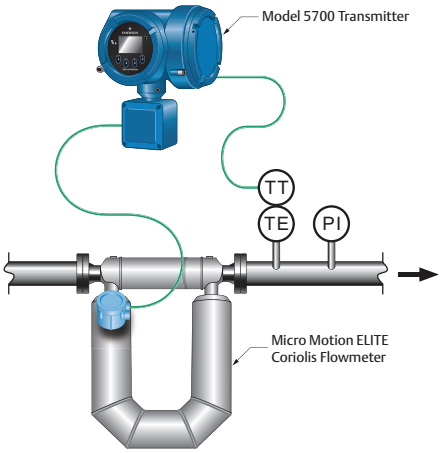
Reduce LACT Cost – Coriolis Measurement with Integral Temperature Averager

RESULTS

- Cost savings of approximately $4,000 per installation
- API MPMS compliant average temperature calculations
- Smaller overall footprint for Coriolis-based LACT skid

APPLICATION

Lease Automatic Custody Transfer (LACT) units are used to measure the Net Standard Volume (NSV) of crude oil produced at a production lease. One input to NSV calculations is a temperature flow-weighted average (TWA) value over the contract run period. Micro Motion white paper number WP-001979 provides a detailed description of LACT units and NSV calculations.



CHALLENGE

Historically, LACT units used mechanical positive displacement flow meters with external temperature averagers to record TWA for NSV calculations. However, mechanical positive displacement flow meters require periodic maintenance and need additional external temperature averagers to determine TWA. This translates to additional customer costs.

SOLUTION

The customer chose to install the Micro Motion ELITE® Series flowmeters and the 2700/5700 Series flow transmitters with an API Referral Software option. An external flowing temperature transmitter provides an input to the flow transmitter via a HART process variable or analog signal. TWA is calculated via the software option and can be reset via the transmitter's display or Modbus communications. LACT measurement quality and availability was increased due to the maintenance free Coriolis flowmeter technology. The LACT skid footprint was also reduced due to fewer components.

These investments resulted in reduced costs to install and operate a Coriolis based LACT, saving the customer approximately $4,000 per unit.

Lease Automatic Custody Transfer (LACT) unit

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