



Materials Testing Facility with 36 Solartron Orbit Linear Encoders



A test-laboratory undertakes materials investigations with the goal to obtain leading edge expertise for the development of thermally and mechanically stressed materials for applications in power plant facilities.

The Task:

18 long-term testing stands for creep property investigations of metallic materials at temperatures up to 1300°C are to be equipped with two high precision dilatometers and automation software.

Therefore, the test procedure can be monitored in-situ and the automatically generated data documented.

High mechanical reliability and a secure data recording system (also after restart) were indispensable requirements.

The Hardware Solution:

The apparatus, co-developed and realized by HWH-Systemtechnik and Solartron-Metrology, is characterised by many innovative features:

- Easily readable real time- and online-display-units installed directly on the test facility by HWH-Systemtechnik
- Incrementally working Solartron-linear encoders LE12S extended to absolute encoders through software
- Industrial strength construction for harsh environmental conditions with high quality connectors and metallic housing
- Keyboard for special functions e.g. for re-adjustment of the sensors
- Additional analogue inputs e.g. for thermocouples or PT100 measuring heads



The Software Solution:

The installed software is based on the Datalog32 Program, developed by HWH-Systemtechnik and offers an individual adaptation to the particular measurement task:

- Simple parameterisation of the Orbit linear encoder system
- Retrieval of position data possible after power outage
- Numerous mathematical, graphical and data saving functions
- Customer specific software, analysis and data export
- Individual adaptation of other measurement tasks and problems possible

