



Bharat Heavy Electricals Limited,

Enquiry No. :	14E0063
Due Date :	27/06/2014
Supplier's Ref.:	
Date :	

Part A (Techno-Commercial Bid)

Section 3

Specification cum Compliance Certificate for **Portable Alloy Analyser**

Note:-

1. The 'Offered' Column and where applicable, the 'Deviations' & 'Remarks' Column 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: Supply, Erection & Commissioning of **Portable Alloy Analyser complying with the following specification**

S No.	Description - BHEL's Requirement	Specified	Offered	Deviations	Remarks
1.0	PURPOSE & WORK PIECE MATERIAL				
1.1	Purpose:	Full Analysing of alloy			
1.2	Work Piece Material:	Aluminium Alloys, Copper alloys, Steel alloys			
2.0	SPECIFICATION				
	MACHINE CONFIGURATION:Single Hand held XRF analyzer capable to analyse elements from Mg(Z-12) to U(Z-92) Battery Operated X-ray tube: Max Voltage 40 KV Detector: High resolution Si-PIN, resolution <300 eV Data transfer:USB Download Cables	Vendor to confirm			

S No.	Description - BHEL's Requirement	Specified	Offered	Deviations	Remarks
2.1	CONSTRUCTION:				
2.1.1	Vendor to Confirm the constructional details, including explanatory drawings, of various accessories	Vendor to Confirm			
2.1.2	Video images on CD including hard copy explaining the technical features / Literature with photographs, drawings explaining the technical features should be enclosed with the offer.	Vendor to Confirm			
2.1.3	Powerful detachable Palm top processor with standard windows operating system (Win 7 / Win 8),TFT color Display as standard	Vendor to Confirm			
2.1.4	Analyser calibrated to alloy analysis program traceable to Certified Reference Material(CRMs) & Grade Should be able to measure the analysis of corner welds	Vendor to Confirm			
2.1.5	Small Parts and Hot Surface Should be measured	Vendor to Confirm			
2.1.6	Cable for remote triggering & Data transfer	Vendor to Confirm			
2.1.7	Battery Charger Including Instrument Battery charger cable,	Vendor to Specify			
2.1.8	Instrument stand for benchtop use.	Vendor to Confirm			
2.1.9	Hot surface adaptor measurement of hot surface up to Appx 400 °C	Vendor to Confirm			
2.1.10	Extended set of check sample/test block (Fe,Ni,Co,Al and Ti Alloy)	Vendor to Confirm			
2.1.11	The working principle of the above mechanism shall be explained clearly.	Vendor to explain			
3.0	OPERATION AND CONTROL SYSTEM:	Vendor to confirm			
3.1	CONTROL PANEL:	Vendor to confirm			
4.0	ELECTRICAL :				
4.1	230V + 10% / -10%, 50HZ +/-3 HZ, 1 Phase AC Power Supply Voltage will be provided by BHEL at a single point near the machine.	Vendor to confirm			
5.0	Tropicalisation: All electrical / electronic equipment shall be tropicalized(operating temperature 0 °C to 50°C)	Vendor to confirm			
5.1	All electrical & electronic control cabinets & panels should be dust and vermin proof	Vendor to confirm			
5.2	All cables and cable trays required for the machine should be included in the offer.	Vendor to confirm			
5.3	The electrical components used shall be from reputed international makes such as Siemens / Telemecanique / Merlin Gerin / GE/ ABB and shall be accordance with DIN/IEC Standards.	Vendor to confirm			

S No.	Description - BHEL's Requirement	Specified	Offered	Deviations	Remarks
6.0	SAFETY ARRANGEMENTS:				
	Following safety features in addition to other standard safety features should be provided on the machine:	Vendor to furnish details			
	1. Machine should have adequate and reliable safety interlocks / devices to avoid damage to the machine, work piece and the operator due to the malfunctioning or mistakes. Details shall be submitted in the technical bid.	Vendor to furnish details			
	2.Detailed list of safety alarms / indications provided on the machine shall be submitted along with the offer.	Vendor to furnish details			
7.0	ENVIRONMENTAL PERFORMANCE OF THE MACHINE :				
	If any safety / environmental protection enclosure is required it should be built in the machine by the vendor.	Vendor to agree			
8.0	TOOLS FOR COMMISSIONING, OPERATION & MAINTENANCE :				
8.1	Special tools and equipment required for the machine shall be brought by the vendor.	Vendor to agree			
9.0	SPARES:				
9.1	Item wise breakup of (1) standard-mechanical, hydraulic, electrical and electronic accessories & spares (included in Basic machine cost),(2) Essential -spares/accessories required for the Purpose and (3)Optional in sufficient quantity as per recommendation of Vendor for 5 years (After initial 24 month's Guarantee period)of trouble free operation on three shifts continuous running basis should be offered by vendor.If machine or control is likely to become obsolete in this period, the vendor should inform BHEL sufficiently in advance and provide drawings of parts / details of spares & suppliers to enable BHEL to procure these in advance, if required The list to include following, in addition to other recommended spares: (Unit Price of each item of spare should be offered in the price bid)	Vendor to agree			
10.0	DOCUMENTATION : Three sets of following documents (Hard copies) in English language should be supplied along with the machine. Only originals shall be supplied. Photocopies will not be accepted.	Vendor to confirm			

S No.	Description - BHEL's Requirement	Specified	Offered	Deviations	Remarks
10.1	Operating manuals of Machine	Vendor to confirm			
10.2	Programming Manuals of Machine	Vendor to confirm			
10.3	Detailed Maintenance manual of machine with all drawings of machine assemblies/sub-assemblies/parts including Electrical circuit diagrams. All Assembly/ Sub Assembly Drawings.	Vendor to confirm			
10.4	Catalogues, O&M Manuals of all bought out items including drawings, wherever applicable.	Vendor to confirm			
10.5	Complete Master List of parts used in the machine shall be submitted by the vendor.	Vendor to confirm			
10.6	One additional set of all the above documentation on CD ROM, wherever possible.	Vendor to confirm			
11.0 TRAINING					
11.1	BHEL Persons should be trained at BHEL Works for mutually agreed period in the area of (a) Electrical, Electronic maintenance for machine & other supplied equipments (b) Operation of the machine & other supplied equipments.	Vendor to confirm			
11.2	Competent experts shall be arranged by the vendor during training for satisfactory & effective training of BHEL personnel.	Vendor to confirm			
11.3	Vendor to quote for training on <i>per diem</i> basis	Vendor to confirm			
12.0 COMMISSIONING OF THE MACHINE					
12.1	Supplier to take full responsibility for carrying out the start up, testing of machine, it's control & all types of other supplied equipment etc. Service requirement like power, air & water shall be provided by BHEL . Other requirements like helping personnel shall also be provided by BHEL. Details of these requirements should be informed by vendor in advance.	Vendor to agree			
12.2	Successful working of full capacity of the machine by the supplier shall be considered as part of commissioning. All tests, as mentioned at clause 13& 14 (Machine Acceptance) shall form part of the commissioning activity.	Vendor to agree			
12.3	Tools, Tackles, instruments and other necessary equipments required to carry out all above activities should be brought by the supplier.	Vendor to agree			
12.4	Commissioning spares, required for commissioning of the machine within stipulated time, shall be brought by the supplier on returnable basis.	Vendor to agree			

S No.	Description - BHEL's Requirement	Specified	Offered	Deviations	Remarks
12.5	Portion, if any, of the machine, accessories and other supplied items where paint has rubbed off or peeled during transit or erection should be repainted and merged with the original surrounding paint by the vendor. For this purpose, the vendor should supply sufficient quantity of touch-up paint of various colours of paint used.	Vendor to agree			
12.6	Schedule of Supply and Commissioning shall be submitted with the offer.	Vendor to agree			
12.7	Charges, Duration, terms & conditions for S&C should be furnished in detail separately by vendor along with offer.	Vendor to note			
13.0.	TESTING STANDARD & PROCEDURE	Vendor to confirm			
13.1	Repeatability of setting				
14.0	MACHINE ACCEPTANCE: (Tests/Activities should be Performed by Vendor)	Should be accepted & confirmed by Vendor			
14.1	Tests/Activities should be carried out at supplier's works on the machine before dispatch :	Vendor to confirm			
14.1.1	The machine should be tested for full load test at supplier works before despatch.				
14.2	Tests/Activities should be carried out at BHEL works while commissioning the machine :	Vendor to confirm			
14.2.1	Demonstration of all features of the machine, control system & accessories to the satisfaction of BHEL for efficient and effective use of the machine.	Vendor to confirm			
14.2.2	Training of BHEL machine operators in operation of complete machine & accessories etc by the supplier's experts / engineers during their stay at BHEL works.	Vendor to confirm			
14.2.3	Demonstration by actual use of all supplied attachments and accessories to their full capacity for actual jobs.	Vendor to confirm			

S No.	Description - BHEL's Requirement	Specified	Offered	Deviations	Remarks
15.0	PACKING:				
15.1	Sea worthy & rigid packing for all items of complete machine with all Accessories and other supplied items to avoid any damage/loss in transit. When machine is despatched in containers, all small loose items shall be suitably packed in boxes.	Vendor to Confirm			
16.0	GUARANTEE :				
16.1	Guarantee for 24 months from the date of acceptance of the machine at BHEL works . During this Guarantee period at least 2 visits per year and/or whenever called by BHEL (within 24 hours of call) by the service engineer of the supplier to be made & the parts, items, spares etc. needing replacement to be replaced by the supplier free of cost. In support a Performance Bank Guarantee of 10% of Basic Value of P.O. valid for 24 months from the date of commissioning will have to be furnished by supplier	Vendor to confirm			
17	GENERAL :				
17..1	Machine Model	Vendor to confirm			
17.2	Total connected load (KVA):	Vendor to confirm			
17.3	Total weight of the machine	Vendor to confirm			
17.4	Detailed catalogues, sketch/photographs of the m/c and accessories/ attachments should be submitted with the offer.	Vendor to Submit			

Signature & Seal of Tenderor