

Upstream oil & gas level solution Winn Marion level success story KTEK products

Upstream O&G Level Solution

Winn-Marion, in its Williamsport, Pennsylvania office, was commissioned in 2013 to design a viable solution for accurate, reliable liquid level detection in a variety of separator applications in Northeast USA.

In oil and gas operations, accurate measurement is critical for operational efficiency, safety and maximized production. Pressure, temperature, flow, and level are critical measurements. Choosing the right technology and product for these measurement needs is paramount.

The Problem

Gas Production Units (GPU), if allowed to overflow, send water down the sales pipeline resulting in inaccurate measurements. The O&G production customer was using a pneumatically operated



switch to sense the fluid height, which would signal a solenoid to open and close a dump valve. Fluid overflow would often occur due to the inaccuracy of the pneumatic devices as well as the slower response time of the antiquated technology. A level solution was needed to separate water from the GPU, and maintain the customer's specific set points so that precise flow measurement could be achieved without water reaching the sales line.

The Solution

Winn-Marion's answer was a turnkey solution using ABB KTEK's KM26 Magnetic Level Gauge, AT600 Magnetostrictive Level Transmitter and an ABB Totalflow RTU. With the combination of the Totalflow, K-Tek, KM26 Magnetic Level Gauge, MS30 switch and AT600 Magnetostrictive Level Transmitter, the liquid measurement and water removal could be managed offsite and calibrated to the customer's specific set points. The TotalFlow RTU controlled a solenoid valve to open and close the dump valve. The TotalFlow then calculated the water that was removed through a series of calculations integrated in the RTU. Water values were logged for current day, previous day and accumulated level set points. Installed in the GPU, the KM26 and AT600 provided 4-20 mA liquid level

measurement, allowing successful removal of water from the unit resulting in more efficient production with no water intrusion.

The customer required over 200 KM26 gauges/ AT600 transmitters in order to control the level in their GPUs for just one Oil and Gas production field.

Winn-Marion and ABB KTEK partnered to develop a solution that addressed the customer's application concerns while providing single source accountability. Winn-Marion has grown from their base in Denver, Colorado adding offices in Pennsylvania, North Dakota, Utah, Arizona, New Mexico, Montana and Wyoming. Serving the industrial marketplace, with more than 180 employees, they have been helping customers in the Rocky Mountain and Northeast region of the United States for over 40-years.

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