

DETAIL	INFORMATION
Contact Person and Address	M.NALLATHAMBI SENIOR MANAGER / CCDP PURCHASE DEPARTMENT/CCDP UNIT – HPBP BHEL, TIRUCHY, INDIA PIN : 620 014
Email	mnthambi@bheltry.co.in
Telephone	0091-431-257 7558, 257 7152
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Notification (Reference) No.	2811400011 – R&D Dt. 06/03/2014
Tender Title	SUPPLY OF COATING EQUIPMENTS
	BUY – Two Part
Brief Description	Coating Equipments as per the specification, commercial terms & conditions enclosed
Published in Newspaper	NO
Published On	--
Tender Value in Rs	--
EMD Value - Rs	NIL
Document Cost- Rs	NIL
Date of Issue of Notification -DD/MM/YY	
Date for Closure of Sale of Forms - DD/MM/YY	Not Applicable
Completed Forms to be submitted by - DD/MM/YY	04/04/2014 : 14.00 Hrs IST
Date of Opening for Technical Bids - DD/MM/YY	04/04/2014 : 14.30 Hrs IST

Note:

If the due date of tender opening happens to be a holiday, the tenders will be opened on the next working day.

All clarification may be sought at least seven days prior to tender due date from the undersigned with due written request.

Corrigendum if any, with respect to this tender will be hosted only in the website <http://www.bhel.com> (or) <http://tenders.gov.in>. You are requested to visit the website regularly for updates.

The offer should reach this office on or before the due date & we are not responsible for any postal delay. Late tender will not be considered.



BHARAT HEAVY ELECTRICALS LIMITED

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

PHONE :2577152
GRAMS : BHARATELEC
FAX NO: 2520193
E-mail: ssraj@bheltry.co.in
Web:

429-002/A

	Enquiry No	Enquiry Date	Due Date for Quotation
	2811400011 - R&D	06.03.2014	04.04.2014
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	Ultrasonic Precision Thickness Gauge with transducer as per the enclosed specification Ultrasonic Precision Thickness Gauge	NO	1.000	1.00	15.05.14
20	Portable Hardness Tester as per the enclosed specification Portable Hardness Tester	NO	1.000	1.00	15.05.14
30	Surface Roughness Tester as per the enclosed specification Surface Roughness Tester	NO	1.000	1.00	15.05.14
40	Cross Hatch Cutter for Adhesion Tests as per the enclosed specification Cross Hatch Cutter for Adhesion Tests	NO	1.000	1.00	15.05.14
50	Hydraulic Adhesion Testers as per the enclosed specification Hydraulic Adhesion Testers	NO	1.000	1.00	15.05.14
60	Cylindrical Mandrel Bend Tester as per the enclosed specification Cylindrical Mandrel Bend Tester	NO	1.000	1.00	15.05.14
70	Variable Impact Tester as per the enclosed specification Variable Impact Tester	NO	1.000	1.00	15.05.14
80	Infra red Thermometer as per the enclosed specification Infra red Thermometer	NO	1.000	1.00	15.05.14

General Note:

NOTE :

- 1) Offer will be invited in TWO PART BID only
(Technical bid and Price bid - Two separate covers- "TECHNICAL BID")

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

Yours faithfully,
For BHARAT HEAVY ELECTRICALS LIMITED

S. SUBBURAJ
Manager
Purchase / R&D and CR
Bharat Heavy Electricals Limited
Trichirappalli - 620 014

[Signature]
MANAGER / PURCHASE
(FOSSIL BOILERS)
Yours faithfully,



BHARAT HEAVY ELECTRICALS LIMITED

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

PHONE :2577152
GRAMS : BHARATELEC
FAX NO: 2520193
E-mail: ssraj@bheltry.co.in
Web

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Cover and "PRICE BID" Cover);

- 2) If regretted make mention on the top of the reply cover as "REGRETTED";
- 3) LD Clause for delivery has to be confirmed without fail.
Otherwise we would assume that you have accepted our LD Clause;
- 4) Test and Guarantee certificate is required.
- 5) BHEL preferred payment term is "100% direct Payment after 45 days from the date of receipt and acceptance of the material";
- 6) Advance or Proforma Invoice payment is not accepted;
- 7) Transport and Delivery at BHEL - shall be Vendor's scope;
- 8) Tender details also hosted in BHEL Web : www.bhel.com.
- 9) No Revision of prices will be entertained after the price bid opening;
- 10) Offer validity should be minimum 60 days from the date of price bid opening.
- 11) Qualifying criteria and technical specification enclosed.

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 tenderers who have submitted their offer and who may like to be present for the tender opening. Late and delayed offers are liable to be rejected.

Yours faithfully,
For BHARAT HEAVY ELECTRICALS LIMITED

G. SUBBURAJ
Manager
Purchase / R&D and CR
Bharat Heavy Electricals Limited
Tiruchirappalli - 620 014

[Signature]
MANAGER / PURCHASE
(FOSSIL BOILERS)
Yours faithfully,

BHEL, TRICHY – 620014
Purchase / CCDP

QUALIFYING CRITERIA

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

BHEL will study both the Qualifying Criteria and Response for Technical Specifications. The Price bid can be studied only if both the Qualifying Criteria and Response for Technical Specifications are found acceptable otherwise rejected.

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: “**Ultrasonic Precision Thickness Gauge**”. Refer Technical Specification 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 “ Ultrasonic Precision Thickness Gauge ”. Please indicate the actual experience.	
2.0	YEAR of launch of the Model quoted against this ENQUIRY	
3.0	Number of “ Ultrasonic Precision Thickness Gauge ” supplied till date in India. Please furnish contact person name, address, phone number, fax number and mail id.	
3.1	Number of “ Ultrasonic Precision Thickness Gauge ” supplied till date outside India. Please furnish contact person name, address, phone number, fax number and mail id.	
4.0	Details of Design Set-Up and Technology Back-Up assured from the PRINCIPAL Equipment Maker.	
5.0	Details on Service-after-Sales set-up in India including the addresses of Agents/Service Centre in India.	
6.0	The BIDDER / VENDOR shall submit the offer in TWO PARTS namely “ <u>Technical Bid</u> ” & “ <u>Price Bid</u> ”.	

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TECHNICAL SPECIFICATION FOR ULTRASONIC COATING THICKNESS GAUGE

Sl. No	Particulars	BHEL specifications	Vendor's Confirmation [With complete technical details]	Deviation, if any
1	Application	Measuring the powder coating thickness for All metallic material (Ferrous and Non ferrous material)		
2	Confirmation for each point of specification.	Vendor is requested to give specific confirmation for each point. Deviations if any shall be clearly indicated.		
3	Scope of Vendor	<ol style="list-style-type: none"> 1. Design, Manufacture, Testing, at vendor's works. 2. Installation & Maintenance manuals, Mandatory Spares. 3. Training, Installation, Commissioning & Proving performance at BHEL, Trichy. 4. On-site Guarantee, On-site Annual Maintenance Contract. 		
4	Coating thickness gauge	<ol style="list-style-type: none"> 1. Measurement range: 0 to 1500 micron 2. Operating Temperature: 0°C to 50°C 3. Resolution: 1 micron 4. Storage Temperature: -10°C to 60°C 5. Accuracy: less than 2 micron 6. Min. measuring area:6mm 7. Measurement Speed: Greater than 60 readings per minute 8. Maximum Operating Temperature (probe): 80°C 9. Gauge weight: less than 0.5kg 		
5	Applicability	Easily Attaches to Curved and Flat Surfaces		
6	Battery	<ol style="list-style-type: none"> 1. Batteries: rechargeable batteries and 2. Battery life: ~24 hours of continuous use at 1 reading per second 3. Battery indicator: low battery indicator 		
7	Additional features	<ol style="list-style-type: none"> 1. Bright colour screen; with permanent back light 2. Calibration lock; <i>with optional PIN code unlock</i> 3. USB; <i>to computer</i> 4. On screen statistics (Number of readings, Mean (average), Standard deviation, etc.,) 		

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		<ul style="list-style-type: none"> 5. Automatic calibration 6. Tough, impact, water & dust resistant 7. Scratch & solvent resistant display 8. Ambient light sensor; <i>with auto brightness adjust</i> 		
8	Test Certificate	Certificate of Test - for this equipment and supplied with readings. A Certificate of Inspection states the instrument is tested in accordance with ASTM standard.		
9	Along with offer the following details in hard copies shall be indicated.	<ul style="list-style-type: none"> 1. Catalogs - 2 copies. 2. Accessories with Unit price if applicable 3. List of software. 		
10	Performance Prove-Out at BHEL, Trichy	The Supplier's Service Engineer has to conduct demonstration & calibration of the Coating thickness measuring gauge with Accessories at BHEL, Trichy.		
11	Onsite Performance Guarantee	The sensor & Accessories (including Bought-Out Items) are to be guaranteed for its performance for a minimum period of 2 year from the date of performance acceptance at BHEL, Trichy.		
12	Installation and O&M manual in ENGLISH Language	2 Nos 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. In addition, one soft copy in CD is to be supplied.		

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QUALIFYING CRITERIA

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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: “Portable Hardness Tester” Refer Technical Specification 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 “ Portable Hardness Tester ”. Please indicate the actual experience.	
2.0	YEAR of launch of the Model quoted against this ENQUIRY	
3.0	Number of “ Portable Hardness Tester ” supplied till date in India. Please furnish contact person name, address, phone number, fax number and mail id.	
3.1	Number of “ Portable Hardness Tester ” supplied till date outside India. Please furnish contact person name, address, phone number, fax number and mail id.	
4.0	Details of Design Set-Up and Technology Back-Up assured from the PRINCIPAL Equipment Maker.	
5.0	Details on Service-after-Sales set-up in India including the addresses of Agents/Service Centre in India.	
6.0	The BIDDER / VENDOR shall submit the offer in TWO PARTS namely “ <u>Technical Bid</u> ” & “ <u>Price Bid</u> ”.	

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TECHNICAL SPECIFICATION FOR PORTABLE HARDNESS TESTER

Sl. No	Particulars	BHEL specifications	Vendor's Confirmation [With complete technical details]	Deviation, if any
1	Application	Measuring the micro Vickers hardness of the coating surface		
2	Confirmation for each point of specification.	Vendor is requested to give specific confirmation for each point. Deviations if any shall be clearly indicated.		
3	Scope of Vendor	5. Design, Manufacture, Testing, at vendor's works. 6. Installation & Maintenance manuals, Mandatory Spares. 7. Training, Installation, Commissioning & Proving performance at BHEL, Trichy. 8. On-site Guarantee, On-site Annual Maintenance Contract.		
4	Hardness testing machine	10. Measurement load: less than 0.5kg 11. Operating Temperature: 0°C to 50°C 12. Resolution: 1 micron 13. Storage Temperature: -10°C to 60°C 14. Accuracy: less than 2 micron 15. Measurement Speed: Greater than 60 readings per minute 16. Maximum Operating Temperature (probe): 80°C 17. Gauge weight: less than 3kg		
5	Applicability	Easily Attaches to Curved and Flat Surfaces		
6	Battery	4. Batteries: rechargeable batteries and 5. Battery life: ~10 hours of continuous use at 1 reading per second		
7	Additional features	9. Tough, impact, water & dust resistant 10. Scratch & solvent resistant display		
8	Test Certificate	Certificate of Test - for this equipment and supplied with readings. A Certificate of Inspection states the instrument is tested in accordance with ASTM standard.		
9	Along with offer the following	4. Catalogs - 2 copies. 5. Accessories with Unit price if applicable		

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	details in hard copies shall be indicated.	6. List of software.		
10	Performance Prove-Out at BHEL, Trichy	The Supplier's Service Engineer has to conduct demonstration & calibration of the Coating thickness measuring gauge with Accessories at BHEL, Trichy.		
11	Onsite Performance Guarantee	The sensor & Accessories (including Bought-Out Items) are to be guaranteed for its performance for a minimum period of 2 year from the date of performance acceptance at BHEL, Trichy.		
12	Installation and O&M manual in ENGLISH Language	2 Nos 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. In addition, one soft copy in CD is to be supplied.		

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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: “Surface Roughness Tester”. Refer Technical Specification 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 “ Surface Roughness Tester ”. Please indicate the actual experience.	
2.0	YEAR of launch of the Model quoted against this ENQUIRY	
3.0	Number of “ Surface Roughness Tester ” supplied till date in India. Please furnish contact person name, address, phone number, fax number and mail id.	
3.1	Number of “ Surface Roughness Tester ” supplied till date outside India. Please furnish contact person name, address, phone number, fax number and mail id.	
4.0	Details of Design Set-Up and Technology Back-Up assured from the PRINCIPAL Equipment Maker.	
5.0	Details on Service-after-Sales set-up in India including the addresses of Agents/Service Centre in India.	
6.0	The BIDDER / VENDOR shall submit the offer in TWO PARTS namely “ <u>Technical Bid</u> ” & “ <u>Price Bid</u> ”.	

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TECHNICAL SPECIFICATION FOR SURFACE ROUGHNESS TESTER

Sl. No	Particulars	BHEL specification	Vendor's Confirmation [With complete technical details]	Deviation, if any
1	Application	Measuring the surface roughness of the coating surface		
2	Confirmation for each point of specification.	Vendor is requested to give specific confirmation for each point. Deviations if any shall be clearly indicated.		
3	Scope of Vendor	9. Design, Manufacture, Testing, at vendor's works. 10. Installation & Maintenance manuals, Mandatory Spares. 11. Training, Installation, Commissioning & Proving performance at BHEL, Trichy. 12. On-site Guarantee, On-site Annual Maintenance Contract.		
4	Surface Roughness tester	18. Measuring Principle: Stylus Method 19. Stylus Pick-Up Supplied: Inductive skidded stylus pick-up, 2 μ m diamond stylus tip, measuring force approx. 0.7 mN 20. Parameters: 24 (with tolerance limits): Ra, Rq, Rz equiv. to Ry (JIS), Rz (JIS), Rmax, Rp, Rp (ASME), Rpm (ASME), Rpk, Rk, Rvk, Mr1, Mr2, A1, A2, Vo, Rt, R3z, RPc, Rmr equiv. to Tp (JIS, ASME), RSm, R, Ar, Rx 21. Measurement range: Ra: 0.05-10.0 μ Rz: 0.1-50 μ (changes automatically) 22. Profile resolution: 32nm, 16nm, 8nm (changes automatically) 23. Operating Temperature: 0°C to 50°C 24. Tracing Speed : 1 mm/s 25. Min Tracing length : 6mm 26. Cut-off length: 0.25mm/0.8mm/2.5mm 27. Evaluation Length: 1.25mm/4.0mm/5.0mm 28. Repeatability: less than 10% 29. Radius And Angle Of the Stylus Point : Diamond, Radius : 10 \pm 2.5 μ Angle: 90°(+5°Or -10°)		

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		30. Memory capacity: Max. 15 profiles, max. 20,000 results 31. Interfaces: USB 32. Power supply: 230V/1 P/ 50Hz 33. Weight: less than 0.5kg		
5	Applicability	Easily measure to Curved and Flat Surfaces		
6	Battery	6. Batteries: rechargeable batteries and 7. Battery life: ~12 hours of continuous use at 1 reading per second		
7	Test Certificate	Certificate of Test - for this equipment and supplied with readings. A Certificate of Inspection states the instrument is tested in accordance with ASTM standard.		
8	Along with offer the following details in hard copies shall be indicated.	7. Catalogs - 2 copies. 8. Accessories with Unit price if applicable 9. List of software.		
9	Performance Prove-Out at BHEL, Trichy	The Supplier's Service Engineer has to conduct demonstration & calibration of the Coating thickness measuring gauge with Accessories at BHEL, Trichy.		
10	Onsite Performance Guarantee	The sensor & Accessories (including Bought-Out Items) are to be guaranteed for its performance for a minimum period of 2 year from the date of performance acceptance at BHEL, Trichy.		
11	Installation and O&M manual in ENGLISH Language	2 Nos 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. In addition, one soft copy in CD is to be supplied.		

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QUALIFYING CRITERIA

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

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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: “Cross Hatch Cutter”. Refer Technical Specification 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 “ Cross Hatch Cutter ”. Please indicate the actual experience.	
2.0	YEAR of launch of the Model quoted against this ENQUIRY	
3.0	Number of “ Cross Hatch Cutter ” supplied till date in India. Please furnish contact person name, address, phone number, fax number and mail id.	
3.1	Number of “ Cross Hatch Cutter ” supplied till date outside India. Please furnish contact person name, address, phone number, fax number and mail id.	
4.0	Details of Design Set-Up and Technology Back-Up assured from the PRINCIPAL Equipment Maker.	
5.0	Details on Service-after-Sales set-up in India including the addresses of Agents/Service Centre in India.	
6.0	The BIDDER / VENDOR shall submit the offer in TWO PARTS namely “ <u>Technical Bid</u> ” & “ <u>Price Bid</u> ”.	

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TECHNICAL SPECIFICATION FOR CROSS HATCH CUTTER

Sl. No	Particulars	BHEL specification	Vendor's Confirmation [With complete technical details]	Deviation, if any
1	Application	Measuring the instant assessment of the quality of the bond to the substrate		
2	Confirmation for each point of specification.	Vendor is requested to give specific confirmation for each point. Deviations if any shall be clearly indicated.		
3	Scope of Vendor	13. Design, Manufacture, Testing, at vendor's works. 14. Installation & Maintenance manuals, Mandatory Spares. 15. Training, Installation, Commissioning & Proving performance at BHEL, Trichy. 16. On-site Guarantee, On-site Annual Maintenance Contract.		
4	Cross Hatch Cutter	34. Cutter: a. Cutting Teeth: 6 b. Tooth/slot spacing: 2mm 35. Hexagonal wrench 36. Eye glass 37. Brush and ASTM D3359 Adhesive Tape 38. Plastic ABS carry case 39. Operating Temperature: 0°C to 50°C 40. Weight: less than 0.5kg		
5	Applicability	This gauge should be ideal for thin, thick or tough coatings on flat or curved surfaces. Easy to change cutters Ideal for thick or hard coatings		
6	Battery	8. Batteries: rechargeable batteries and 9. Battery life: ~12 hours of continuous use at 1 reading per second		
7	Test Certificate	Certificate of Test - for this equipment and supplied with readings. A Certificate of Inspection states the instrument is tested in accordance with ASTM standard.		
8	Along with offer the following	10. Catalogs - 2 copies. 11. Accessories with Unit price if applicable		

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	details in hard copies shall be indicated.	12. List of software.		
9	Performance Prove-Out at BHEL, Trichy	The Supplier's Service Engineer has to conduct demonstration & calibration of the Coating thickness measuring gauge with Accessories at BHEL, Trichy.		
10	Onsite Performance Guarantee	The sensor & Accessories (including Bought-Out Items) are to be guaranteed for its performance for a minimum period of 2 year from the date of performance acceptance at BHEL, Trichy.		
11	Installation and O&M manual in ENGLISH Language	2 Nos 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. In addition, one soft copy in CD is to be supplied.		

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QUALIFYING CRITERIA

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BHEL will study both the Qualifying Criteria and Response for Technical Specifications. The Price bid can be studied only if both the Qualifying Criteria and Response for Technical Specifications are found acceptable otherwise rejected.

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: “Hydraulic Adhesion Testers” Refer Technical Specification 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 “ Hydraulic Adhesion Testers ”. Please indicate the actual experience.	
2.0	YEAR of launch of the Model quoted against this ENQUIRY	
3.0	Number of “ Hydraulic Adhesion Testers ” supplied till date in India. Please furnish contact person name, address, phone number, fax number and mail id.	
3.1	Number of “ Hydraulic Adhesion Testers ” supplied till date outside India. Please furnish contact person name, address, phone number, fax number and mail id.	
4.0	Details of Design Set-Up and Technology Back-Up assured from the PRINCIPAL Equipment Maker.	
5.0	Details on Service-after-Sales set-up in India including the addresses of Agents/Service Centre in India.	
6.0	The BIDDER / VENDOR shall submit the offer in TWO PARTS namely “ <u>Technical Bid</u> ” & “ <u>Price Bid</u> ”.	

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TECHNICAL SPECIFICATION FOR HYDRAULIC (PULL OFF) ADHESION TESTER

Sl. No	Particulars	BHEL specifications	Vendor's Confirmation [With complete technical details]	Deviation, if any
1	Application	Measuring the adhesion strength for coatings on Tanks, Pipelines, etc.		
2	Confirmation for each point of specification.	Vendor is requested to give specific confirmation for each point. Deviations if any shall be clearly indicated.		
3	Scope of Vendor	17. Design, Manufacture, Testing, at vendor's works. 18. Installation & Maintenance manuals, Mandatory Spares. 19. Training, Installation, Commissioning & Proving performance at BHEL, Trichy. 20. On-site Guarantee, On-site Annual Maintenance Contract.		
4	Push off adhesion tester	41. Instrument type: Digital 42. Operating range: 4 MPa - 50 MPa 43. Scale range: 0 MPa - 34 MPa 44. Digital Scale resolution: 0.01 MPa 45. Accuracy: $\pm 1\%$ of full scale 46. Operating Temperature: 0°C to 50°C 47. Net Weight: less than 2kg 48. Dolly size: Outside Dia 14.2 mm and Inside Dia 3.7mm and Area 284 sq. m 49. curved dollies 50. Operating Pressure rating of pressure hose: 34 MPa 51. Max Pressure rating of pressure hose: min 138 MPa 52. Operating Pressure rating of connector: min 60 MPa 53. Max Pressure rating of connector: 120 MPa		
5	Applicability	This gauge should be ideal for thin, thick or tough coatings on flat or curved surfaces.		
6	Adhesive	10. Type: Cyanoacrylate 11. Storage temperature: +6°C to +22°C		

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		12. Shelf life: 6 months		
7	Battery	1. Batteries: rechargeable batteries and 2. Battery life: ~12 hours of continuous use at 1 reading per second		
8	Special feature	Reusable stainless steel dollies Ideal for thick or hard coatings LED with Backlight display		
9	Test Certificate	Certificate of Test - for this equipment and supplied with readings. A Certificate of Inspection states the instrument is tested in accordance with ASTM standard.		
11	Along with offer the following details in hard copies shall be indicated.	13. Catalogs - 2 copies. 14. Accessories with Unit price if applicable 15. List of software.		
11	Performance Prove-Out at BHEL, Trichy	The Supplier's Service Engineer has to conduct demonstration & calibration of the Coating thickness measuring gauge with Accessories at BHEL, Trichy.		
12	Onsite Performance Guarantee	The sensor & Accessories (including Bought-Out Items) are to be guaranteed for its performance for a minimum period of 2 year from the date of performance acceptance at BHEL, Trichy.		
13	Installation and O&M manual in ENGLISH Language	2 Nos 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. In addition, one soft copy in CD is to be supplied.		

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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: “Cylindrical Mandrel Bend Tester” Refer Technical Specification 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 “ Cylindrical Mandrel Bend Tester ”. Please indicate the actual experience.	
2.0	YEAR of launch of the Model quoted against this ENQUIRY	
3.0	Number of “ Cylindrical Mandrel Bend Tester ” supplied till date in India. Please furnish contact person name, address, phone number, fax number and mail id.	
3.1	Number of “ Cylindrical Mandrel Bend Tester ” supplied till date outside India. Please furnish contact person name, address, phone number, fax number and mail id.	
4.0	Details of Design Set-Up and Technology Back-Up assured from the PRINCIPAL Equipment Maker.	
5.0	Details on Service-after-Sales set-up in India including the addresses of Agents/Service Centre in India.	
6.0	The BIDDER / VENDOR shall submit the offer in TWO PARTS namely “ <u>Technical Bid</u> ” & “ <u>Price Bid</u> ”.	

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TECHNICAL SPECIFICATION FOR CYLINDRICAL MANDREL BEND TESTER

Sl. No	Particulars	BHEL specification	Vendor's Confirmation [With complete technical details]	Deviation, if any
1	Application	Determining the elasticity, adhesion and elongation properties of cured coatings on base metal.		
2	Confirmation for each point of specification.	Vendor is requested to give specific confirmation for each point. Deviations if any shall be clearly indicated.		
3	Scope of Vendor	21. Design, Manufacture, Testing, at vendor's works. 22. Installation & Maintenance manuals, Mandatory Spares. 23. Training, Installation, Commissioning & Proving performance at BHEL, Trichy. 24. On-site Guarantee, On-site Annual Maintenance Contract.		
4	Bend tester	1. Maximum width of specimen : 64 mm 2. Maximum length of specimen : 80 to 100 mm depending on the size of the mandrel used 3. Operating Temperature: 0°C to 50°C 4. Net Weight: less than 5kg 5. Mandrel sizes 2, 3, 4, 5, 6, 8, 10, 12, 13, 16, 19, 20, 25, 32 mm 6. Quote price per mandrel by vendor		
5	Test Certificate	Certificate of Test - for this equipment and supplied with readings. A Certificate of Inspection states the instrument is tested in accordance with ASTM standard.		
6	Along with offer the following details in hard copies shall be indicated.	16. Catalogs - 2 copies. 17. Accessories with Unit price if applicable 18. List of software.		
7	Performance Prove-Out at BHEL, Trichy	The Supplier's Service Engineer has to conduct demonstration & calibration of the Coating thickness measuring gauge with Accessories at BHEL, Trichy.		

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8	Onsite Performance Guarantee	The sensor & Accessories (including Bought-Out Items) are to be guaranteed for its performance for a minimum period of 2 year from the date of performance acceptance at BHEL, Trichy.		
9	Installation and O&M manual in ENGLISH Language	2 Nos 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. In addition, one soft copy in CD is to be supplied.		

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QUALIFYING CRITERIA

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

BHEL will study both the Qualifying Criteria and Response for Technical Specifications. The Price bid can be studied only if both the Qualifying Criteria and Response for Technical Specifications are found acceptable otherwise rejected.

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: “Variable Impact Tester”. Refer Technical Specification 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 “ Variable Impact Tester ”. Please indicate the actual experience.	
2.0	YEAR of launch of the Model quoted against this ENQUIRY	
3.0	Number of “ Variable Impact Tester ” supplied till date in India. Please furnish contact person name, address, phone number, fax number and mail id.	
3.1	Number of “ Variable Impact Tester ” supplied till date outside India. Please furnish contact person name, address, phone number, fax number and mail id.	
4.0	Details of Design Set-Up and Technology Back-Up assured from the PRINCIPAL Equipment Maker.	
5.0	Details on Service-after-Sales set-up in India including the addresses of Agents/Service Centre in India.	
6.0	The BIDDER / VENDOR shall submit the offer in TWO PARTS namely “ <u>Technical Bid</u> ” & “ <u>Price Bid</u> ”.	

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TECHNICAL SPECIFICATION FOR VARIABLE IMPACT TESTER

Sl. No	Particulars	BHEL specification	Vendor's Confirmation [With complete technical details]	Deviation, if any
1	Application	Evaluating the resistance of a coating to impact (elongation, cracking or peeling).		
2	Confirmation for each point of specification.	Vendor is requested to give specific confirmation for each point. Deviations if any shall be clearly indicated.		
3	Scope of Vendor	25. Design, Manufacture, Testing, at vendor's works. 26. Installation & Maintenance manuals, Mandatory Spares. 27. Training, Installation, Commissioning & Proving performance at BHEL, Trichy. 28. On-site Guarantee, On-site Annual Maintenance Contract.		
4	Variable Impact Tester	54. Guide tube Scale length: 0cm to 100cm 55. Guide tube total length: less than 1.5 m 56. Falling 1kg weight with a 20mm and 12.7 mm punch 57. Stop collar 58. 27mm and 16.3mm die with fixing screw 59. Sample clamp with two fixing screws 60. 3mm and 4mm hexagonal wrench 61. Static indenter with 15.9mm punch 62. Operating Temperature: 0°C to 50°C 63. Net Weight: less than 15kg		
5	Test Certificate	Certificate of Test - for this equipment and supplied with readings. A Certificate of Inspection states the instrument is tested in accordance with ASTM standard.		
6	Along with offer the following details in hard copies shall be indicated.	19. Catalogs - 2 copies. 20. Accessories with Unit price if applicable 21. List of software.		

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7	Performance Prove-Out at BHEL, Trichy	The Supplier's Service Engineer has to conduct demonstration & calibration of the Coating thickness measuring gauge with Accessories at BHEL, Trichy.		
8	Onsite Performance Guarantee	The sensor & Accessories (including Bought-Out Items) are to be guaranteed for its performance for a minimum period of 2 year from the date of performance acceptance at BHEL, Trichy.		
9	Installation and O&M manual in ENGLISH Language	2 Nos 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. In addition, one soft copy in CD is to be supplied.		

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QUALIFYING CRITERIA

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

BHEL will study both the Qualifying Criteria and Response for Technical Specifications. The Price bid can be studied only if both the Qualifying Criteria and Response for Technical Specifications are found acceptable otherwise rejected.

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: “**Infra Red Thermometer**”. Refer Technical Specification 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 “ Infra Red Thermometer ”. Please indicate the actual experience.	
2.0	YEAR of launch of the Model quoted against this ENQUIRY	
3.0	Number of “ Infra Red Thermometer ” supplied till date in India. Please furnish contact person name, address, phone number, fax number and mail id.	
3.1	Number of “ Infra Red Thermometer ” supplied till date outside India. Please furnish contact person name, address, phone number, fax number and mail id.	
4.0	Details of Design Set-Up and Technology Back-Up assured from the PRINCIPAL Equipment Maker.	
5.0	Details on Service-after-Sales set-up in India including the addresses of Agents/Service Centre in India.	
6.0	The BIDDER / VENDOR shall submit the offer in TWO PARTS namely “ <u>Technical Bid</u> ” & “ <u>Price Bid</u> ”.	

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TECHNICAL SPECIFICATION FOR INFRA RED THERMOMETER

Sl. No	Particulars	BHEL specification	Vendor's Confirmation [With complete technical details]	Deviation, if any
1	Application	Measuring the surface Temperature of the coating surface		
2	Confirmation for each point of specification.	Vendor is requested to give specific confirmation for each point. Deviations if any shall be clearly indicated.		
3	Scope of Vendor	29. Design, Manufacture, Testing, at vendor's works. 30. Installation & Maintenance manuals, Mandatory Spares. 31. Training, Installation, Commissioning & Proving performance at BHEL, Trichy. 32. On-site Guarantee, On-site Annual Maintenance Contract.		
4	IR Thermometer	13. Measurement range: -50 to 2200°C 14. Operating Temperature: 0°C to 50 °C 15. Laser Pointer: less than 1mW power and Wavelength is 630 to 670 nm. 16. IR Accuracy: less than 1% of reading 17. Resolution: 0.1°C at least up to 1000°C, 1°C over 1000°C 18. Optical resolution: Distance to spot ratio50:1 19. Response time: 150m sec 20. Emissivity: Automatic adjustable type (range 0.1 to 1) 21. Type K Temperature range: -50 to 1370°C 22. Type K Accuracy: less than 1.5% of reading 23. Reading memories: Min 99 24. Weight: less than 0.5kg		
5	Battery	1. Batteries: rechargeable batteries and 2. Battery life: ~12 hours of continuous use at 1 reading per second		
6	Test Certificate	Certificate of Test - for this equipment and supplied with readings. A Certificate of Inspection states the instrument is		

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		tested in accordance with ASTM standard.		
7	Special features	<ol style="list-style-type: none"> 1. Laser Targeting 2. Simple One-Handed operation. 3. LCD With Back Light with function indicator. 4. USB Interface 		
8	Along with offer the following details in hard copies shall be indicated.	<ol style="list-style-type: none"> 5. Catalogs - 2 copies. 6. Accessories with Unit price if applicable 7. List of software. 		
9	Performance Prove-Out at BHEL, Trichy	The Supplier's Service Engineer has to conduct demonstration & calibration of the Coating thickness measuring gauge with Accessories at BHEL, Trichy.		
10	Onsite Performance Guarantee	The sensor & Accessories (including Bought-Out Items) are to be guaranteed for its performance for a minimum period of 2 year from the date of performance acceptance at BHEL, Trichy.		
11	Installation and O&M manual in ENGLISH Language	2 Nos 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. In addition, one soft copy in CD is to be supplied.		



An ISO 9001 Company

Bharat Heavy Electricals Limited
Purchase Dept /R&D and Cr
Tiruchirappalli-620014, Tamil Nadu, India

COMMERCIAL TERMS AND CONDITIONS FOR SUBMISSION OF OFFER

1.0 QUOTATIONS

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

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

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

Both the envelopes (Part I & II) shall be put in one cover, duly sealed, superscribing as Part I and Part II 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. We suggest you to send the offer by SPEED POST.

Tender should not be addressed to any Individual's name but only by designation to:

AGM / CCDP
Purchase Department
BHARAT HEAVY ELECTRICALS LIMITED
TIRUCHIRAPALLI - 620 014
TAMIL NADU, INDIA

Tenders should be free from **CORRECTION AND ERASURES**, Corrections if any, must be attested. All amounts 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 details of process facility in **ENGLISH**.

2.0 PART I (TECHNICAL & UNPRICED COMMERCIAL BID)

2.1 Technical

This part shall include / indicate the following:

Offer should contain complete scope of supply with all technical details, specifications, delivery and other commercial terms and conditions.

2.2 Commercial

This part shall include / indicate the following:

- 2.2.1. Port of shipment / Station of despatch
- 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. A copy of "Un-Priced Part II" i.e., a copy of the Price Bid **without the price details** to be enclosed.
(Incomplete offers shall be liable for rejection).

3.0 PART II (PRICE- BID)

This part should contain the schedule of price particulars and to be co-related to the technical details provided in Part I. Wherever required / possible break up price details are to be furnished. (Bidders shall quote only fixed rate / price only and not subject to any escalation whatsoever during the period of bid validity and execution of purchase order. Any bid with adjustable or price variation clause shall be treated as "non responsive" and liable for rejection).

4.0 OPENING OF TENDERS

The Part I - Technical & commercial bid alone would be opened on the Tender opening date at the pre-fixed time. In presence of responded tenderers / authorised representative, who may like to be present for tender opening.

The Part II - 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 II - price bid.

5.0 GENERAL

5.1. Incomplete offers will not be considered.

5.2. **Terms of Delivery:** Bidders are required to quote their best delivery period. Delivery shall be counted from the date of Letter of Intent.

5.3. Taxes and Duties : All Taxes and Duties if any payable extra over and above the quoted price should be specifically indicated in the un-priced bid along with CST & TIN No etc., failing which the purchaser will not be liable for payment of such Taxes and Duties (the quoted rates shall be considered as "all inclusive").

Note : We are not eligible to issue C Form.

5.4. Validity of Offer : Offer shall be kept valid for acceptance for a period of 60 days (sixty days) from the date of opening of the price bid.

5.5. Payment terms : Payment term is 100% direct payment after 45 days from the date of receipt and acceptance of materials. (Any deviation in the above payment term will attract loading as mentioned below.

"Base rate of SBI (as applicable on the date of Techno-commercial bid opening) + 6% will be loaded for the period of relaxation sought by bidders.

Payment through Bank is not preferred. In case of Payment through Bank is opted by Supplier, BHEL prefers documents submission through bank with copy of LR and door delivery of Goods to Stores with Consignee copy attached. In this case Loading will be 3% on the offered value.

5.6. 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. Failure to dispatch the materials in the time as per the delivery quoted in our Purchase Order would make the supplier liable to an un-conditional penalty as below

a. Liquidated damages shall be 0.5% of the total order value per week or part there of subject to a maximum of 10% of the total order value.

b. For staggered delivery schedule, LD shall be 0.5% of the undelivered portion per week of the delay or part there of subject to a maximum of 10% of the total order value.

c. Any deviation from the above LD clause, loading will be applied to the extent to which it is not agreed by the bidder (at offered value).

5.7. 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.

5.8. Test certificates: The Bidders shall clearly mention in their offer that Test Certificates as called for in the Technical Specification, in the required number of copies will be provided at no extra cost.

5.9. Evaluation of the offers shall be on the basis of "To-Door Cost at BHEL, Trichy (Net Cash outflow to BHEL). BHEL will consider the ranking after the loading is applied as referred above wherever deviations are observed.



BHARAT HEAVY ELECTRICALS LIMITED
TIRUCHIRAPALLI – 620014

PURCHASE / R&D and CR

ANNEXURE TO PURCHASE ENQUIRY

1. PRICE : Ex-Works / Ex-Godown (or) F.O.R- DESTINATION
2. DISCOUNT : % (or) Lumpsum amount Rs
3. PACKING & FORWARDING : % (or) Lumpsum amount Rs
4. TAX : VAT.....% / CST %
(CST Without C FORM)
5. SURCHARE :%
6. DUTIES :%
7. FREIGHT & INSURANCE :
8. DELIVERY PLACE :
9. DELIVERY PERIOD :
10. LD / PENALTY FOR DELAY IN DELIVERY : @ 0.5% PER WEEK SUBJECT TO A MAXIMUM OF 10% IS APPLICABLE. ACCEPTED
11. OFFER VALIDTY :
12. PAYMENT TERM : 100% direct Payment after 45 Days from the date of Receipt and Acceptance of the Material.
13. GUARANTEE / TEST CERTIFICATE :

SIGNATURE OF SUPPLIER WITH SEAL

NOTE : Please do not Quote as EXTRA. Quote the rate in % or the amount as lumpsum. (Rates of applicable Taxes & Duties, whether inclusive or exclusive should also be mentioned).