

CHARACTERIZATION OF NEW MATERIALS

Advanced Service Available - Support for industrial characterization and qualification of new materials for which physical properties are still unknown. Problem solving related to the properties of materials which could impact the reliability of complex industrial plants.

Use - Physical and mechanical characterization of metallic and ceramic materials, measurement of their physical properties (density, thermal diffusivity, thermal capacity, Young modulus, mechanical resistance) from cryogenic temperature (77 °K) up to high temperatures (2200 °K) for their applications in:

- equipment for the production of thin films;
- sensors for hostile environments (chemical reagents, cryogenics, vacuum, high temperatures) and heat exchangers for high temperatures.

Applications and ongoing Activities - Activities in material characterization have recently been carried out for FN S.p.A. and as part of an international IFCR project related to the "Broader Approach Activities".

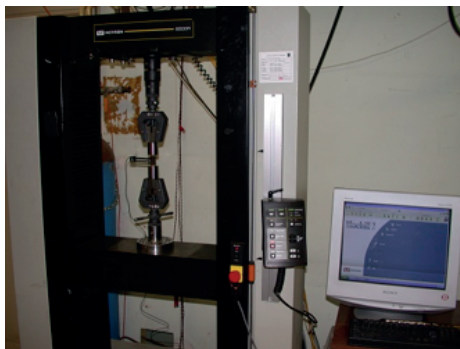


Fig. 1: Setup for tensile stress analysis



Fig. 2: Laser Flash apparatus



Figura 3: Differential scanning calorimeter

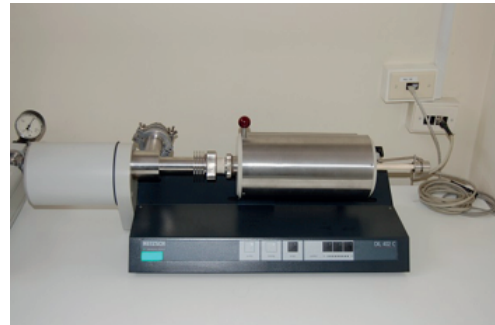


Figura 4: Dilatometro

Characteristics:

CUSTOM The service can be adapted with flexibility according to different contexts and needs