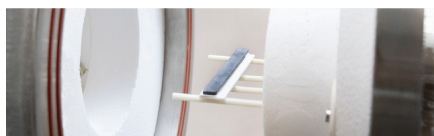




CODE GT3003
 MODEL GT-ODF
 EXTERNAL DIMENSIONS. 1100x280x420 mm
 POWER 1500 Watt
 VOLTAGE 220 V – 50 Hz single phase
 WEIGHT 60 kg



OPTICAL DIFFERENTIAL FLEXIMETER GT-ODF

DESCRIPTION

The differential fleximeter (F) was designed to study the tensional state between the different layers of a fired material during a thermal cycle, without the application of an external force. The main application of the differential fleximeter is the determination of the coupling temperature between layers of materials (enamel/ glaze coating over ceramic/metal). The deflection of an industrially fired sample during a heating and cooling thermal cycle reveals a discontinuity at the coupling temperature where the coating loses its grip on the substrate. A high resolution camera (0.5 μm) simultaneously frames the top side of a reference alumina plate and the bottom side of the sample. The image analysis software automatically subtracts the (apparent) movements of the reference from those of the sample, thus performing the calibration in realtime. It is ideal for the study of tensions causing deformations within 150 μm . A test piece of fired material 85 mm long and 2 mm thick is required to identify the coupling temperature between the substrate and the enamel.

APPLICATIONS

- Identify the state of tension in multi-layers materials, especially ceramics

TECHNICAL SPECIFICATIONS

- Sample size Shape: parallelepiped
- Sample size Length: 83–85 mm
- Sample size Width: 4–7 mm
- Sample size Thickness: 2–3 mm
- Simultaneous sample testing: 1
- Dimensional Variation Resolution: 0.5 μm
- Sensor resolution: Total 60 Megapixel
- Light source: 480 nm ; 3 W ; Blue led
- Filter: Interferential
- Frame acquisition rate: 1–15 frames per second, user selectable
- Temperature Range On the sample RT–1400/1600°C depending on the heating element type
- Temperature Range On the furnace RT–1450/1650°C depending on the heating element type
- Heating rate: 1 to 80°C/min
- Temperature Resolution: 0.1°C
- Atmosphere control: Air, protective atmosphere on demand

THERMAL CYCLE

- Unlimited number of heating/cooling/isothermal segments
- Simulation of industrial thermal cycles
- Maximum heating rate: 80 °C/min

EMBEDDED COMPUTER

- Intel Core i7 Processor
- RAM 16 GB
- Linux Operating System
- Automatic data backup