



AW-LAKE
PROCESS FLOW MEASUREMENT

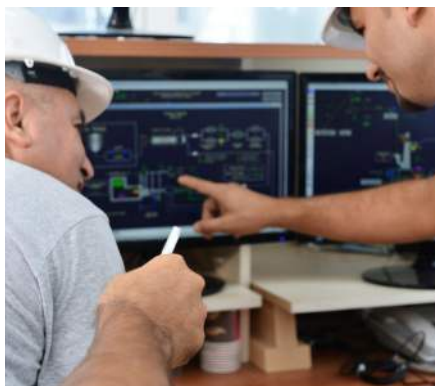


APPLICATION SPOTLIGHT

Offshore - Oil & Gas Production



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APPLICATION:

Corrosion inhibitors are injected into flow lines to prevent corrosion from naturally occurring chemicals in the produced oil and gas. The concentrated corrosion inhibitor is injected at very low flow rates requiring precise metering.

PRODUCT SUPPLIED:

- Custom JVHS-12CG-EX meters

CHALLENGE:

Although AW has used the standard JVHS-12KG-EX meters for many years to successfully measure corrosion inhibitors, the newer formulations and higher concentrations of the chemical were found to be attacking the material of the ball bearings used in the JVHS-KG style meters as well corroding the gears to some extent.

SOLUTION:

Working closely with the chemical manufacturer and the end-user, AW's engineers were able to determine that the corrosion inhibitor would be compatible with tungsten and super-duplex. The solution was to combine two available technologies that AW already had. The high pressure body of the JVHS meters with the tungsten sleeve bearing internals of the JV-CG style meters. This eliminated the need for the ball bearings completely.

The other challenge of finding a new material for the gears was a bit different. Because of the non-intrusive nature of the AW HUB-40EX pickup, the material had to have certain magnetic properties so the hall effect sensor would be able to identify movement in the gears. Super-duplex is an alloy with very high tensile strength and a high tolerance to corrosion. After some trial it was found to be a suitable material for the gears.

RESULTS

For this type of application it is very important to have a high up-time for all equipment. With the new materials and design the damage to the meters was eliminated and down-time greatly reduced. After deployment to the field, these meters have held up to the challenge helping to ensure downhole corrosion is kept to a minimum.