



APPLICATION SPOTLIGHT

High & Low Pressure Offshore Chemical & Methanol Injection



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APPLICATION:

On a new oil production platform, injection of chemicals and methanol into the oil flow line ensures a smooth startup and continued oil production. The meters of choice for chemical injection offshore in the GOM include AW Gear Meters and AW/KEM Turbine Meters because they meet the specifications for wide parameters in flow rates, viscosity and pressure ranges. After recovery, the oil and produced water are also chemically treated once they reach the topsides system, adding a low-pressure component to the project scope.

PRODUCT SUPPLIED:

- High and low pressure AW Gear Meters
- AW HUB-40EX pickups
- AW/KEM HM Series turbine flow meters
- Litre Meter titanium VFF flow meters
- Litre Meter 4-wire FlowPod transmitters

CHALLENGES:

Eighty injection points on the chemical injection skids required close monitoring. These points ranged in flows from just 2 gpd to over 15 gpm and pressures from 450 psi to 15,000 psi. Fluid mediums also varied greatly in viscosity and chemical composition. This necessitated a wide range of flow instruments. In addition, the end user required that all instrument enclosures be remote mounted from the flow element and made of 316SS to withstand the saline air environment offshore.

SOLUTION:

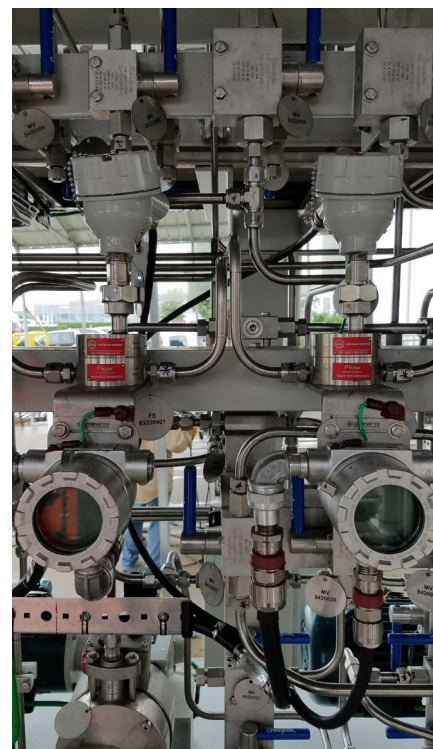
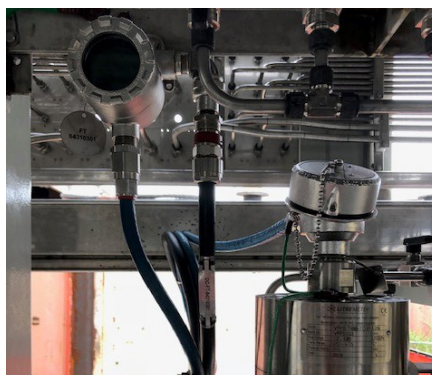
For the methanol lines, typically between 10,000 and 15,000 psi, our MJ Systems Representatives supplied AW/KEM High Pressure turbine meters. They selected this technology due to their field proven, robust design, capable of pressures up to 20,000 psi. From Cindy Nadiger, the MJ Systems Sales Engineer, "We selected turbine meters for the service due to their ability to efficiently measure methanol at high flow rates, high pressures and very low viscosities."

She added further, "We used the AW Gear Meters for the low flow chemical services due to their exceptional turndown ratio which makes them versatile for a wide variety of flows and viscosities. The availability of AW Gear Meters in both medium and high-pressure versions allows us to use the same technology on both the subsea and topsides injection lines." For the highly corrosive sodium hypochlorite applications for low pressure water treatment, MJ Systems utilized the Litre Meter VFF flow meters due to their availability in titanium.

Every meter supplied for the project included the AW HUB-40EX pickup which is CSA-certified for CID1 environments. The cross utilization of the Litre Meter FlowPod transmitter across all the applications added more flexibility to our solution set to meet the area certification and the 316SS enclosure requirement.



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RESULTS:

The same parent company, TASI Flow, owns AW, KEM and LitreMeter. The engineering teams behind the technology in the meters, pickups, and transmitters provide the ability to smoothly cross utilize products throughout the range. This allows the customer the ease of one vendor and a single point of contact for sizing, sourcing, technical and aftermarket support for all of their flow instruments.

The high cost of chemicals makes monitoring very important. By using the TASI suite of products, it gives our end users a variety of solutions to choose from to monitor chemical usage.

