

# Mechanical Condition Management

For optimal performance of your power plant



Mechanical condition management covers a variety of specialised tests, diagnostics and services that aims at the optimal performance of your power plant. On contractual basis, we take care of the whole range of condition management from planning to periodical measurements and expert services.

## Services for power plants and industrial facilities

- Condition monitoring services
- Condition tests
- Expert services for problem solving and structural mechanics
- Guarantee and acceptance testing
- Services for balancing of rigid and flexible rotors
- Training

## Condition monitoring

On contractual basis, we assume the responsibility of the whole range of condition management from planning to periodical measurements and expert services. We also constantly develop condition management programme methods.

Contracted condition monitoring services for power plants and industrial facilities:

- Complete range of condition monitoring services
- Analysis, diagnostics and prognostics services
- Machinery specific condition audits and -studies
- Extensive problem solving and professional services
- Education and training for plant personnel
- Constant development of periodical practises and methods
- Estimation of forces acting on bearing blocks etc.

## Services for turbines and generators

- Condition test (Diagnostic Test Run - DTR)
- Vibration measurements
- Thermal displacement (TDAS)
- Process parameters (TDAS)
- Fingerprints during commissioning
- Condition monitoring
- Periodical condition monitoring

- Remote diagnostics
- Condition monitoring audits and consultation
- Balancing of major machinery on site
- Supervision of factory tests (e.g. turbine balancing)
- Expert support and professional problem-solving methods for vibration problems
- Education and training
- Expertise in condition monitoring systems and machine protection

## Troubleshooting of fatigue and/or vibration problems

- Experimental modal analysis (EMA) using artificial or operational excitation to determine natural frequencies, mode shapes and damping
- Operational deflection shape (ODS) measurements
- Vibration-, pressure-, displacement-, strain-measurement etc. with process parameters
- Measurements under difficult circumstances (high temperatures, under water, radiation)
- Monitoring & analysis of structural responses (vibration/strain)
- Measurement of axial torque and torsional vibration using telemetry systems (= measurements from rotating axel)
- Consultation services of structural mechanics
- Planning of structural modifications and damping (dampers) to eliminate vibration problems

## Key Benefits:

- Optimal performance
- Well planned predictive maintenance
- Savings in maintenance
- Training of personnel

## For further information:

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