Panametrics
a Baker Hughes business

Application note

Panametrics measures pulp stock in a paper mill

Benefits:

- Easy to set up and program
- No process interruption
- Strong reputation and local support in water measurement
- Reliability and accuracy
- Ability to handle harsh applications

Summary

A large paper mill in Alabama was trying to find a way to measure the flow of pulp stock. Some lines don't have in-situ flow meters installed and the facility was not set for an outage in the near future.

Measuring the flow of pulp stock would allow the paper mill to properly control its process and identify clogs.

Application

Medium:	Pulp stock
Pipe size and material:	16" schedule 40 carbon steel
Flow rate:	3000 to 5000 GPM (681 to 1135 m3/h)
Temperature:	ambient
Requested accuracy:	<±2% of reading

Challenge

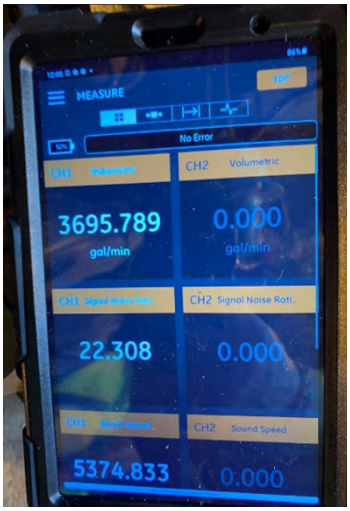
The lines that do have meters are very maintenance intensive. Additionally pulp stock can contain knots, wood chips and debris, pulping chemicals, bleaches, pigments, additives and more depending upon what type of pulping method is used and what stage of the paper making process it is in.

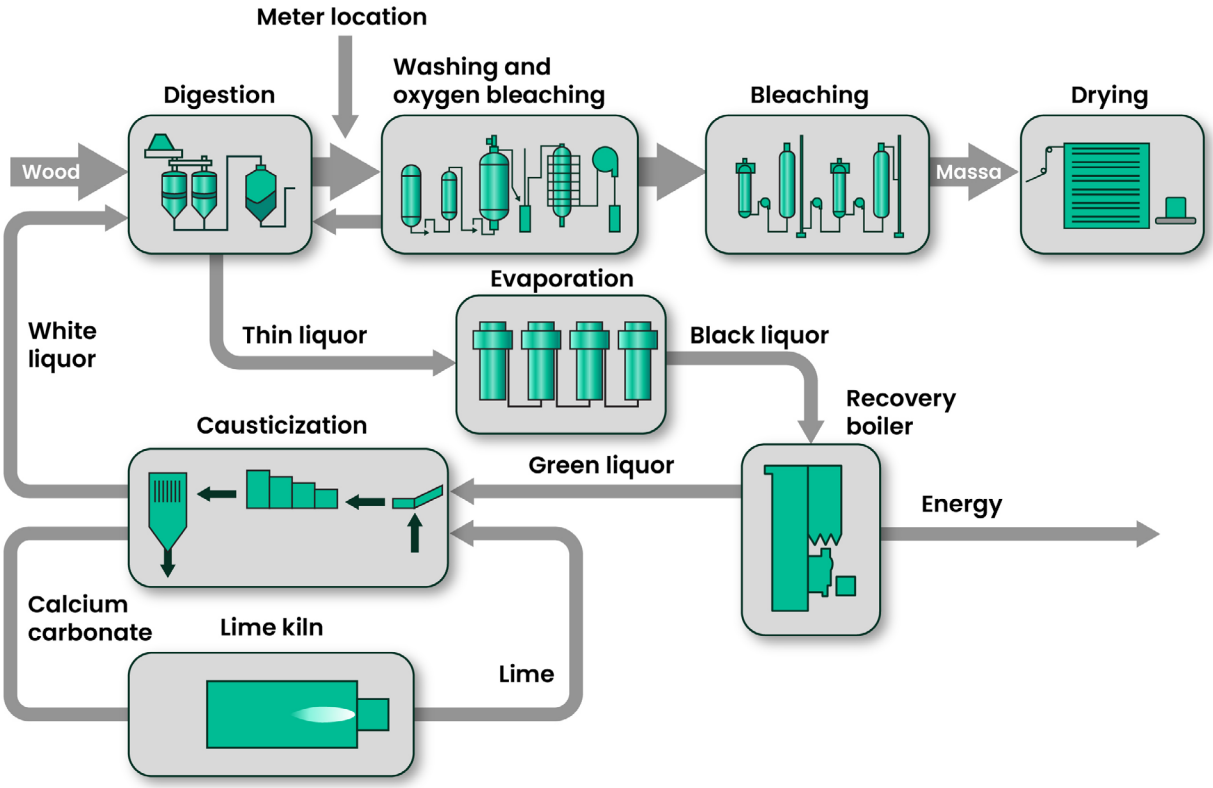
Pulp stock is a challenging medium to measure. It is very thick and has solids present. This causes it to wear out differential pressure flow meters prematurely by clogging the impulse lines or wearing out the edges of orifice plates. The mill was spending a considerable amount of time and money performing maintenance on the existing meters. Additionally, there are several lines without an existing flow meter that don't have any planned down time in the next two years preventing the installation of an inline flow meter.

Solution

Panametrics recommended the PT900 with 1MHz CRR transducers to perform a demonstration on the customer's selected line. The PT900 was programed and installed on the 16" line in less than 30 minutes. It read within the expected flow rate based on pump curves. All diagnostics were favorable, and the meter had no errors. The paper mill is planning to install seven permanent flow meters, AT600's with 1MHz transducers on these lines.

The Panametrics AT600 with clamp-on transducers allows for installation without shutting down the line. Additionally, with no moving parts there is no drift and no need for maintenance.





Panametrics, a Baker Hughes business, provides solutions in the toughest applications and environments for moisture, oxygen, liquid and gas flow measurement.

Experts in flare management, Panametrics technology also reduces flare emissions and optimizes performance.

With a reach that extends across the globe, Panametrics' critical measurement solutions and flare emissions management are enabling customers to drive efficiency and achieve carbon reduction targets across critical industries including: Oil & Gas; Energy; Healthcare; Water and Wastewater; Chemical Processing; Food & Beverage and many others.

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