

Cone Calorimeter

Compliance

ISO 5660, E1354

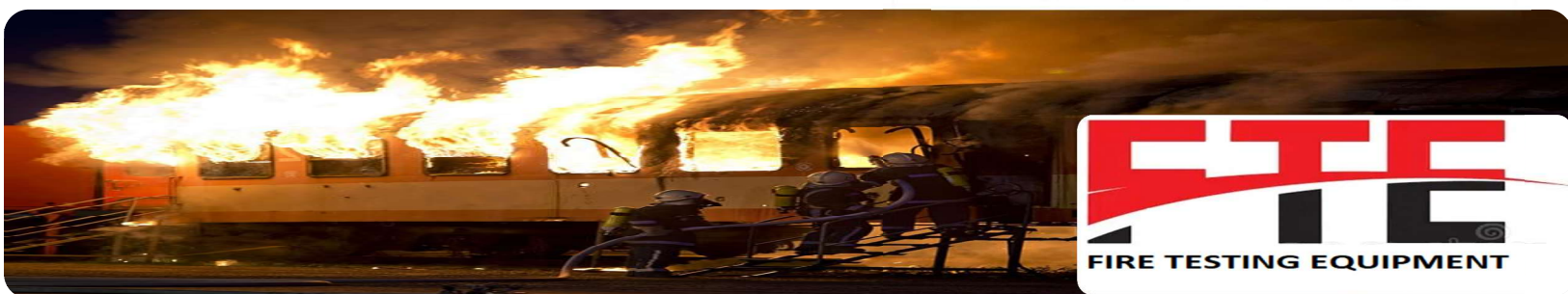
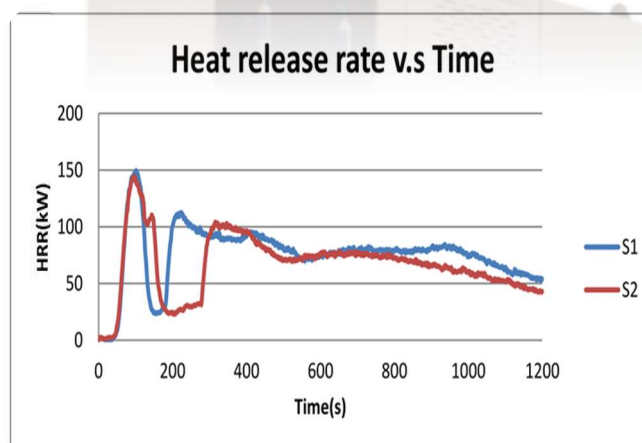
The FTE Cone Calorimeter is a critical instrument in fire testing and research. It allows fire testing or research to be miniaturized and databased with good repeatability.

The Cone Calorimeter offers a method for assessing the heat release rate and dynamic smoke production rate of specimens exposed in the horizontal orientation to controlled levels of irradiance with an external igniter. The heat release rate is determined by the measurement of the oxygen consumption derived from the oxygen concentration and the flow rate in the combustion gas. The dynamic smoke production rate is calculated from the measurement of the attenuation of a laser light beam by the combustion gas.

The heat release rate and smoke obscuration are recorded for the entire test, regardless of whether the specimen is flaming or not.

The following data will be reported by the cone calorimeter test:

- Heat release rate, in MJ/kg, kW/m²
- Total heat release, in MJ
- Smoke production rate, in m²/m²
- Total smoke production, in m²
- Mass loss rate, in g/m². s
- Time to sustained flaming and extinguished, in seconds
- Heat flux, in kW/m²
- Exhaust duct flow rate, in l/s
- Test duration, in seconds
- C factor, in 1/kg.m.K
- Results derived from different standards.



Cone Calorimeter consists of

- Cone-shaped radiant electrical heater, an electrical heater rod tightly wound into a truncated cone, rated 5000w with a producing irradiance output of 100 kW per square meter.
- Horizontally orientated specimen mounting facility.
- PID temperature control of cone irradiance.
- Load cell, having a resolution of 0.1g and accuracy better than $\pm 0.3g$. Well heat insulation under the heating cone.
- Independent marble cone facility workbench.
- Exhaust gas system, stainless steel made for long life use, adjustable flow control from 0-50g/s at a resolution of 0.1g/s. An orifice plate flow meter to measure the combustion gas flow in the duct.
- Combustion gas sampling apparatus, consisting of 3-stages filters (accuracy up to 0.5 microns), refrigerated cold trap, diaphragm pump, moisture trap.
- Oxygen analyzer, paramagnetic type with the range of 0 to 25%. Servomax gas Sensor is optional.
- Heat flux meter, with the self-recycle cooling system.
- Data acquisition system, maximum record the data 50 times per second.
- Operation software, with the functions of the standard test program, sensor calibration, auto system calibration, status monitoring, and report management.



FLARETEST EQUIPMENT PRIVATE LIMITED

Address- 81, DSIDC Shed, Phase -1, Okhla Industrial Estate, New Delhi - 110020 (INDIA)

GSTIN - 07AAGCF1491H1ZM

 www.flaretest.com

 deepak@flaretest.com, mkt@flaretest.com

 +91 9266453577  WhatsApp :+919266457277

