

Flow Measurement for aluminum slurry

Industry: Metal mining

Region: Australia

Products:

Expert Solution
Utility and Maintenance



Simplified Selection
Engineering and Procurement

Process Guard
Operation and Observation



Smart Assist
Installation and Commissioning

Requirements

Slurry flow measurement is one of the most difficult applications for magnetic flowmeters. Slurry causes the noise for flow detector. Flowmeter must be robust not only for the slurry, but also for the corrosive chemicals in the flow. For steady and accurate measurement, one must determine how to cancel the noise influence simultaneously while maintaining the basic steady measurement.



Expected benefits

- Stable and reliable output signal regardless the slurry volume, without jeopardizing the response speed or zero stability.
- Robust design, offering longer life-time of flowmeter.
- Minimal downtime and maintenance work.
- Consequently, to provide the best productivity.



AXG
Magnetic Flowmeter
Integral Type



AXG
Magnetic Flowmeter
Remote Sensor



AXG4A
Magnetic Flowmeter
Remote Transmitter

□ Challenges

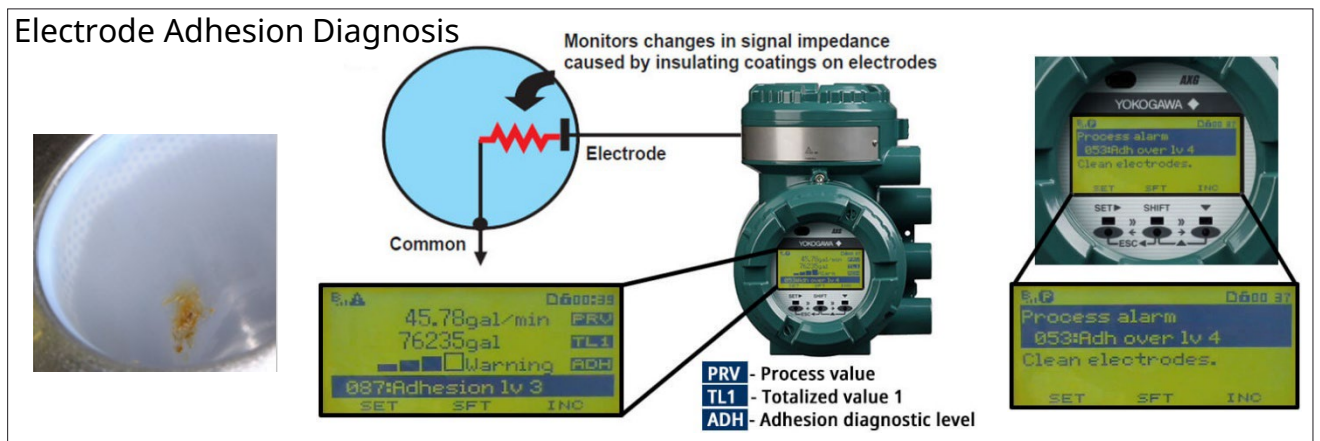
- Slurry noise disturbs the accurate and stable measurement.
- Abrasive aluminum slurry shortens the life time of liner and electrodes.
- High density red-mud covers the electrodes. Periodical Cleaning is required

□ Solution

ADMAG AXG magnetic flowmeters deliver fit-for-purpose solutions for the difficult applications in mining industry.

The client found the **ADMAG AXG Dual Frequency Excitation** to be an advantage in overcoming the noise in slurry flow. The simultaneous high and low frequency pulse provided **good zero stability, no span shift and immunity to slurry noise**.

In addition, ADMAG AXG offers **adhesion level diagnosis** of fluid on electrode. This function enables the operator recognize the maintenance timing.



□ Conclusion

- The ADMAG has a unique flow tube and liner design supporting robust and aggressive processes, proving a longer life-cycle of the flowmeter. It uses an injected molded PFA liner with a welded retaining grid, that holds the liner position and prevents it from caving, due to vacuum conditions.
- AXG is the latest generation of ADMAG series which provides Dual Excitation System and adhesion level diagnosis. In addition, it offers in-line verification, and an optional microSD for off-line data analysis.
- AXG is the most suitable magnetic flowmeter for the severe applications like the flow with slurry or adhesive materials.

Yokogawa Electric Corporation

YOKOGAWA ELECTRIC CORPORATION

9-32, Nakacho 2-chome, Musashino-shi, Tokyo 180-8750, Japan

YOKOGAWA CORPORATION OF AMERICA

12530 West Airport Blvd, Sugar Land, Texas 77478, USA

YOKOGAWA EUROPE B.V.

Euroweg 2, 3825 HD Amersfoort, The Netherlands

YOKOGAWA CHINA CO., LTD.

Room 1801, Tower B, THE PLACE, No.100 Zunyi Road, Changning District, Shanghai, China

YOKOGAWA MIDDLE EAST & AFRICA B.S.C.(c)

P.O. Box 10070, Manama, Building 577, Road 2516, Busaiteen 225, Muharrag, Kingdom of Bahrain

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