High Temperature Observation System TMS series

Vivid observations with image heating and the latest optical system

A furnace hot stage microscope capable of rapid heating and high temperature observations at high magnification (400x @ 1700°C).

This system combines an infrared furnace hot stage with an optical or confocal microscope for crisp, sharp focused observation of samples during heating from RT up to 1,700°C. Controlled heating rates of 16°C/sec are possible with the sample housed in a clean sealed chamber which can be pumped to vacuum conditions or flooded with inert or reactive cover gas. Digital video software overlays the temperature data and time signals on the sample observation screen. Time lapse video capture is also available.

Capable of observations of the crystal transformation, deposition, and solidification of metallic materials, capable of observations of the molten state and deposits of various materials, and capable of thermal cycle measurements of polymer materials from crystals → molten → re-solidification

Applications

- Observations of the crystal transformation of metallic materials
- observations of the molten state of various materials
- Crystal transformation, precipitation, and solidification of metallic materials
- Observation of bonding surface organizational change, crystal growth and precipitates of various materials
- Thermal cycle measurement of polymer materials from crystallization, melting to re-solidification

Features

- Can perform vacuum gas displacement
- Capable of transmission deflection observations (P1R model)
- Can be combined with a laser microscope
- Installable in a clean room
- High speed heating and cooling possible,
- Capable of high temperature observations at 1600°C (E1S model)
- Capable of observing 2-inch substrates (P44 model)
- Capable of transmitted polarized observations

Specifications

High Temperature Observation System TMS series			
Type	**TMS-P1R**	**TMS-E1S**	**TMS-P44**
Temperature Range	**RT to 700°C**	**RT to 1600°C**	**RT to 1100°C**
Sample Size	**φ5 mm x 3 mm thickness**	**φ5 mm x 5 mm thickness**	**φ50 mm x 2 mm thickness**
Measurement Atmosphere	**Inert gas flow, air**	**Inert gas flow, air, vacuum**	
Application	**Customizable to special specifications**		