V-Cone Application Guide

Industry: ***Chemical***
Product: ***Bromine Compounds***
Application: ***Flow measurement of Saturated Steam in a continuous process***

Measurement Challenge/Difficulty:
Steam measurement is always a challenge. Traditionally, Pitot Tubes and Orifices Plates are used for this application but are of low accuracy and low rangeability. Typically the ID of the process tube is unknown and the straight pipe requirements are difficult to meet. Steam is almost always a non-homogenous fluid, with cavitation, shocks and other irregularities.

Previous Method:
The customer had a steam mass flow system in place that was based on a Vortex meter. The system had never functioned properly.

Solution:
The basic features and benefits of the V-Cone were explained to the customer with particular reference to the flow conditioning and mixing effect of the cone meter which eliminates the usual measurement problems. Model V0108 elements were subsequently installed on the two major steam lines to the factory.

Date Installed:
June 1992

Additional Comments:
The customer (Chief Instrumentation Engineer) was very happy with the V-Cone right from startup; however, he believed that there was a problem since the flow rate indicated by the computer was stable and did not fluctuate. Previously, the fluctuations observed with the Vortex unit were +/- 20% – 30% and were considered to be unreasonable. Further investigation found that the signal from the V-Cone transmitter was very stable and highly sensitive to flow rate changes. This company has now standardized on V-Cone's for their steam flow measurement requirements.

Industry:
Power

Niche Market:
Facilities, Power Station

Process:
Condensate from Power Station

Product:
Bromine Compounds

Fluid:
Saturated Steam

Viscosity & Sp.G:
Not Available

Flow Rate:
25,000 kg/h

Pressure:
4 – 10 bar gauge

Temperature:
Extremely High

Size:
8 inch

Date:
June 1992

For more information, please contact ABLE Instruments on +44 (0)118 9311188 or by email: info@able.co.uk

measureable
Solutions. Support. Success. A news article from ABLE Instruments

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