



SITUATION

Accurate determination of density is required for interface detection at product receipt station of Marketing Terminal. Besides reference density measurement, accurate measurement of volumetric flow rate is desired for checking the product receipt.

The product receipt pipeline has potential of having broken pipeline pig particles, which might damage the instruments used for flow and density determination.

SOLUTION

To accommodate maximum flow rate of 6,000 bph, two DS600 Coriolis sensors are installed in parallel. A flow computer is utilized to do averaging of API gravity and calculating total net volume flowing through the flow meters. Coriolis meters are used for volumetric measurement as well as density (reference API gravity) measurement.

BENEFITS

- Multi-variable measurement with single system (volumetric flow rate/total and density)
- Coriolis sensors are not damaged by broken pig particles or slugs of air. This eliminates need for installing expensive strainers and air-elimination devices upstream of metering system.
- Coriolis sensors provide accurate determination of density which is critical to switch the refined products and transmix.
- Two sensors in parallel in conjunction with a flow computer provide average gravity and also pay and check configuration for density measurement.
- Summation of volumetric rate from two meters and determination of net volume provide accurate reconciliation of the product received with the main pipeline meter as well as tank gauging.

USER

A major marketing terminal for refined products in Gulf Coast of Texas, USA