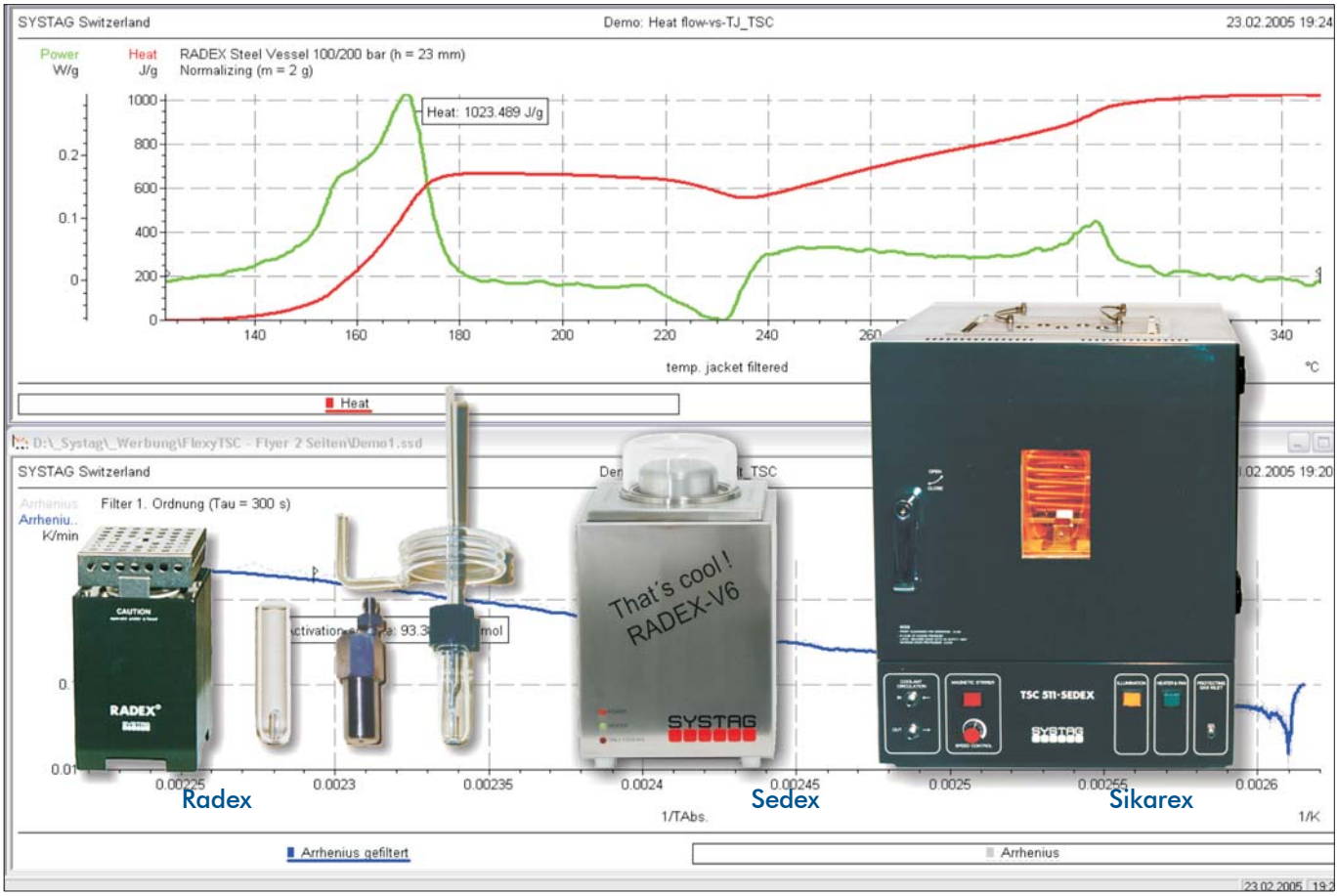
FlexyTSC

Your perfect pathway to thermal safety



- **Simple operation** throughout from measurement to evaluation
- Required sample size within gram range, ideal for **non-homogenous samples**
- Up to **6 measuring cells** can be operated simultaneously and within independent time frames
- Wide selection of **cost-effective sample vessels**
- **Freedom of choice of test conditions** for thermal safety evaluations
- **Standardised measuring procedures** to determine thermal stability, storage stability, self generated heat, heat build up, and gas evolution
- Automatic **test report** generation, **qualitative and quantitative data evaluation**

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FlexyTSC (Thermal Safety Calorimeter)
The versatile thermal safety calorimeter

Only thermal safety evaluations that are based on sound principles can make a significant contribution towards process safety.

FlexyTSC supports this process by using varying sample sizes and an individual choice of test conditions. Nevertheless, all measurements are directly comparable. This provides an exact characterisation of the sample.

Measuring Methods

- Scanning
- Isoperibolic steps
- Long-term isoperibolic evaluations
- Adiabatic operation
- IsoARC method (heat-wait-search)

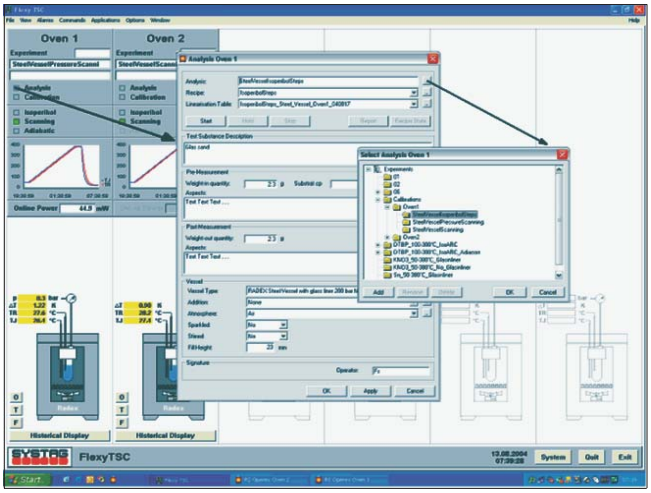
Experimental Conditions

- Atmospheric
- Inert gas atmosphere
- Oxygen atmosphere
- Use of a catalyst
- Measuring gas evolvement
- Pressure measurement
- While stirring

Recording

- Description of sample
- Sample serial No.
- Sample weight
- Appearance of sample
- Test conditions
- Vessel type

Operator monitor: Screen for setting parameters



Evaluation

- Easy diagram generation
- Output [W/g] / Enthalpy [J/g]
- Adiabatic temperature increase
- Time to maximum rate (TMR)
- Arrhenius plot (Activation energy)
- Self heating rate (SHR)
- Onset temperature

Measuring Cells

- **RADEX V5**, test vessel, typically 2.5ml
- **RADEX V6** for low temperature down to -50°C
- **SEDEX**, choice of test vessels, up to 1l

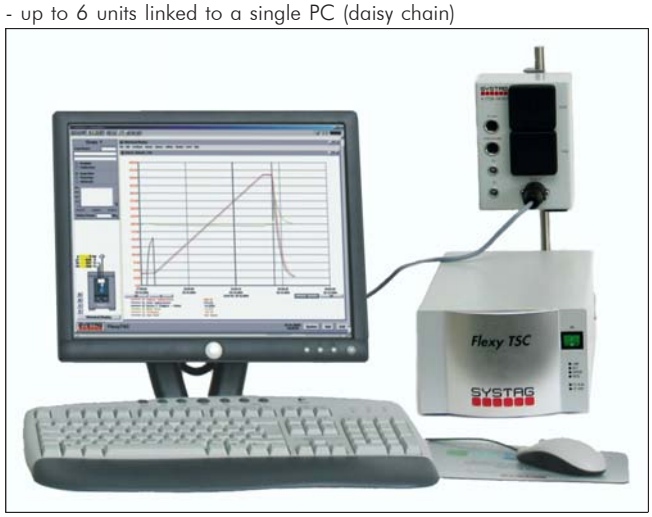
Test Vessels

- Glass test vessel
- open and closed, Autoclave
- stainless steel, Hastelloy
- Dewar-vessel (mirrored glass)
- Wire cage (transport safety, UN-Test)
- Three-necked flask
- Choice of any other vessel designs

One modular control unit

One FlexyTSC control unit per measuring cell. It is possible to incorporate up to 6 measuring cells. For this, if daisy-chained, it is possible to use up to 6 measuring cells simultaneously. Temperature difference resolution: +/-0.01K.

Control unit:
- Control monitor (on left)
- FlexyTSC controller, plus power unit for 1 measuring cell
- up to 6 units linked to a single PC (daisy chain)



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