



AW-LAKE
PROCESS FLOW MEASUREMENT



APPLICATION SPOTLIGHT

Hydraulic Fracturing - Chemical Injection



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APPLICATION:

This customer is building chemical injection trailers for the Baker Hughes AddFrac system. These are movable trailers that continually monitor and inject chemicals, such as corrosion inhibitors, biocides, and H₂S inhibitors into the fracking fluid being pumped into the ground. These chemicals are used for flow assurance and to reduce well contamination.

PRODUCT SUPPLIED:

- JVS Positive Displacement Flow Meters
- MAG-PB Sensors

CHALLENGE:

The system originally used turbine meters, but needed lower flow rates for some chemicals than the turbines could reach. As fracking operations moved into areas with cold temperatures, it was discovered that more concentrated solutions of chemicals were needed to ensure the water would not freeze. In addition, the meters were to be integrated into the existing wireless communication system on the trailers. Because this was all for outdoor use, the meters and all electronics had to be designed to withstand both high and low ambient temperatures, as well as exposure to the elements.

SOLUTION:

Positive Displacement meters were specified because of their high turndown ratio, ability to get down to very low flow rates and high accuracy. These meters are viscosity independent, so the changing environmental conditions do not have a strong effect on accuracy.