



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, as the traditional Pitot Tubes and Orifices are of low accuracy, low rangeability, plus the ID of the process tube is usually 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 never worked properly.

Solution: We explained the basic V-Cone features to the customer. We highlighted the flow conditioning and mixing effect of the V-Cone which eliminates the usual measurement problems. Two model V0108 elements were installed on the two major steam lines to the factory.

Date Installed: June 1992

System Diagram: None

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

Literature No.

24509-70/Rev. 1.1

Industry:

Chemical

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:

Really Hot!

Size:

8 inch

Date:

June 1992

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