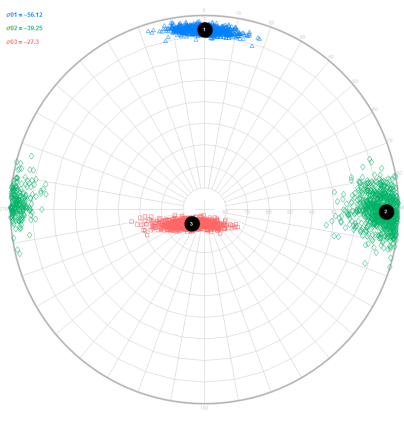
Stress measurements and stress monitoring applied to geostructures

Stresses are a prominent parameter when assessing stability of geostructures all over their life cycle. In situ stress measurements are then important to early detect high stress zones and ground issues as well as to set up numerical geomodels to enhance the prediction of stress fields and potential failure mechanisms .

INERIS offers stress measurement solutions and services to investigate control in situ quasi-static and dynamic stress fields exerting in the rocks or soils in order to provide a deeper insight into risk assessment studies.

INERIS has completed numerous stress measurement projects in a wide range of situations, adapting methods and tools on purpose according to the objectives and operating conditions on site. INERIS identifies and sizes the most adapted stress monitoring solution in order to collect high quality data and to optimize the analysis and expertise for better decision making.



Highlights

Pre-existing stress field

Stress gradients

Quasi static stress changes

Dynamic stresses

Cyclic Shear Ratio

Vibrations

Field applications

Mines and quarries

Embankments

Tunnels

Dams

INERIS
controlling risks
for sustainable development

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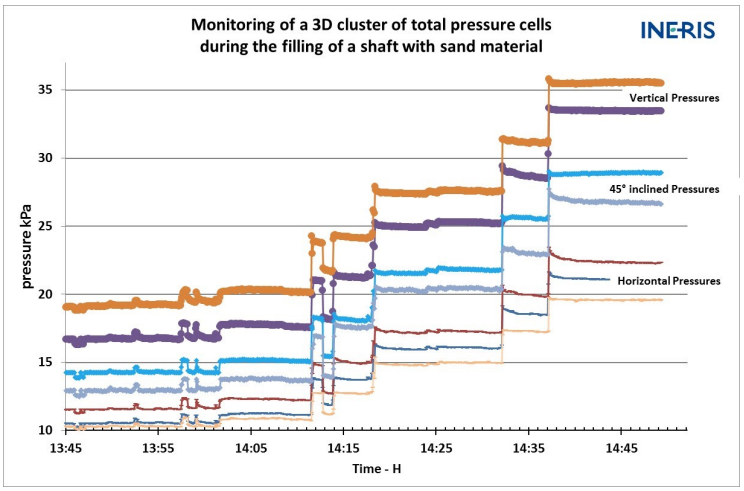
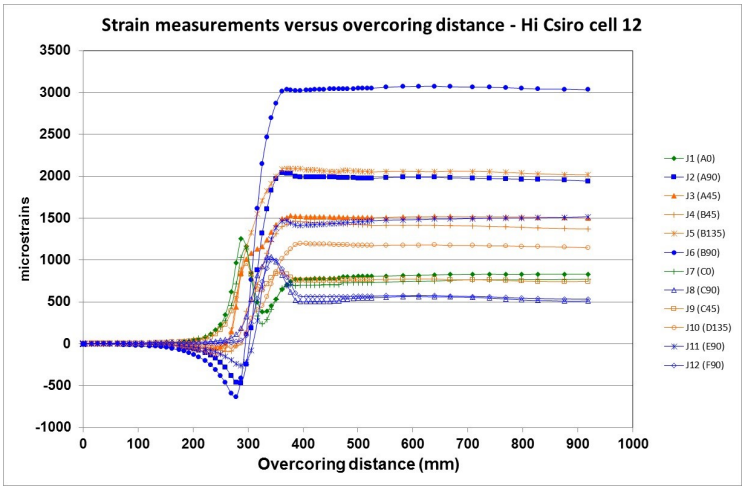


Our services are based on strain gauges, total pressure cells, pore pressure sensors, flat jack cells, clinometers, extensometers and any combination of these sensors.

INERIS develops the versatile **SYTGEO®** hardware monitoring system and the **SYTGEOstress®** software for data analysis, featuring rock anisotropy, statistical quality indexes, automatic in-depth analysis, simulations and multiple test inversions.

- **Design** and calibration studies
- **Field installation** and measurements
- **Overcoring** with CSIRO or USBM cells
- **Real-time monitoring**
- **Database** management
- **Expertise** of dataset and reporting
- **Assistance** for data interpretation



For more information and custom applications, please contact us:

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