



Pulsar revitalizes measurement accuracy at Soviet-era plant

As I walk through the factory in the Ukrainian city of **Krasnoperekopsk**, not far from the Black Sea, I feel as though I've slipped back in time. Founded the same year as Magnetrol, in 1932, the **Perekop Bromine Plant** has been undergoing extensive asset upgrades in recent years, yet it remains a patchwork of 21st century modernization and Soviet neglect. In older, drearier areas of the plant more lights are off than on. Oily smears from leaked fluids and a dusty patina of rust blanket pipes, tanks and equipment. Soviet-era displacer and pressure transmitters monitor levels but the ravages of time have diminished their effectiveness.

The plant produces a variety of bromine products that end up in a number of very different and very important applications. Bromides are essential for making flame retardants, pesticides, oil-well drilling fluids, sanitation and water purification chemicals, desiccants, dyes, fumigants and pharmaceuticals.

For the application that we've come to upgrade—a calcium bromide tank—we can see that the old instruments are faltering. One limitation of the plant's level technology

has been problems with changing densities. The liquid in the tank is heated by steam tracing which concentrates the solution. Water vapors are extracted by creating a vacu-



Soviet torque tube displacer transmitter.



Changing dielectrics defeated old level devices. Note the tank's many internals.

um of approximately -200 to -400 mbarg (-2.9 to -5.8 psig) at temperatures of 120° C (248° F).

An additional challenge of this application is its small tank packed with coiled piping for the steam heating and an agitator. After our evaluation, we recommend Pulsar through-air radar. An extended 4" horn antenna was selected to avoid initial reflection from the round shape of the tank top.

After installation, Pulsar gave us a strong signal. When the tank was closed, heated, and the agitator activated, however, sensing quality diminished because of the poor reflection from the turbulent surface. The problem was easily resolved by changing Pulsar's turbulence setting to "high."

Pulsar has been operating perfectly for this customer ever since. He told us he's now securing funds to replace other tired level instruments with Magnetrol products.

■ Michael Brekelmans, Magnetrol Belgium



Extended 4" Horn Antenna

REP'S NOTE:



"Running late to the airport, I packed Pulsar's extended horn antenna into my carry-on luggage. When the horn appeared on the x-ray screen at the airport's security check, the luggage conveyor came to a sudden halt and the inspector shot me a puzzled look. I could see I had some explaining to do. Luckily, I referred to my Russian IOM manual I had with me, which freed me to board the twin-propeller Antonov 24 for my flight from Kiev to Kharkov. It's the first time an IOM served me as a boarding pass!"

