
London, April 14, 2016

Acoustic Expert from Primetals Technologies monitors bag filters in dedusting plant at voestalpine

- **Acoustic Expert supports preventive maintenance**
- **System measures and analyzes the sound spectrum of the filter cleaning system**
- **Commissioned two months before scheduled date**
- **Hardware installed in less than one day**
- **Commissioning and optimization completed in just two days**

At the end of January, a new acoustic monitoring system was brought into operation in the secondary dedusting plant 3.1. at voestalpine Stahl GmbH in Linz, Austria. The “Acoustic Expert”, developed by Primetals Technologies, measures the sound spectrum emitted during the cleaning of the bag filter via the Pulse-Jet System. This enables deviations from the nominal state to be detected, and condition-based maintenance activities to be initiated. The Acoustic Expert system implemented at voestalpine was installed in one day without any plant stoppages, optimized in just two days, and brought into operation two months before the scheduled date.

Pulse-jet valves emit a specific sound spectrum while cleaning the bag filters in a dedusting plant. Inspecting the pulse-jet filter manually takes time because the maintenance personnel have to check a complete cleaning cycle. In contrast, Acoustic Expert from Primetals Technologies facilitates a condition-based maintenance strategy. To this end, a microphone as an acoustic sensor is installed in the penthouse of the plant to continuously monitor the noises in the environment.

When the pulse-jet valves are activated, the sound spectrum they emit is recorded for several seconds. The recording is then analyzed in detail, and a report is generated to indicate whether or not the monitored equipment is functioning properly. The recorded data are then deleted. Acoustic Expert produces such a stable analysis that it is not impaired by background noises, and provides information about the current condition of each pulse-jet valve. The maintenance personnel receive direct

information about which valves are working correctly and which need to be repaired. This reduces the cost of maintenance to the essential minimum.

Acoustic Expert was designed on a bionic basis. All sounds perceptible to the human ear are monitored continuously. Whereas people find it difficult to detect gradual wear, Acoustic Expert makes this possible by long-term analysis. Acoustic Expert can also be used on all equipment that emits a specific sound spectrum, such as the nozzles of torch cutting machines in continuous casting plants, switching relays, and leaks in valve stations.



Bag filter housing and industrial microphone. Acoustic Expert measures and analyzes the sound spectrum to facilitate a condition-based maintenance strategy.

This press release and a press photo are available at www.primetals.com/press/

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