THERMAL HAZARD TECHNOLOGY

November 2019 Newsletter
Chemical Applications

Latest developments at THT

The UK office has been extended with Sales & Marketing and R&D now occupying South House. Expansion and refurbishment of the Production and Lab areas in North House has also been completed.

This summer we welcomed our Chinese distributors from Thermal Safety Technology. Harry Li, Laven Liu, Wang Hao and Kevin Zhang provide sales and service support for all THT products from their Shanghai office.

Our production team continues to grow with Rory Sadler and Collins Oti joining the mechanical team as Assembly Technicians.

Rory Sadler

Collins Oti

Blair Edwards and Etienne Brouillet join our R&D and Marketing and departments focusing on the ICP Isothermal Control Platform as part of the UK government funded Faraday Battery Challenge.

Blair Edwards

Etienne Brouillet

New Website

Our website has recently been updated and optimised for mobile use. The new fresh look gives better access to specific product areas, testing services, news and events. Social media links to our Twitter, LinkedIn and YouTube accounts allow improved communication with our customers.

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ARC

Fast Tracking Option (FTO)

The FTO extends the standard calorimeter adiabatic control to rates of up to 200°C/min. This prevents heat loss. The FTO is useful for tests that are needed for vent sizing assessment and the tests where it may be necessary and important to get reliable data from fast reacting system.

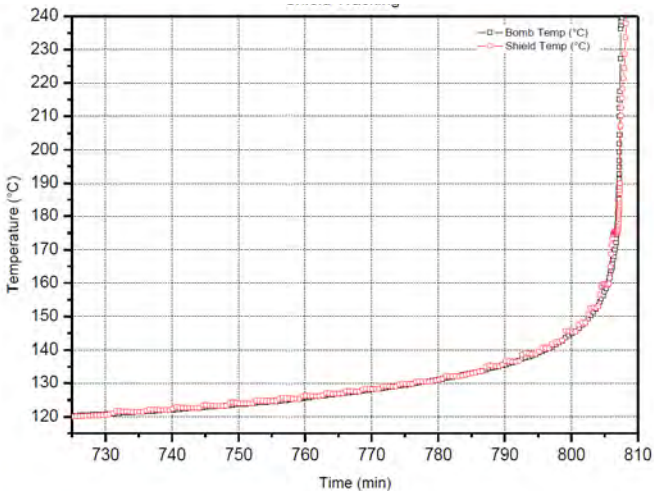
However it should be cautioned that this is often not required. At fast rates there may also be thermal gradients within the sample and the time of the test is short reducing the potential for heat loss. It must be realised that the most valuable and important data obtained from an adiabatic safety calorimeter is at the onset of exotherm and how it progresses where the rates are relatively low.

The FTO consists of a thin metal shield and fast acting heater, during exotherm mode it engages to track the bomb thermocouple. Due to the low mass of the shield its temperature can be increased at a very fast rate matching that of the sample maintaining adiabaticity.

The FTO requires the OSU (Option Support Unit) for software control and can be added to existing systems.

When FTO is ordered with new ES-ARC systems a quick-fit plug connection is offered for simple switching between the FTO shield heater and standard radiant heater.

DTBP 35% Exotherm Data
Test Cell (Bomb) and Sheild Temperature, versus Time



Download our updated ARC brochure

The latest brochure focusing on the esARC and options aids customers select the appropriate system for their needs. Copies can be requested via the sales office; a PDF version is also available for download.

Latest papers

Since our last newsletter several papers have been published citing use of THT products.

Beijing Institute of Technology and Pharmaron in China report use of the ARC and RSD to study the effect of inorganic salt and organic acid on the thermal runaway of hydrogen peroxide..

A full list of abstracts and links to purchase can be downloaded here.

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ARC

The Fume Hood Unit (FHU)
FHU is an option, for the esARC, which provides extraction performance equal to that of a fume cabinet. This option can be pre-built into a new esARC or can be fitted on-site by a THT trained engineer.

The unit comprises:
• The extractor: mounted within the lid of the ARC-ES unit, incorporates a back draught shutter allowing the ARC-ES to be incorporated into a building's fume extraction network. It protrudes by 25 mm from the lid, and allows the user to connect to 300 mm circular draughting ducts (fixed or flexible).

• The air-shield: mounted on the inner side of the blast box door. It can be easily attached and removed to allow easier access to the calorimeter and blast chamber. Typically this would be used when the user is releasing a vapour/gas from the test. This can also be used with the cryogenic system unit (CSU) although an Extractor Isolation Unit is required (contact THT for more info)

Figure 1 shows the air-shield fitted to the chamber. Figure 2 shows the extractor fan.

The Fan Unit allows extraction that has the ability to replace the volume of the containment vessel 120 times per minute. This air-flow extraction compatibility meets standards that exist for Fume Cupboard specifications. A flow rate of 31m³/min is maintained.

Fig.1

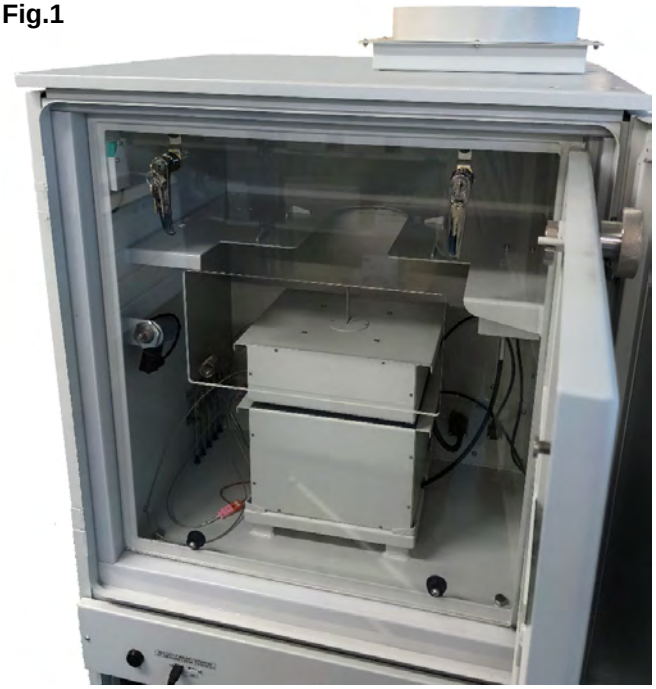

Fig.2

ARC, RSD, µRC

New customers

Hetero, one of India's leading generic pharmaceutical companies have invested in a complete range of THT equipment. ARC, RSD and µRC were installed at the Hyderabad site earlier this month. The instruments will aid development of active pharmaceutical ingredients, chemicals intermediates and finished dosages.

Brochures & Videos

Download our latest brochures here

ARC / RSD / µRC

Short product videos are also available

ARC / RSD / µRC

THERMAL HAZARD TECHNOLOGY

UK • USA • India • China

Distribution Worldwide

Head Office
1 North House, Bond Avenue,
Bletchley MK1 1SW
t: +44 1908 646800
e: info@thtuk.com

US Office
RT Instruments
t: +1 530 419 7033
e: info@thtusa.com

India Office
KAN-THT (India) Pvt Ltd
t: +91 11 4701 0775
e: info@kan-tht.com

China Office
Thermal Safety Technology
t: +86 21 6114 0501
e: info@thermalsafetytechnology.com