VIBRODIAGNOSTICS

In-situ vibrodiagnostics

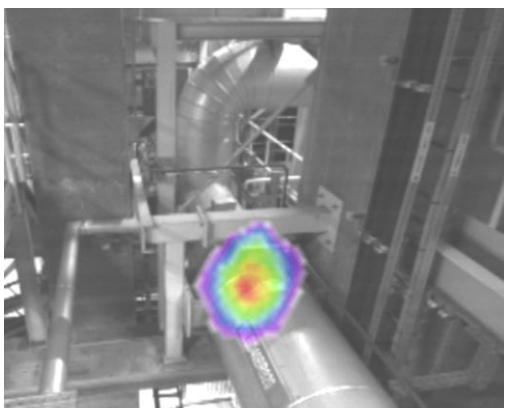
- Vibration amplitude measurement
- Frequency spectrum and phase angle analysis
- Harmonic analysis
- Orbital Analysis - shaft motion within the bearing clearance
- Time Waveform Analysis

ACOUSTIC PRESSURE MEASUREMENT

Measurement of mean and local level of acoustic pressure in the industrial environment

- Sound level meter BRÜEL & KJÆR 2245, 2250 a 2270.
- Evaluation according to ČSN EN ISO 3746, ČSN EN ISO 60045
- Max. acoustic pressure level 140+ dB
- Frequency weighting filters A, C, Z

NOISE SOURCE IDENTIFICATION



- Noise source identification using acoustic camera Bionic M-112 Array
- Measuring range -40 Hz – 24 kHz with 3 Hz resolution
- Measuring frequency 48 kHz
- Operational range 33 – 120 dB

MEASUREMENT OF FLOW CHARACTERISTICS IN RUNNING TURBINES

PNEUMATIC PROBE

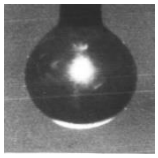
Measurement of flow parameters distribution along the steam channel

- OLYMPUS IPLEX NX device
- Measurement of static and total pressure distribution, temperature, flow velocity
- Using electric or hand-driven traversers
- Max. temperature of flow: 100°C
- Flow velocity range: Ma 0,05 – Ma 0,9
- Probe diameter 20 – 50 mm
- Probe length: up to 5m

WETTNESS PROBE

Wetness measurement, direction and velocity of droplets measurement, droplet size spectrum measurement

- Droplet diameter D: 0,02 ÷ 0,6 mm
- Droplet velocity v: 0,1 ÷ 300 m/s
- Pulse time τ: 50 ns ÷ 50 ms
- Radial droplet angle δ: $\pm$ 45°
- Temperature: 20 ÷ 90 °C
- Working pressure p: 5 ÷ 50 kPa
- SW: In-house C++
- Probe cooling: air



VIDEO PROBE

Visual inspection in closed, dark and steamy areas

- Probe diameter: 50 mm
- Probe length: max. 4 m
- Working pressure: 0,1 – 1 bar
- Temperature: up to 70 °C

TEMPERATURE MEASUREMENT

Measurement of temperature distribution in flowing or static media

- Temperature range: -40 - 1200 °C
- Up to 48 temperature channels
- Long-term temperature monitoring
- Possibility of simultaneous measurement of more values

PRESSURE MEASUREMENT

Measurement of pressure distribution in flowing or static media

- Pressure range: 0,005 - 200 bar(a)
- Measurement uncertainty: 0,05 % of sensor range, various sensor ranges, mostly 0 - 1 bar(a)
- Possibility of measurement of up to 80 channels simultaneously
- Long-term pressure monitoring
- Possibility of simultaneous measurement of more values