Deutsches Zentrum
DLR für Luft- und Raumfahrt

Handout

Thermal analyses

Measured values
- Specific heat

Description of facility
For measuring specific heat and for determination of enthalpy of transformations the DSC method (differential scanning calorimetry) is used. The equipment (DSC 400, Fa. Netzsch Gerätebau) allows measurements up to 1400°C. Thermo balances (Setaram TG-DTA 92 und Setaram Setsys 16/18) are used to analyse weight changes in defined atmospheres (air, oxygen, argon, synthetic gases) at a high resolution (up to 1µg) at temperatures up to 1600°C. Simultaneously DTA measurements (differential thermal analyses) are possible. Dilatometer measurements can be run under vacuum or defined atmosphere to determine the coefficient of thermal expansion.

Application
Measuring specific heat and determination of enthalpy of transformations

Contact
- Prof. Dr.-Ing. Stefan Reh, DLR Institute of Materials Research, Tel: +49 2203 601 3573, Fax: +49 2203 68936
- Jochen Krampe, Technology Marketing, Tel: +49 2203 601 3665, Fax: +49 2203 695689

This handout, and cross-references to related measurement techiques and facilities are available at: http://messtec.dlr.de/link-272-en.

Deutsches Zentrum
für Luft- und Raumfahrt e.V.
German Aerospace Center

DLR Institute of Materials Research

Prof. Dr.-Ing. Stefan Reh
Telephone: +49 2203 601 3573
Telefax: +49 2203 68936
Stefan.Reh@dlr.de
www.dlr.de