Thermal/Acoustic Insulation Flame Propagation Apparatus

(FAR Part 25 Appendix F Part VI; Airbus AITM 2.0053; Boeing BSS 7365)

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A Judges Scientific plc company

This test method is used to evaluate the flammability and flame propagation characteristics of thermal/acoustic insulation when exposed to both a radiant heat source and flame in a test chamber.

The radiant heat is applied by means of an electric panel, inclined at 30°, and directed at a horizontally mounted specimen. The radiant panel generates a radiant energy flux distribution ranging from a nominal maximum of 1.0W/cm^2 to a minimum of 0.1W/cm^2, operating at temperatures up to 816°C. The flux is controlled with a thyristor power unit and measured with a 25.4mm cylindrical water-cooled total heat flux density, foil type Gardon Gage. The outputs from the thyristor and heat flux meter are displayed on a programmable LCD meter.

To ignite the specimen a propane venturi pilot burner with an axially asymmetric burner tip is moved back and forth from the outside of the test chamber.

The electric panel and pilot burner are located in a test chamber. The sides, ends and top of the chamber are insulated with a fibrous ceramic insulation. The front side has a high temperature, draft free observation window. Below the window is a sliding platform to enable the user to easily insert either the calorimeter holding frame or specimen holding system (retaining and securing frames).

The chamber temperature is monitored with a thermocouple and displayed on a programmable LCD meter. The test duration is measured with a programmable electronic LCD timer.

Options include a:

- User friendly software package that automatically configures a data acquisition unit. This user interface is a Microsoft Windows based system with push button actions and standard Windows data entry fields, drop down selectors, check boxes and switches.
- Stainless steel hood to collect the smoke gases.
- Smoke measurement system

Software

Instrument supplied with software at no extra charge. Software updates provided free of charge.

TECHNICAL SPECIFICATIONS	
Dimensions	1.9m (W) × 1.9m (H) × 0.75m (D)
Hood	2.5m (W) × 2.0m (H) × 1.4m (D)

SERVICES	
Water	15-25°C, 2.4bar (35 psi), 200-300 mℓ/min.
Electrical	40A supply at 230VAC
Gas	Commercial grade propane
Extraction system	30-85m^3/min

Unrivalled Experience in Design and Manufacturing

FTT's site in East Grinstead, is home to the largest group of fire scientists and instrumentation design engineers working on fire testing instrumentation, and is at the heart of our design and manufacturing. For more than 30 years **FTT** has provided the highest quality instruments and service for fire testing and research professionals worldwide, directly and through its extensive global sales and support network.

Quality

- World-class manufacturing in accordance with multiple international and national standards, including: EN, ISO & ASTM
- ISO 9001, ISO 14001 certified

Integrity

- A dedicated team passionate about fire testing instrumentation and continuous product improvement
- Delivering reliable, robust and easy-to-use instruments for the past 30 years

Excellence

- A world-class team made up of qualified fire scientists, mechanical, electrical and electronic fire instrument design engineers and production, installation and maintenance engineers

Global

- World-wide distribution network for global sales, installations, training, maintenance and technical support
- Leading global supplier of the Cone Calorimeter, Large Scale Calorimeter, NBS Smoke Chamber and Oxygen Index