BOMB CALORIMETER

It determines the gross CV of any solid or liquid sample by determining the water equivalent by burning 1 gm of known CV sample.

Temperature Resolution: 0.001 deg C

Standard :- Confirm to the specification ASTM D 4809, D 240, DE711, IS -1350-1966, BS 1016 PART 5-1967, IP 12/63 T

CONSTRUCTION:

a) Double walled construction, thermally insulated by pouring approx. 1.8 ltr water in the outer jacket.
b) Made of full stainless steel.

FEATURES & BENEFITS:

Type of method: – Isothermal
Method of detecting temp. Rise : Automatic.
Method of detecting calorific value : Automatic.
Touch Screen PLC, 21 x 4 character LCD display
Automatic measurement and calculation of CV/Water equivalent.
Thermal printer interface with printout report.
Auto alarm on completion of test.
PC interface for data recording.
Weight of the sample to be filled by keyboard.
Calorimeter **vessel made of SS**
Ambient working temp range : 15 to 35 degree C
Heat capacity :- 5800 to 6500 cal/deg C
Process time: – 10 to 12 minute
Temperature resolution :- 0.001 deg c,
Oxygen bomb endure pressure : 300 kg/cm
Humidity requirement : less than 85%
Power supply: 230a VC, 50 Hz, 10 amp
Heating load: 2 kW.
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 necessary 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.
Safety interlocks/ relay :-
a. Over load protection.
b. Electrode short protection & indication.
c. 1-phase indication lamp.
d. Emergency switch off

Accessories will be supplied with equipment:

1) **SS 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 bomb: 3 nos.
6) S**panner 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) **Automatic electronic firing** unit with digital Beckmann thermometer. (microprocessor based)
13) **Connecting wire** [electrical].
14) **Hook** for lifting bomb.
15) **Crucible.** [stainless steel]
16) **Cotton reel:**01 no. (approximately 200 m)
17) Bomb **o ring** : 01 no.
18) **Teflon tape**: 01 no.
19) **Valve body o ring** : 01 no.
20) **Ignition wire** : 100 meters.
21) **Schrader valve** : 01 nos.
22) **Bursting discs** for safety device 12 nos: 1 set.
23) **Benzoic acid of known calorific valve.** { 6319 cal / gram }
24) **Valve key.**
25) **Printer, PC interface cable, Operating manual**