McCROMETER

Industry: Power

Process: Gas Scrubber

Application: Measuring non-condensable gas into a Lo Cat scrubber before discharge to atmosphere. This is a compliance measurement. The considerable amount of H_2S makes it a safety issue as well.

Measurement Challenge/Difficulty: Very low amount of kinetic energy inherently. Pressure is very low while velocity is relatively high. Gas is predominantly C_O2 (97%) with H_2S(2%). There are trace elements of N, Ar, and other naturally occurring gasses.

Previous Method: Orifice Plates

Solution: A fourteen inch v-cone was used with a Beta of 0.6656. This made an 8:1 flow turndown possible. The beta ratio was designed for the low amount of pressure available for measurement use. The differential pressure is low but very stable in this application and requires high accuracy draft range transmitters. The signal from an orifice plate is erratic and range is very limited due to the abrupt geometry. The gas is sampled periodically for content. AGA 3 combined gas calculations are implemented.

Date Installed: Second quarter 1994

Literature No.
24509-87/Rev. 1.1

Industry:
Power

Niche Market:
Geothermal Power

Process:
Scrubbing gas before discharge

Product:
Power

Fluid:
Exhaust Gas-
Lo Cat Scrubber

Viscosity & Sp. G.
AGA 3 combined gas relative density 1.513

Flow Rate:
5625-45000 Pounds per hour. 25000 Normal

Pressure:
20 psiA

Temperature:
65° F

Size:
14 Inch Dia.

Date:
Second quarter 1994

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