

# Application Note

Application Note: 060506B2

**KAYDEN**<sup>®</sup>  
I N S T R U M E N T S

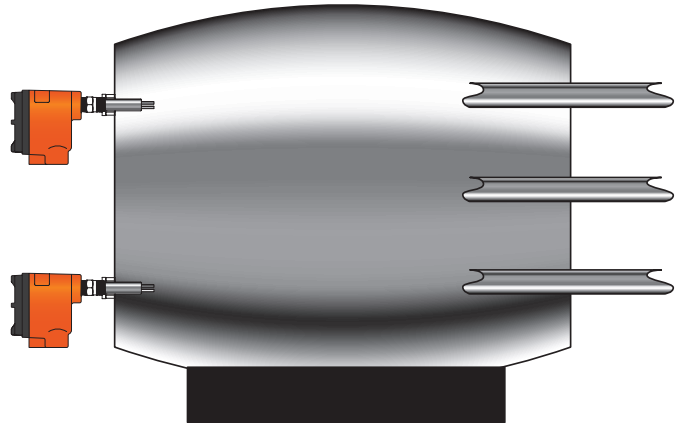
## Pulp & Paper Skimmer Tank

**Application:** Interface (Level) Detection: Black Liquor & Tall Oil Soap in the Evaporator

**Product:** Kayden CLASSIC 800 Series Thermal Dispersion Flow, Level, Interface & Temperature Switch & Transmitter

### Description:

After the pulp is washed the materials in the tank separate into component layers inside the tank. The CLASSIC 800 is used to detect the levels of both the black liquor and the soap emulsion so that the latter may be safely removed.



### Problem:

The combination of the process media and plant conditions cause instrument malfunctions and maintenance problems. For a level switch to perform well in this application it must resist failures caused by:

- corrosion and / or “sludging” damage to the sensor caused by the soapy emulsion.
- temperature extremes - depending upon location and operation the instrument will see high temperatures (including steam).
- water contamination - feed water and cooling water often contains sediment and high mineral content.
- electromagnetic interference.
- difficult and/or controlled access points limit monitoring and daily maintenance.

### Solution:

The Kayden CLASSIC 800 Series Thermal Dispersion Flow, Level, Interface & Temperature Switch & Transmitter is used to provide the critical control for interface level in the tank. The switch may be set to activate or deactivate the pump or feed valve using either of the independent relay contacts or the 4-20mA analog output.

Although often overlooked in level applications in favor of more complicated and expensive technologies, Kayden thermal dispersion switches provide digital repeatability and fast response in a rugged package that is not bothered by coating on the probe and will not drift, seize, or ever require calibration.

Easy Display Panel controls and display make set up fast and easy. Unlike float, paddle or gap switches Kayden switches feature all-welded sensors, no-moving-parts design, true digital electronics with auto-diagnostic functions, two independent relay timers, a Bypass Timer for auto pump restart, simultaneous process temperature monitor and a 4-20mA analog output corresponding to the process level (flow).

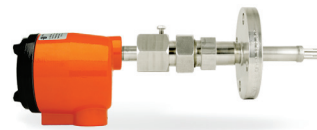
Applicable CLASSIC™ 800 Models



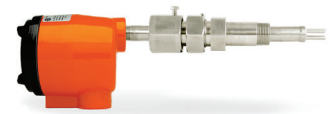
CLASSIC™ 810



CLASSIC™ 812



CLASSIC™ 814



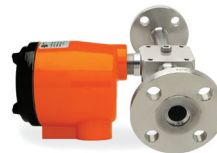
CLASSIC™ 816



CLASSIC™ 828



CLASSIC™ 830



CLASSIC™ 832

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