

# Industry: Minerals Processing

- Pipeline Monitoring

## SONARtrac<sup>®</sup> SOLUTIONS

**Abrasive wear, ore variability, and high pressures make flow measurement on hydrotransport pipelines difficult and costly. SONARtrac flowmeters are unaffected by these factors, enabling improved pipeline operation and leak detection at lower cost.**

### Benefits

- SONARtrac flowmeters provide accurate, repeatable flow measurement in high solids-content slurries providing improved leak detection
- Non-invasive design eliminates leaks, abrasive wear, meter drift
- Works with lined pipes
- Entrained air, speed of sound measurements provide density correction
- Eliminates potential shutdown costs related to magmeter replacement

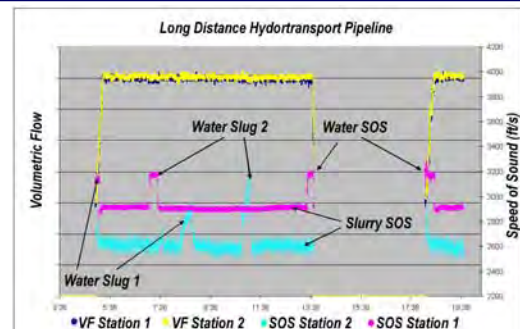
**SONARtrac flowmeters clamp onto hydrotransport pipelines and eliminate the variability and leak danger of magmeters, thus improving flow measurement and leak detection. The result is improved operational control, reliability and environmental security.**

### Process

Hydrotransport pipelines are an important, cost-effective means of transporting solids over long distances. Many such pipelines traverse difficult terrain where elevation changes, geological conditions, weather related events, and proximity to populated areas make accurate flow measurement critical for leak detection and operational control.

Water characteristics and chemical additives can cause scaling of internal surfaces. Abrasive ore causes continual wear.

Elevation changes and/or use of high pressure positive displacement pumps result in very high internal pipe pressures in certain locations where flow measurements are highly desirable, such as pump discharge lines and choke stations.



### Challenge

Until now, invasive magmeters have been the preferred technology for flow measurement. However the high content of abrasive solids can cause wear of internal wetted parts of magmeters. Also, water characteristics and/or use of chemical additives can also cause scale on internal magmeter electrodes. Both occurrences cause degradation of performance and shortened life of magmeters. In locations with high internal pressure, particularly remote locations where monitoring is difficult, invasive magmeters pose a significant risk of leaks and resultant environmental damage.

### SONARtrac Solution

Now there is a better option. Pipeline operators now replace traditional magmeters with SONARtrac flow monitoring systems. SONARtrac meters clamp onto the existing piping and are not affected by abrasive wear, slurry density, internal pressure or scale. This results in a repeatable and accurate flow measurement, while providing the pipeline operator with improved process knowledge and confidence, and improved leak detection capability. The unique on-line measurement of entrained air adds additional accuracy to density measurements. When replacement of the pipe is required due to abrasive wear of the pipe/liner, the easy removal and reinstallation of the SONARtrac meter means maintenance time and costs are greatly reduced, and the need to purchase and stock an expensive replacement magmeter is eliminated.