



APPLICATION SPOTLIGHT

Onshore Oil Recovery - Water Separation



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APPLICATION:

This customer is building water separation systems to be used at multiple oil wells. When oil is pumped from the ground there is a percentage of water mixed in with the oil. The amount can range from trace amounts to over 75% of the total well output. Before processing, this water is separated from the oil by a passive method where the oil floats to the top of a specialized tank and the water moves to the bottom. The water is then drained from the bottom of the separator into storage tanks to be held for disposal and the oil is drawn from the top.

PRODUCT SUPPLIED:

TW Turbine flow meters & RT-10 Totalizer.

CHALLENGE:

Water produced by an oil well must be treated before being disposed of. In most locations, the stored water is periodically picked up by a tanker truck and hauled to a treatment facility before injection into a deep injection well for disposal. The well owner is charged by the disposal company by how much water is removed from the separation site. It is in the best interest of the well owner and the tanker owner to verify how much water is removed for billing purposes. The amount of produced water must also be reported to the EPA, making accurate record keeping a must.

SOLUTION:

TW series turbine flow meters were used as a cost effective, yet accurate, solution for this OEM application. These turbine meters are specifically designed for low viscosity applications like water. The TW turbine is available in a number of sizes to meet almost any flow requirement so the customer does not have to change the method of metering for different separator sizes, just change the size of the meter.

Combined with an RT-10 totalizer in a NEMA 4X enclosure, the customer is able to accurately keep track of the amount of water disposed of. The RT-10 totalizer is battery operated and fits nicely into an application that often requires remote locations for installation.

AW-Lake has been manufacturing and supplying turbine meters to the energy industry for decades.

RESULT:

As an added feature to the water separators, the meter/totalizer solution provides valuable information for the user to reduce their water transportation and disposal costs.