



An ISO 9001
Company

Bharat Heavy Electricals Limited

(High Pressure Boiler Plant)

Tiruchirapalli – 620014, TAMIL NADU, INDIA

CAPITAL EQUIPMENT / MATERIALS MANAGEMENT

ENQUIRY

NOTICE INVITING TENDER

Phone: +91 431 257 7421

Email : vkarna@bhel.in

spcy@bhel.in

Web : www.bhel.com

TWO PART BID

Tender to be submitted in two Parts

Enquiry
Number:

2731900011

Enquiry
Date:

03.05.2019

Due date for submission
of quotation:

31.05.2019

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 should reach physically on or before 14.00 Hrs(IST) on the Date of tender opening. Tenders received after 14.00Hrs (IST) will not be considered for evaluation.

Item	Description	Quantity	(Indigenous Vendors) Matl. Will be Delivered to
10	Shadowgraph as per the technical specification & commercial conditions applicable (To be downloaded from web site www.bhel.com/tender/tender_home.php or https://eprocure.gov.in/epublish/app)	1.00 No.	FOR, BHEL, Stores, High Pressure Boiler Plant, Tiruchirappalli - 620014

Important points to be taken care during submission of offer

- 1) Material shall be delivered to (By Indigenous vendors): As stated above.
- 2) Delivery required 2 Months from the date of purchase order.
- 3) Erection & Commissioning period required 1 Week from the date of intimation by BHEL to vendor for deputation of their Engineers for E&C.
- 4) EMD for this Tender will be NIL
- 5) Compliance Forms. TRY/IND/08 to be filled and enclosed along with the offer failing which, the offer will not be considered for evaluation.
- 6) 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 / GENL / 001) including bank guarantee formats and list of consortium banks, commercial terms check-list can be downloaded from BHEL web site www.bhel.com/tender/tender_home.php or from the Government tender website <https://eprocure.gov.in/epublish/app> under Enquiry reference .

Tenders should be submitted before 14.00Hrs (IST) 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

DGM / Capital Equipment / MM

S.PARTHASARATHY
MANAGER
CAPITAL EQUIPMENT / MM
BHEL, TRICHY-620014.

PART – A: Pre-Qualifying Criteria for Shadowgraph (Profile Projector) – 1 No.

S. No	REQUIREMENTS	VENDOR's RESPONSE
2.0	INFORMATION TO BE PROVIDED BY VENDOR:	
2.1	The BIDDER / VENDOR to furnish Reference List of Customers, with complete address, details of contact person, where Shadowgraph (Profile Projector) have been supplied in the past.	
2.2	Specify details of Shadowgraph (Profile Projector) supplied to other units of BHEL, if any (Year of commissioning)	
2.3	Details on SERVICE AFTER SALES Set-up in India including the Address of Agents / Service Centres in India.	
2.4	Any Additional data to supplement the manufacturing capability of the BIDDER for the subject equipment.	
3.0	PARTICULARS (Vendor to note)	
3.1	The BIDDER shall submit the offer in Two Parts – 1. Technical [with PART A & PART B] & 2. Commercial and Price Bid.	
3.2	The Bidder's offer against each clause in PART A & B of the offer should be filled by the BIDDER compulsorily with complete details.	
3.3	The BIDDER shall assure a continuous support for Spares and Service for Ten Years, from the date of commissioning of the equipment at BHEL Works.	
3.4	The Technical Offer shall be supported by Product Catalogue and Data Sheets in original and complete technical details / literature on the quoted equipment.	
3.5	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.	

Annexure -A

PART – A: Pre-Qualifying Criteria for Shadowgraph (Profile Projector) – 1 No.

Suggestive Format of Performance Certificate:

The performance certificate should be produced **on Customer's Letter Head or through direct email to BHEL.**

PERFORMANCE CERTIFICATE

- | | | |
|---|--|-----------------------------------|
| 1 | Supplier of the machine | : |
| 2 | Make & Model of the M/C | : |
| 3 | Month & Year of Commissioning | : |
| 4 | Performance of the Machine
(Strike off whichever is not applicable) | : Satisfactory / Not Satisfactory |
| 5 | After sales service
(Strike off whichever is not applicable) | : Satisfactory / Not Satisfactory |
| 6 | Any Other remarks | : |

Date:

Signature & Seal of the Authority
Issuing the Performance Certificate with contact details

PART - B: Technical Specification

Note: -

1. The Column “Vendor’s offer with Technical details & Remarks” of this format shall be filled in by the Vendor and submitted along with the offer. Inadequate / incomplete, ambiguous or unsustainable information against any of the clauses of the specifications / requirements shall be treated as non-compliance.
2. The offer and all documents enclosed with offer should be in **English language** only.

Name & Address of the Supplier:	Name & Address of the Indian agent:
Telephone no.:	Telephone no.:
Fax no.:	Fax no.:
e-mail:	e-mail:

SCOPE: -

This technical specification covers the requirements of Design, Manufacture, Supply, Erection and Commissioning of SHADOWGRAPH (PROFILE PROJECTOR) with all the accessories for trouble free operation. Shadowgraph (profile projector) should be of Industrial design for long operating life.

Bidder shall be complying with the technical specification as given below.

PART – B: Technical Specification for shadowgraph (profile projector)– 1 No.

S. No	Technical Specification		Vendor's offer with Technical details and Remarks	
1.0	Purpose :			
1.1	The profile projector is to be used to enlarge the view of machined components, tools etc. and to measure the machining parameters. The profile projector will be used to measure the tube edge preparation angle, tool tip angles, ID/OD weld projection etc.		Vendor to note	
1.2	Important features of the profile projector: • Compact light weight and table top with easy operation. • High Precision Magnification Lens for best visual quality. • Frameless Screen to avoid Center Shift, with fine cross hair line • Dual Lighting – High Contrast Surface Illumination System. • Cooling by built in noiseless and vibration free fan. • Thread less - Friction Bearing Mechanism for linear traverse to avoid Backlash trouble. • Quick Release Attachment to minimize table traverse time. • High Precision Linear Guide ways for closer linear accuracy and smooth traverse of axes. • Compact Digital Read Out Unit for effective measurement of linear and angle.		Vendor to confirm	
2.0	Machine Features:			
2.1	Model type	Vertical Model	Vendor to confirm	
2.2	Screen size	300mm - frameless screen & with fine cross hair line. Screen graduated to 360° with vernier reading 1 minute.	Vendor to confirm	
2.3	Table base	Satin Chrome Plated – Hardened Steel Base	Vendor to confirm	
2.4	Measuring range (x&y):	150 x 100mm (Minimum)	Vendor to confirm	
2.5	Linear resolution	0.001mm	Vendor to confirm	
2.6	Angular resolution	1 minute (Digital Reading)	Vendor to confirm	
2.7	Magnification device	20 x lens	Vendor to confirm	

PART – B: Technical Specification for shadowgraph (profile projector)– 1 No.

S. No	Technical Specification			Vendor's offer with Technical details and Remarks
2.8	Table Base	Satin - Chrome plated Work Table for aesthetic appearance and to avoid rusting on surface.	Vendor to confirm	
2.9	Illumination structure	• Profile & surface illumination • Stepless intensity variation • Fluorescent color bulb (with uv green filter)	Vendor to confirm	
2.10	Measurement accuracy	3.5 μ m + L/55 μ m (L in mm)	Vendor to confirm	
2.11	Illumination accuracy	Profile : 0.075% / Surface : 0.05%	Vendor to confirm	
2.12	Power & input supply	Vendor to specify & 220 V	Vendor to specify	
2.13	Weight on glass stage	Minimum 3 kg	Vendor to confirm	
2.14	Machine weight	Vendor to specify	Vendor to specify	
2.15	Table/ stand for the machine.	Modulated Pedestal Stand for easy viewing of objects in Projector Screen. The modulated pedestal stand should have storage space in it.	Vendor to confirm	
3.0	Machine Reading Display:			
3.1	The Digital display read out unit to be provided with the machine with following features.		Vendor to confirm	
3.1.1	• Inbuilt on the Projector Screen Panel		Vendor to confirm	
3.1.2	• Digitized - Linear Axes (X & Y) measurements- Linear Resolution of 0.001mm		Vendor to confirm	
3.1.3	• Digitized - Angular (Q) Measurements with minimum 1 minute (Digital Reading)		Vendor to confirm	
4.0	Calibration:			
4.1	NABL Lab calibration certification valid for 1 year from the date of delivery.		Vendor to confirm	
4.3	Calibration to be performed on: • Linear Axes Accuracy • 0-360° Angular accuracy		Vendor to confirm	

PART – B: Technical Specification for shadowgraph (profile projector)– 1 No.

S. No	Technical Specification	Vendor's offer with Technical details and Remarks
	Quadrant wise Magnification Accuracy.	
5.0	Additional Accessories as specified below: The below mentioned accessories to be supplied with the equipment as spares.	
5.1	50X magnification lens (1 Nos.)	Vendor to confirm
5.2	Spare Digital-Read Out Unit (DRO) (1 Nos.)	Vendor to confirm
5.3	Vinyl cover for instrument (1 No.)	Vendor to confirm
5.4	Between Center-Work Holding Device (Pair of V-Blocks with Center and U- clamp)	Vendor to confirm
5.5	All types of bulbs/ power lamps used in the equipment (5 set)	Vendor to confirm
5.6	All types of fuses used in the equipment (10 Sets)	Vendor to confirm
5.7	Durable and aesthetic Dark Hood screen curtain (1 No.)	Vendor to confirm
5.8	Other essential spares / consumables (if any) for two years of trouble free operation & maintenance. (Bidder to specify and give detailed break up)	Vendor to quote
6.0	Documentations:	
6.1	The following documents shall be furnished along with the offer: - Detailed Catalogue/GA drawing of the offered "SHADOWGRAPH (PROFILE PROJECTOR)" with details & dimensions - Construction features - Detailed list of error / alarm messages	Vendor to provide
6.2	3 sets of the following documents shall be furnished during inspection and supply: - Detailed Catalogue/GA drawing of the offered "SHADOWGRAPH (PROFILE PROJECTOR)" with details & dimensions - Make of bought out items with part No./specification - The operator instruction manual - Maintenance instruction manual - Programming manual if any - Guarantee / Warranty cards of all bought-outs if any - Applicable Calibration / Test certificates	Vendor to confirm

PART – B: Technical Specification for shadowgraph (profile projector)– 1 No.

S. No	Technical Specification	Vendor's offer with Technical details and Remarks
	h. Safety instruction manual i. Controller operation manual and circuit diagram with proper identification of potentiometers if any.	
7.0	Acceptance:	
7.1	Acceptance at vendor's works: The SHADOWGRAPH (PROFILE PROJECTOR) shall be offered to BHEL for inspection at vendor's works prior to dispatch and all feature shall be demonstrated.	Vendor to confirm
7.2	Acceptance at BHEL works: During commissioning the vendor should demonstrate all features of the SHADOWGRAPH (PROFILE PROJECTOR) including calibration, interface with reading display unit, troubleshooting etc.	Vendor to confirm
8.0	Installation and commissioning at BHEL:	
8.1	Installation and Commissioning of the "SHADOWGRAPH (PROFILE PROJECTOR)" at BHEL shall be in the scope of vendor. Calibration shall be done at onsite in BHEL and stated accuracy has to be proved during commissioning.	Vendor to confirm
9.0	Packing:	
9.1	The "SHADOWGRAPH (PROFILE PROJECTOR)" and other accessories, Spares etc. shall be packed rigidly to avoid any transit damage and dispatched.	Vendor to confirm
10.0	Guarantee:	
	The equipment shall be guaranteed for a minimum period of 12 months from the date of commissioning or 18 months from the date of dispatch whichever is earlier.	Vendor to confirm