Industry: Minerals Processing

- Phosphate Mining

CiDRA® Minerals Processing

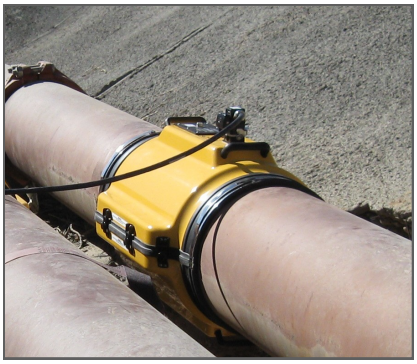
Application Note

SONARtrac® SOLUTIONS

In order to meet the needs of the Phosphate Industry, CiDRA Minerals Processing has developed new technologies for measuring flow, entrained air, pipeline sanding, and pipe wear.

Benefits

- Non-intrusive design of the instrumentation means there is no wear and no process downtime to install
- Real time entrained air meter offers engineers an improved mass flow balance and the ability to measure and control chemical dosing
- Through the use of the Sanding Detection and Pipe Wear Monitoring Systems, engineers can maintain process uptime and reduce costs by optimizing water usage and pipeline management
- Simple design and ease of installation is beneficial, especially in remote areas
- High accuracy
- No maintenance cost



Process Applications

Mines:
Matrix slurry lines
Tailings Lines
Flotation Feed Lines
Water Lines

Processing Plants:
Sulfuric Acid Lines
Phosphoric Acid Lines
Reactor Feed Lines
Slurry Feed Lines

Challenge

Measuring flow rates of slurries such as matrix lines in phosphate mining can be challenging as the ore is highly abrasive and pumped at high speed.

Applications at phosphate processing plants such as sulfuric acid and phosphoric acid lines are highly corrosive and can be problematic for instrumentation that come in contact with these fluids.

Magnetic flow meters commonly used in applications like these require frequent maintenance and replacement; as they will erode and corrode under these abrasive conditions.

SONARtrac Solution

CiDRA's *SONARtrac* flow meter is a clamp-on solution designed specifically for abrasive slurries and corrosive fluids like those in phosphate mining.

The *SONARtrac* system never comes in contact with the fluid and it is a passive device so it requires no maintenance or re-calibration.

The unique capability of the *SONARtrac* meter to measure real-time entrained air can impact process improvements in slurry management, reagent addition and flotation optimization.

SONARtrac® Technology

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