A Micro Motion® Flowmeter Helps Refinery Transfer Heating Oil to Meet API Gravity Specification

RESULTS

- Provided accurate, continuous measurements, enabling product to meet customer specifications to within 0.1 degree API
- Eliminated manual sampling and testing
- Reduced costly distillate usage dramatically
- Paid for itself with a single transfer

Adding a Micro Motion flow-meter reduces costly addition of distillate to heating oil.

APPLICATION

A refinery cuts heating oil with an expensive, high value distillate fuel to meet customers' specifications for API gravity. Transfers are verified by the pipeline company.

CHALLENGE

Distillate was added to the heating oil based on lab tests of samples taken during the transfer. Due to delays in obtaining the lab test results and variability in the process, the distillate needed to be overdosed to ensure that the specification would be met. Manual sampling and testing were also expensive.

SOLUTION

The refinery installed a Micro Motion® Coriolis flowmeter in a slipstream to sample the process continuously during transfer to the pipeline. Coriolis flowmeters measure density and temperature, and can therefore be configured to compute API gravity. The refinery was able to obtain accurate, continuous API gravity from a single instrument.

The advantage in using the Coriolis meter to measure density as opposed to a standard vibrating tube densitometer is that, since the Coriolis meter also measures flow, the refiner is assured that it always has flow through the slip stream, and therefore has a representative sample of the material in the main pipeline.

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Micro Motion®

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www.EmersonProcess.com/solutions/oilgas
www.micromotion.com/oilgas

EMERSON™
Process Management

Continuous measurement made it possible to control the blending much more precisely and also eliminated the need for manual sampling and testing.

Measurements made by the pipeline company verified that complete transfers were within 0.1 degree of the customer-specified API gravity.

As a result, distillate usage was reduced so significantly that the refinery was able to recover the entire cost of the Micro Motion meter and its installation from a single transfer of 130,000 barrels of heating oil.