



## **ACOUSTIC EXPERT**

# NOW OUR AUTOMATION SOLUTIONS HAVE EARS

A wide variety of equipment is used in metals production. This equipment has to be checked and maintained continuously, which requires a great deal of effort and a solid maintenance strategy to guarantee proper function throughout the devices' lifecycle. In addition to the usual sensor setup for equipment monitoring, analysis of the typically emitted sounds allows a more detailed insight to the actual equipment condition.

With Acoustic Expert, plant monitoring enters a new dimension. In addition to all other sensor strategies we provide, our automation solutions now have 'ears' for comprehensive sound analysis.

### **FUNCTION**

The Acoustic Expert system is always active and continuously checks the sounds in the surrounding area. The soundscape is recorded for several seconds and then followed by a detailed analysis of the captured stream. Finally, a short report is generated with an equipment classification whether the equipment is working well within specified parameters or not. Provided that the Acoustic Expert detects an acoustic situation that is outside normal operating limits, the system reports which malfunction has occurred based on the captured soundscape.

The Acoustic Expert analysis is very stable and reliable because the influence of the disturbing background sound is almost eliminated entirely by advanced calculation tools. The most important factor is mounting the microphone in an appropriate position where the entire soundscape can be observed.

### **FIELD OF APPLICATION**

All areas in an industrial plant

### **MAIN BENEFITS**

- Adaptable to a wide spectrum of applications in metals production
- Continuous equipment diagnosis and trend reporting for maintenance support
- Fast installation and easy to use
- Installation with no disruption to ongoing production
- Cost-effective investment with short Return-of-Investment time



Acoustic diagnosis for torch cutting



Bag-filter dedusting plant

## PRODUCT FEATURES

- Continuous equipment and process monitoring including trend analysis for the entire operations process
- Installation during ongoing production process possible
- Sound analysis is possible within a wide field of applications in metal production
- Implementation of new customer-specific solutions
- Stand-alone package for autonomous operation available
- Attractive Online Services and Remote Service Support for Acoustic Expert System

## EXAMPLES

- Monitoring of Jet Pulse bag-filter cleaning
- Supervision of material transport and conveyer belts
- Monitoring of torch cutting at continuous casting machines
- Monitoring of spray nozzles for lubrication and cooling
- Other applications with characteristic sound emissions possible

## SERVICES

- Hardware and software engineering and equipment supply
- Integration engineering
- Interface coordination
- Advisory service for installation and commissioning
- On-site training for operation and maintenance personnel
- Spare parts



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