

InfraLeuna GmbH

Increase your plant availability with
Fatigue Monitoring System



The Plant

At its modern combined cycle power plant, InfraLeuna GmbH generates electricity and steam to supply its customers at the Leuna chemical site in Germany.

The combined heat and power process, along with a peak load boiler, ensures a demand-oriented, environmentally friendly, and cost-effective energy supply.



The Task

- Monitoring of fatigue in thick-walled components in the high-pressure section of the waste heat boiler and the superheated steam line.
- Components monitored include the HD drum, HD superheater headers, VD, ECO (including injection cooler), and superheated steam line branches.

The Solution

- Calculation of creep fatigue, strain cycle fatigue and total fatigue of the monitored components.
- Monitoring is based on the standard DIN EN 12952 part 3 and 4.
- The customer can view the calculation results via a web-based interface.
- Time-based trends visualize the development of component fatigue as a function of operating parameters (pressure, temperature of water and steam).
- Automatic generation of monthly reports describing the status of component fatigue at the end of each month.
- Long-term storage of results.

The Result

- Cost-effective continuous monitoring and evaluation during operation.
- Reduction of operating costs by utilizing material reserves and component lifetime.
- Knowledge of the current material degradation supports the planning of inspections and overhauls.
- Transparency of the influence of the operating mode on the remaining service life.
- Optimal planning of the timing for necessary overhauls.
- Increased power plant safety (detection of components with critical fatigue).
- Detection and avoidance of highly wearing operating modes.
- Integrated into "Omnivise-T3000"



InfraLeuna's modern combined cycle power plant is located in Leuna, Germany.

"In 2022, the Fatigue Monitoring System was implemented at the GuD2 power plant for InfraLeuna GmbH.

InfraLeuna sees FMS as a good opportunity for continuous monitoring of components and for simplifying its inspection efforts."

Dr. Brocke
InfraLeuna GmbH

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