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No.: 1/AE&AM/19-20

Date: 16th January, 2020

Sub: Invitation for Quotation

Sealed Quotations are invited from Manufacturers, suppliers and agents to supply thefollowing items as mentioned below:

Item No.-1:Digital Bomb Calorimeter

Important features:

- Automatic measurement & mathematical calculation
- USB interface for sending data to PC.
- Full test report print out by inbuilt thermal printer
- Weight of sample, water equivalent & sensitivity can be set through keypad on single page.
- Automatic detection of temperature rise & fall.

Detailed specifications are listed below:

Specifications	Range/ Other details
Housing material	S.Steel duly Nickle chromium plated water jacket S.S Vessel S.S Bomb, Water Vessel
Power consumption	220/ 230 V AC supply, Single phase +/- 10% 50 hz
Standard	Confirm to the specification ASTM D 4809, D 240, D E711 , IS - 1350- 1966, BS 1016 PART 5-1967 , IP 12/63 T.
Type of method	Isothermal
Method of detecting temp.	Automatic
Heat capacity	500 to 10000 cal/degree celsius
Process time	5 to 15 minutes
Temperature resolution	.01 ^{o}C
Keypad	Yes
Internal memory	Yes
Interface	Yes (USB interface to PC)
Oxygen bomb endure pressure	300 kg/cm^2
Printer	Yes (should be provided)
Control panel display	A. Digital Display Of Temperature. B. Auto Temp. Rise Detection Based On Microprocessor Chip Based. C. Automatic Reading For Temp. Rise Calculation. D. All The Necessory Interlock For Stirrer, Ignition Wire Continuity, Wire Loose, Over Load Etc.

	E. Electrode Short Indication. F. Continuity Test Indication. G. Auto Stop Of The Stirrer After Completion Of Test. H. Buzzer Horn After Completion Of The Test.
Accessories supplied	1. S.S. Bomb 2. Calorimeter Vessel with Bomb Support. 3. Insulated outer Jacket with Calorimeter Vessel support. 4. Combined Lid for outer Jacket & Calorimeter Vessel. 5. Connecting Tubes (Copper / flexible) for filling Oxygen in the 6. Spanner for Oxygen valve & copper tube Connection. 7. Oxygen Control Valve 8. Pressure Gauge on stand with Bomb Lid stand. 9. Safety Device. 10. Pellet Press 11. Stirrer Unit 12. Electronic Firing Unit with Digital Beckmann Thermometer. 13. Connecting Wire 14. Hook for Lifting Bomb 15. Crucible. [Stainless Steel] 16. Cotton Reel 17. Bomb 'O' Ring 18. Teflon tape 19. Valve Body 'O' Ring 20. Ignition Wire 21. Schrader Valve 22. Bursting Discs for Safety Device 23. Benzoic Acid of Known Calorific Valve 24. Valve Key 25. Operating manual.

Sealed Quotation should be submitted to:

Head of the Department of Aerospace Engineering & Applied Mechanics
Indian Institute of Engineering Science & Technology, Shibpur
Howrah- 711103, West Bengal

Last Date of submission: 24.01.2020 (Friday) upto 2.00 pm
Date of Opening: 24.01.2020 (Friday) at 3.00 pm

(Dr. Amit Roy Chowdhury)
Head of the Department of Aerospace Engineering & Applied Mechanics
Indian Institute of Engineering Science & Technology, Shibpur
Howrah- 711103, West Bengal

Copy to: 1. Notice Board of A.E. & A.M.
2. Institute Website