

CSIR-CENTRAL MECHANICAL ENGINEERING RESEARCH INSTITUTE
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MODIFICATION OF BIDDING DOCUMENTS AFTER PRE-BID CONFERENCE

TENDER REFERENCE	PUR/114/CAMP/05/2017-18
ITEM	SUPPLY INSTALLATION TESTING AND COMMISSIONING OF CHNS ANALYZER [WITH BALANCE AND PC] FOR COAL,COKE AND GEOLOGICAL SAMPLES
DATE OF PRE-BID CONFERENCE	14 DECEMBER 2017

The following amendments have been made to the Bidding Documents after the Pre-Bid Conference

1. CRITICAL DATES

REVISED DEADLINE FOR RECEIPT OF BIDS	18 JANUARY 2018 UPTO 2.30 PM IST
REVISED DATE AND TIME OF OPENING OF BIDS [TECHNO-COMMERCIAL BID ONLY]	18 JANUARY 2018 AT 3.00 PM IST

2. TECHNICAL SPECIFICATIONS AND OTHER REQUIREMENTS

Sl. No	Specifications	Requirement
1.	Macro Elemental Analyzer System	Fully automated PC Controlled simultaneous CHNS analyzer with high sensitivity detector and capable of multiple operating mode with sample (solids& liquids).
2.	Application	The Instrument should accept 150 mg or more solid sample such as solid waste, hazardous waste, coal, coke, biomass, liquid waste for better System should be real multi matrix analyzer, capable to analyze solids, liquid, liquid volatile samples.
3.	Selectable Operation mode	Measurement of CHNS, CHN, CNS, Total carbon, Total N, Total S (all are mandatory).
4.	Sample Combustion System	Should have furnaces for with independent temperature control up to 1000°C or more for CHN and for sulphur unit temperature should be 1150°C or 1350°C to ensure complete oxidation of sample. System should have auto protection due to fully integrated safety features and auto leak check facility and better for increased operational safety and minimized maintenance expenditure. The instrument should preferably include features like: Auto start-up, equilibration, wake up, shut down. Auto analysis and calculations, routine maintenance scheduling. Continuous monitoring on diagnostics and digital read out of temperatures and pressures.
5.	Application Software	Programme facility with multitasking windows base software displaying method sample and analysis status. Display of set and actual pressure, flow rate, temperature no. of sample analyzed. Provision for setting maintenance interval with warning regarding maintenance needed.

		Online display of graphics and text data should have segmented leak check through software.
6.	Detection range	Capability of measuring following absolute weight. Total Carbon [C] : 0.1 to 60 mg or better Hydrogen [H]: 0.1 to 12 mg or better Total Nitrogen [N] : 0.1 to 15 mg or better Total Sulphur [S]: 0.02 to 10 mg or better Instrument should be capable of operation using either Helium (He) or argon (Ar) as carrier gas without compromising the detection range.
7.	Precision	Total Carbon [C] : 0.5% RSD or better Hydrogen [H]: 1.0% RSD or better Total Nitrogen [N] : 0.6% RSD or better Total Sulphur [S]: 1.0% RSD or better
8.	Compliance to standards	System should conform to ASTM or equivalent international standard for coal, coke and other liquid fuels
9.	Analysis Time	Less than 10-12 minutes or lower in any case.
10.	Analytical gases	Compressed Air, Argon/Helium and Oxygen, Microprocessor control for gas flow controller
11.	Detector System	Carbon, Hydrogen and Nitrogen must be detected using TCD/IR detectors. For Sulphur detection IR detector should be used as per ASTM D 4239
12.	Auto Sampler	Auto sampler system with 30 positions or more for CHN solid and liquid samples
13.	Digital balance Operation Control Weighing Range	Mettler or Sartorius semimicro-balance capable of direct the data to the analyzer Weighing Range: 200 mg or more Resolution : 0.1 mg
14.	Consumables	Consumables to be supplied should be sufficient for 500 sample for liquid and 500 for solid analysis. Any short supply of consumables for analyzing the above mentioned samples has to be supplied by the firm without any additional cost, failing which the equivalent cost will be deducted from PBG.
15.	Certified Reference	Two coal CRM at low and high carbon content (50 g each) with certificate.
	Material (CRM	One soil CRM (50g) with certificate. Sulphanilamide/Sulphonic acid or any chemical used internationally should be provided for calibration purpose
16.	Computer System Make Processor RAM HDD Monitor DVD Writer Ports Key Board Mouse Ethernet Graphics Sound Printer	Reputed brand such as HP/Lenovo/Dell Intel Core i5 (4 th generation or better) processor 8 GB DDR4 RAM (upgradable to 32 GB) or better, LED backlit monitor with stand, DVD – Multi drive 2 serial, 1 parallel and 6 USB or more, wireless keyboard and mouse, 64 bit auto selectable 10/100 MBPS Internet ready with integrated Graphics Integrated sound card and inbuilt stereo speakers, Laser jet printer (A4-Size) or better configuration.
17.	Software	Pre-loaded Windows 7 professional or latest operating system with Licensed CD compatible software MS Office 2013 Professional or better and licensed CD compatible with application software.
18.	Sample Packing	Should be supplied with accessories for solid sample packing Should be supplied with liquid sample sealing press/sample crimper for packing and analysis of liquid samples.
19.	Operation and Maintenance Training	On site comprehensive training for scientific officials operating the system and support services till satisfaction with the system followed by one week adequate training on operation and maintenance should be provided on instrument.

		Note: Must have service support branch with efficient engineers in Eastern Region.
20.	Warranty	Comprehensive warranty with spares for one year from the date of successful installation of the instrument should be covered. Optional: AMC charge to be mentioned for next two years after one year warranty is over.
21.	Qualification criteria	Bidder should have supplied same instrument to at least 05 (five) customers preferably in CSIR Labs/ Govt of India funded institutions/ PSUs within last 5 years (as on the date of Bid opening). Purchase order/performance certificate shall be enclosed with the bid.
22.	Gas Cylinder and Regulators with accessories	One set with purity 99.999% (pressure more than 150 kg/cm ²) certified gas cylinders, with double stage stainless steel regulators (one set) with safety certificate for refilling with adequate metal tubing, fixing nuts and screws, spanners for operation compatible to the system.
23.	Technical Manual / Calibration certificate	A set of technical manuals are to be supplied with each sensor which shall cover the sensor description, drawing, installation and commissioning guidance. Parts list and their identification, maintenance kit, instruction manual fault-diagnosing guidance also to be provided. Equipment will be supplied with manufacturer's calibration certificate having reference to NIST or equivalent standard.
24.	Required Accessories	All necessary cables, Glands, connectors, terminations and other accessories necessary for the normal operation of the system are included though it may not be mention in this specification. Any sub system that is required for the operation of a function requested in this specification must be automatically be included in the scope of supply and must not be added as additional after the order and delivery of the system.

MODE OF EVALUATION

The Techno-Commercial Bids shall be first taken up for evaluation and assessment in the manner described in the Bidding Documents. After due evaluation of the Techno-Commercial bids, the short listed Bidders shall have to arrange for a physical demonstration of the offered model either at Bidder's premises or any location nearest to CSIR-CMERI, where the said model is installed and in use. Bidder shall arrange for such demonstration within 7 days of being notified by CSIR-CMERI. No charges shall be payable by CSIR-CMERI for the demonstration.

The demonstration shall be done in the presence of a technical team deputed by CSIR-CMERI. Bidder shall be required to demonstrate the performance of the offered model in respect of the following parameters :

1. Macro Elemental Analyzer System.
2. Application.
3. Selectable Operation Mode.
4. Sample Combustion System.
5. Detection Range.
6. Precision.
7. Analysis Time
8. Digital Balance Operation Control Weighing Range.

Models which fail to meet the prescribed parameters shall be disqualified and the bid shall be rejected. Price Bids of only those Bidders whose models meet the prescribed parameters shall be opened

Note : Short listed Bidders mean Bidders whose Techno-Commercial bids meet the tender specifications

THE ABOVE AMENDMENTS SHALL AMOUNT TO AMENDMENT OF ALL RELEVANT PROVISIONS OF CSIR-CMERI BIDDING DOCUMENTS.

OTHER PROVISIONS OF THE BIDDING DOCUMENTS REMAIN UNCHANGED.