

Differential Pressure Flow Sensors

Liquid: Propylene
Industry: Chemical Plant

Application:

Monitoring propylene usage by measuring the flow rates from the main line into a chemical plant.

Pressure/Temperature: 700 PSIG / 80° F

Flow Rate: 9,000 PPH to 130,000 PPH (future capacity)

Pipe Sizes: 4" Pipe

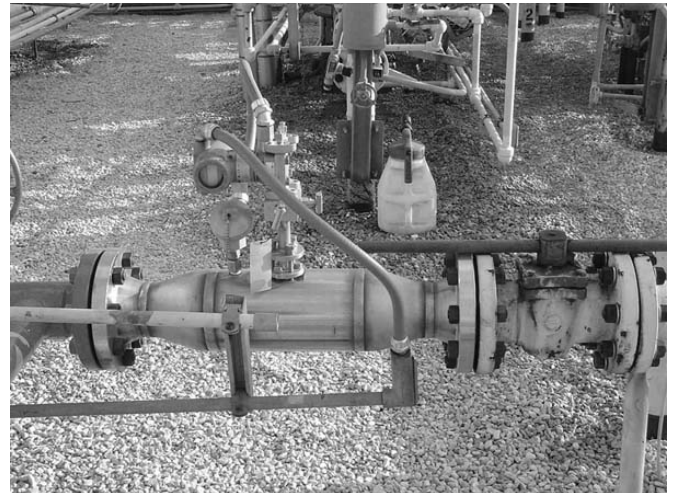
Problem:

Piping constraints required the flow meter to be installed with no upstream or downstream straight run, bolted directly between a valve (upstream) and tee (downstream).

The meter would have to be sized with a future increase in demand considered.

Solution:

- Ability to accurately measure current flow rates (low velocity) while having the ability to accommodate a future increase in capacity. The required 15:1 flow turndown is well within the operating limits of the Accelabar.
- No straight run requirements. The location between the upstream valve and downstream tee is adequate because the necessary straight run is integral to the Accelabar.
- No piping modifications or future meter replacement required. The Accelabar was designed to directly replace a turbine meter within the required face-to-face dimension.



Results:

The Accelabar is accurately measuring the propylene flow despite the limited straight run. When checked against a custody transfer turbine meter, the Accelabar was in agreement within 0.2%. Because the meter was sized up (with an integral expansion from 4" to 6"), it is equipped to handle the increased future demand.