APPLICATION**: Density measurement of crude oil pipelines**

PROBLEM:

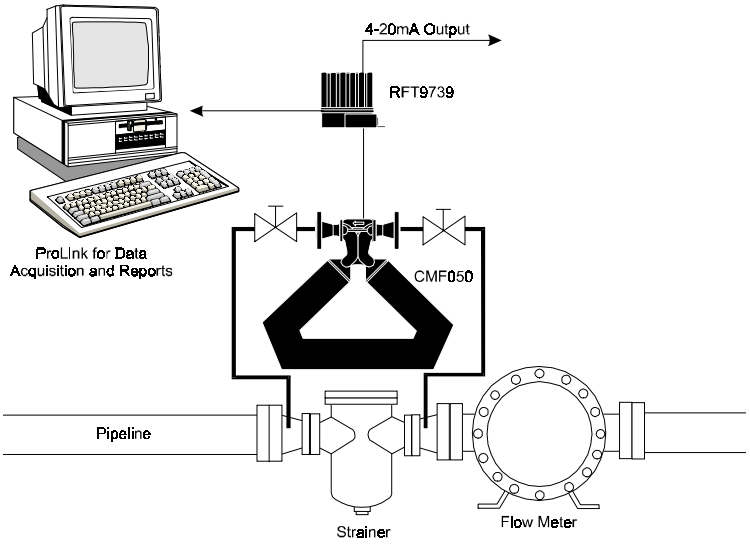
Online density measurement of various products was done through existing vibrating element densitometers. The user wanted to replace the existing densitometer with one having the least sensitivity to vibration, reduced installation requirements and most importantly to be cost effective.

SOLUTION:

Micro Motion coriolis meters were proposed for measuring density of crude oil in West Texas. The units were installed on the existing connection of previous densitometers (Slip-stream across the strainer).

EQUIPMENT:

CMF050 (4 units) with RFT 9739 were installed. The analog output is configured as density output for communicating density to the existing DCS system. Prolink (PC-Windows based configuration and data acquisition package) was utilized for Transmitter configuration.



BENEFITS:

The existing installation was used to install the coriolis densitometers. The typical benefits of using coriolis meters as densitometers are:

- High accuracy (± 0.0005 g/cc) and repeatability (± 0.00002 g/cc) well within API Ch.14.6 recommendations
- High sensitivity to density changes
- Eliminated requirement for separate density computing electronics (safe area mounted)
- Less sensitive to Vibrations
- Serial ModBus interface to the RTU for data collection
- No flow contact indicates incorrect representation of density measurement
- Elimination of high maintenance instruments like pumps which were required for straight tube densitometers.

CUSTOMER:
Large pipeline company in West Texas, USA

SUBMITTED BY:
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