The BeST SoluTion foR high-PaRaffin aPPlicaTions

» Superior accuracy. FMC Technologies Smith Meter positive displacement (PD) meters use rotary vanes and uniquely designed inlet and outlet nozzles that make it the most accurate and lowest pressure-drop metering technology to use for high-paraffin applications.

» Minimal paraffin wax buildup. Unlike inference meters, which can allow buildup in paraffin-rich applications, PD meters are more suitable for these types of applications. The blades of the rotary vane PD meter prohibit the build-up of wax from the walls of the measuring chamber with each rotation.

» Effective for variable applications. PD meters are effective for a variety of paraffin-based applications, including those with variable flow rates and viscosities, from allocation measurement on the oil leg of a separator to custody transfer on a LACT skid.

» Long service life. Low friction ball bearings, fixed cam-type timing and rugged construction give PD meters sustained accuracy and a long service life.
MEASURING CRUDE OIL CONTAINING PARAFFIN WAX

PD meters are highly versatile and have been used in the petroleum industry since the 1930s. Because of their high accuracy, stability, reliability, mechanical output and ease of proving, PD meters remain the most widely used technology in custody transfer management.

One of the advantages of the rotary vane PD meter is its ability to accurately measure crude oils that contain paraffin wax. Unlike inference meters, which can have problems with measurement stability due to paraffin buildup, rotary vane PD meters excel in measuring product containing paraffin wax.

INTERNAL DESIGN

While paraffin wax can coat the measuring chamber of a PD meter, that minimal buildup will stabilize the measuring chamber’s volumetric displacement and, therefore, stabilize the meter factor. That’s because the PD meter rotary vane’s sliding action acts as a constant self-cleaning operation. The vanes control the buildup as they rotate, passing all but a thin layer of paraffin on the chamber wall out of the meter.

EFFECTIVE IN CRUDE OIL APPLICATIONS

The robust nature of FMC Technologies’ Smith Meter PD meters make them effective for almost all applications, including continuous or start-and-stop operations, inconsistent flow profiles and rates, or for varying viscosities or densities. Our Smith Meter PD meters are the premier legacy measurement technology available today, and they’re considered the best technology for many applications – including custody transfer – where accuracy, stability and reliability are demanded.