McCROMETER

Industry: Food & Beverage

Process: Alcohol manufacturing

Application: Alcohol measurement

Measurement Challenge/Difficulty: Alcohol (grain) is difficult to measure due to its solvent characteristics (It plays havoc with turbine bearings). Alcohol also has a relatively low vapor pressure making traditional differential pressure measurement over the specified range difficult. This was an existing plant with minimal straight pipe available for proper flow measurement.

Previous Method: Turbine meters

Solution: A 3/4" V-Cone sized to optimize on a 6:1 flow turndown with minimum pressure drop. The location chosen for the measurement had minimal straight pipe allowing two diameters upstream and three diameters downstream. The existing precision turbine meter was left in the pipe as a check for several weeks. The V-Cone deviated less than 1/4% from the turbine at any specific point of measurement.

Date Installed: October 1993

Literature No.
24509-79/Rev 1.1

Industry:
Food

Niche Market:
Alcoholic Beverage

Process:
Spirits manufacturing

Product:
Additive for Brandy

Fluid:
Alcohol

Viscosity & MW
32.04 MW

Flow Rate:
7.5 Gallons/Minute

Pressure:
5 PSIG

Temperature:
Ambient

Size:
3/4 Inch Dia.

Date:
October 1993

Submitted by:
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