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APPLICATION CASE STUDY



Magnetrol
HYGIENIC MEASUREMENT SOLUTIONS

ECLIPSE
GUIDED WAVE RADAR



HART
COMMUNICATION PROTOCOL



Guided Wave Radar for High Fructose Corn Syrup Storage Tanks

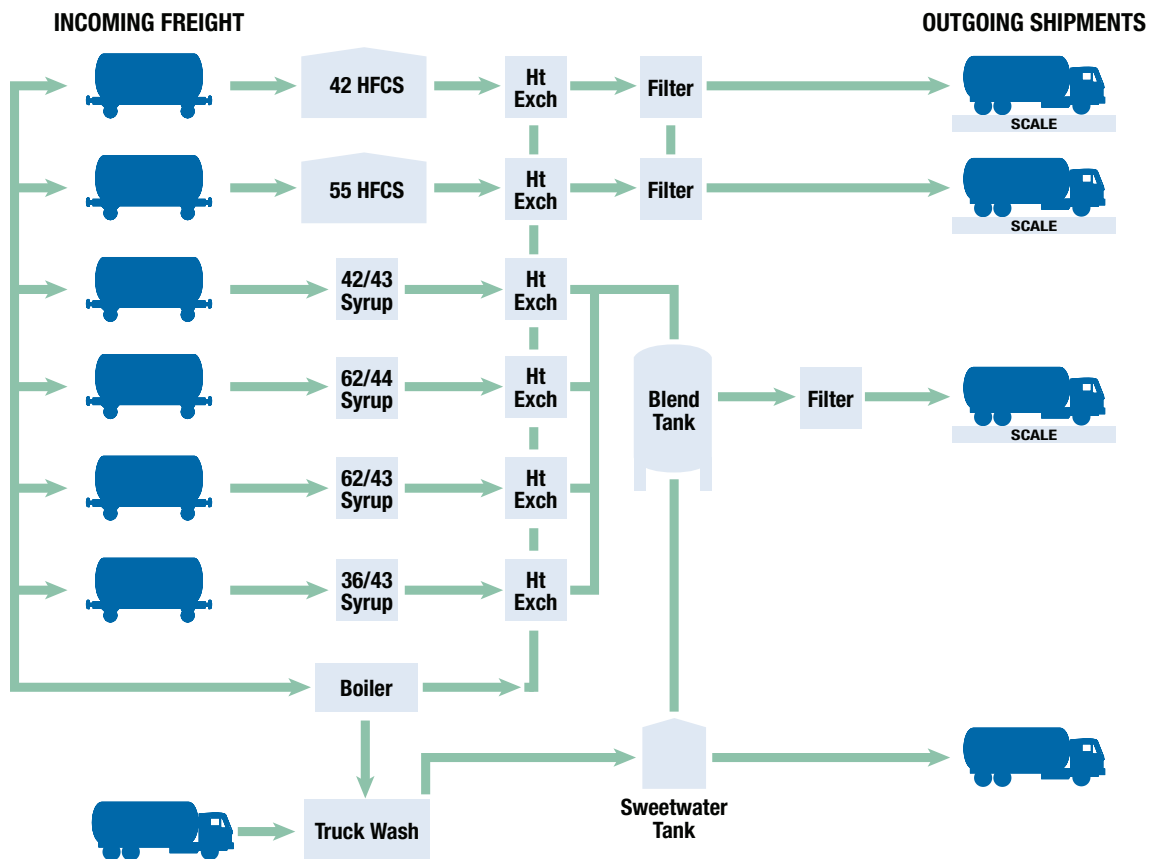
Submitted by Rob Clemons, Fine Line Instrument

Application:

Two tanks, 52' (15.8m) Tall – Light Viscosity - 500 cP, and 40' (12.2m) Tall – High Viscosity - 180000 cP, store high fructose corn syrup for manufacturing processes that require accurate level measurement.

Problem:

The customer was using a pressure sensor at the base of their tanks to measure level. The sensor would become covered with syrup and would not accurately measure the level, causing their inventory records to be significantly inaccurate. The specific gravity of the product also varied, giving them accuracy issues. This inaccuracy was causing inventory and accounting errors.



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GUIDED WAVE RADAR TRANSMITTER



Solution:

Since the tanks were 52' and 40' tall and only about 12' in diameter, we needed to use Magnetrol Guided Wave Radar technology for continuous level measurement. We used a single-cable flexible probe in light syrup, which was the first application. We then decided to use a twin-cable flexible probe in the 2nd application with the heavier corn syrup. We decided to use the twin-cable since it would provide better sensitivity and reliability for the product.

Each unit was sold with a Precision Digital PD6000-6R5-2 Relays & 4-20 mA Out, 85-265 VAC & 24 VDC Transmitter Supply and Precision Digital PD2811 - Plastic NEMA 4 Enclosure for 1/2 DIN Meters. These units powered the radars, sent a 4-20 mA signal to their control room and had high level alarm relay points.



They were frustrated with inventory shortages and costs associated with manually gauging the tanks each month. This was an excellent solution for stable, reliable data information and allowed them to save money and time associated with inventory errors. Fine Line Instrument and Magnetrol became valuable partners in solving an issue that had cost them money for over 5 years. Customer service and the quality of the product was very important to the customer. We put a 60-day delayed billing on the first unit and they were very happy with the results. The customer purchased the second unit outright.

Result:

They benefited by having excellent control over their inventory. This saved time and money. They decided to standardize with the Magnetrol GWR at this facility for all of the level applications.



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