Industry: Pulp & Paper

- Digester Blow Line Flow Measurement
- Knotter Flow Line Flow Measurement

CiDRA Pulp & Paper Solutions

Application Note

SONARtrac® SOLUTIONS

***SONARtrac* full-bore flow meters clamp onto existing process pipes without shutdowns and deliver reliable flow measurements unaffected by wear, deposits, conductivity variations and debris.**

Benefits

- Eliminates drifts caused by wear and deposits and is not affected by the conductivity or consistency variations.
- Eliminates the risk of process fluid leakage associated with “flanged-in” flowmeters, thereby resulting in safety and environmental benefits.
- Eliminates costly process down-time during installation. Maintains continuous plant operation and process flow when changeover in flow instrumentation occurs.
- Immune to damage caused by debris in process lines.

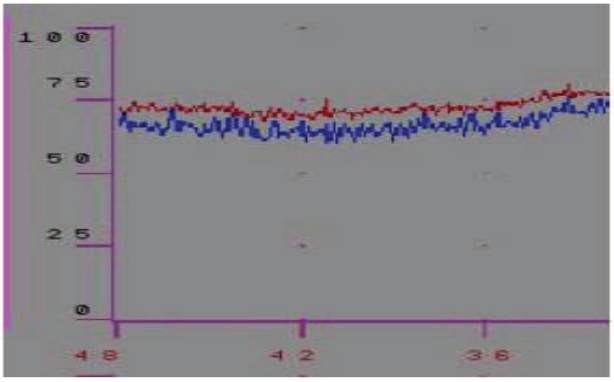
Reliable blow line and knotter line flow measurement forms the basis for stable, continuous operation and optimized production rate controls.

Process and Challenge

The fiber line production is continuous, so unplanned and even planned shutdowns always incur significant production losses.

Typically, in-line magnetic flow meters are used to measure the volumetric flow of pulp and knot slurries. Rapid wear, deposits, and debris caused by these aggressive slurries can affect the measurement reliability and significantly shorten the operational life of in-line flow meters. Furthermore, the high conductivity variations present in blow lines affect the magmeter’s performance, and reliability. These drifts in measurements negatively affect the controls in the digester and the fiber line.

Digester Blow Line Flow Meters



The above example illustrates flow variations from a *SONARtrac* flow meter and a magnetic flow meter. Automatic process control was not possible when using the magmeter. After this pulp mill installed a *SONARtrac* flow meter, they were able to go to automated control and benefited by being able to further tune their control loops.

SONARtrac Solution

SONARtrac systems are unaffected by wear, deposits, and conductivity variations resulting in significantly improved process flow control in the digester and knotter processes. Debris often found in these process lines do not affect performance or flow meter life cycle as there is no contact with the process fluid.

Value Proposition

Often, the life of a magnetic meter in a knotter or blow line application is 1-3 years. If a common estimate for installed costs of a typical 12” knotter or blow line magmeter replacement is $12,000; then the minor cost differential for the CiDRA system would pay for itself multiple times when the first replacement is needed. This removes over $60,000 dollars of expense required to maintain the flow data over the minimum expected life expectancy of the CiDRA *SONARtrac* system. Give CiDRA a call to work through the economic advantages available from taking advantage of a truly permanent replacement for this difficult flow application.

SONARtrac® Technology

CiDRA Chemical Management, Inc.
50 Barnes Park North
Wallingford, CT 06492
Tel. 203.265.0035
www.cidra.com

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