICULARS AND BHEL SPECIFICATION	BIDDERS OFFER (With Technical Details)
2.1.27	<b>Safety systems:</b> Basic equipment must be equipped with safety features like emergency stop button, limit switches etc. Details of safety systems to be provided	Bidder to provide details
2.2.0	<p><b>Essential Accessories:</b> Bidder to attach un-priced list (priced list with <b>Unit Rate</b> shall be attached in the <b>commercial offer</b>) of various essential accessories to be procured with the equipment to enhance the operating efficiency and features of the offered equipment, over and above those mentioned in the specifications. Details of the accessories to be specified.</p> <p>Essential accessories shall include flat anvil, indenter for HV, HBW, HRC and HRB along with suitable lenses, PC with software package, Motorized X-Y stage, Safety systems, supporting cables etc. to ensure trouble-free operation of the equipment after installation.</p> <p>Bidder to attach un-priced list(priced list with Unit rate shall be attached in the commercial offer) of various essential accessories</p>	Bidder to provide details
2.3.0	<b>Optional Accessories:</b> Bidder to attach un-priced list (priced list with <b>Unit Rate</b> shall be attached in the <b>commercial offer</b> ) of various Optional accessories like other indenters, test blocks, special anvils and fixtures etc. to be procured with the equipment to enhance the operating efficiency and features of the offered equipment, over and above those mentioned in the specifications. Details of the accessories to be specified.	Bidder to provide details
2.4.0	<p><b>Essential Spares for 2 years trouble free operation:</b></p> <p>Bidder to attach un-priced list (priced list with Unit Rate shall be attached in the commercial offer) of various essential spares to be procured with the equipment for two years of trouble free Operations and Maintenance. Ordering No. And Details / Specifications of the spares to be mentioned.</p>	Bidder to provide details
2.4.1	All types of spares for the equipment and its accessories should be available for minimum <b>ten years</b> , after supply of the equipment. If any spares or controls are likely to become obsolete within this period, the Bidder should inform BHEL and provide details of its suppliers to enable BHEL to procure them in advance	Bidder to confirm
2.5.0	<b>Consumables:</b> Bidder to attach un-priced list (priced list with Unit Rate shall be attached in the commercial offer) of various consumables to be procured with the equipment for 10000 impressions. Details / specifications of the consumables to be mentioned.	Bidder to provide details
3.0	<p>Calibration: Along with the original calibration certificates, complete details of calibration procedures &amp; instructions, applicable standards, periodicity, acceptance criteria, methodology for corrections etc. Shall be provided.</p> <p>Details of Calibration Kit, if required. Should be quoted separately in the commercial bid.</p>	Bidder to provide details

**TECHNICAL SPECIFICATION : PART – B**

Clause	PARTICULARS AND BHEL SPECIFICATION	BIDDERS OFFER (With Technical Details)
<b>4.0</b>	<b>ELECTRICAL SYSTEM :</b>	
<b>4.1</b>	<b>415V + 10% / -10%, 50HZ +/- 1.5 HZ, 3 Phase AC (3 wire system without neutral) and / or 230V + 10% / -10%, 50HZ +/- 1.5 HZ, Single Phase AC through a 3 wire system (Phase, Neutral and Protective earthing) Power Supply Source will be provided by BHEL near the equipment. All types of cables, connections, circuit breakers etc. required for connecting BHEL's power supply point to the equipment, shall be the responsibility of Bidder.</b>	Bidder to confirm
<b>4.1</b>	<b>Tropicalisation:</b> All electrical / electronic equipment shall be tropicalized. All control cables should be of copper.	Bidder to confirm
<b>4.2</b>	All electrical & electronic control cabinets & panels should be dust and vermin proof and shall have IP 54 protection.	Bidder to confirm
<b>4.3</b>	Bidder should ensure the proper earthing for the machine and its peripherals.	Bidder to confirm
<b>5.0</b>	<b>Pre-Dispatch Inspection:</b> The equipment, its accessories, etc. shall be offered for inspection and performance prove-out to BHEL Engineers, prior to dispatch.	Bidder to confirm
<b>6.0</b>	<b>Installation &amp; Commissioning, Performance Prove-out&amp; training at BHEL:</b> The equipment, its accessories, etc. Shall be installed and commissioned at BHEL works by the service engineer of the supplier.	Bidder to confirm
	The service engineer has to calibrate the equipment and its accessories by direct and indirect methods and to carryout performance prove-out as per BHEL specifications.	Bidder to confirm
	The Service Engineer has to impart training to a minimum of 3 BHEL Engineers on the Operation, calibration, Data processing and Maintenance of the equipment and accessories.	Bidder to confirm
<b>7.0</b>	<b>Training at supplier's Works:</b> Training is to be given to two BHEL Engineers on the Calibration, Operation, Data processing and Maintenance of the equipment and accessories at Suppliers Works. Program details & training venue shall be indicated in the offer.	Bidder to confirm & Specify
<b>8.0</b>	<b>Performance Guarantee:</b> The equipment and its 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.	Bidder to confirm
<b>9.0</b>	<b>Service Support requirement:</b> Bidder shall ensure continuous AMC service support facilities in India after the guarantee period for a minimum period of 10 years, through trained Service personnel in India.	Bidder to confirm

**TECHNICAL SPECIFICATION : PART – B**

Clause	PARTICULARS AND BHEL SPECIFICATION	BIDDERS OFFER (With Technical Details)
10.0	<b>AMC (Annual Maintenance Contract):</b> The bidder has to quote for AMC under two patterns given below, for a period of three years after the expiry of original warranty period.	
10.1	<b>AMC - CASE-I:</b> Technical service for Preventive Maintenance, Trouble shooting and Re-commissioning of the equipment <b>excluding</b> the cost of Spares and Consumables (BHEL will not be responsible for the timely availability of Spares and Consumables).	
10.2	<b>AMC - CASE-II:</b> Technical service for Preventive Maintenance, Trouble shooting and Re-commissioning of the equipment <b>including</b> the cost of Spares and Consumables.	Bidder to provide details
10.3	<b>AMC Response time:</b> The bidder has to furnish / indicate the response time for the service engineer to be at BHEL works from the time of reporting the breakdown through e-mail or tele-fax.	
10.4	<b>AMC Service Calls:</b> The Bidder has to furnish details on service calls for preventive maintenance (number of calls and intervals) and Break-down maintenance.	
11.0	Documents should be submitted along with offer:	Bidder to provide details
	Apart from the details / documents mentioned above in various clauses, following documents in English language are to be submitted along with this technical offer, for technical evaluation.	
	Catalogues of the Equipment & Accessories	
	Details of bought out items with their specifications / catalogues	
12.0	Documents should be submitted at the time of Pre Despatch Inspection: Three sets of hard copies and one soft copy in CD, following mentioned documents in English language are to be submitted to BHEL Engineers at the time of Pre Dispatch Inspection:	Bidder to confirm
	Catalogues of the Equipment & Accessories	
	O&M manuals containing electric schematics, circuit diagrams, PCB drawings, Troubleshooting charts, mechanical sub-assemblies, Bill of materials etc.	
	List of bought out items with their specifications / catalogues.	

**TECHNICAL SPECIFICATION : PART – B**

Clause	PARTICULARS AND BHEL SPECIFICATION	BIDDERS OFFER (With Technical Details)
<b>13.0</b>	<b>Details of the Equipment offered:</b>	
<b>13.1</b>	Make:	Bidder to provide details
<b>13.2</b>	Model:	
<b>13.3</b>	Dimensions:	
<b>13.4</b>	Weight in Kg:	
<b>13.5</b>	Total Connected load in KW:	
<b>13.6</b>	Operating temperature:	
<b>13.7</b>	Humidity range:	