

# INLINE<sup>TM</sup>

with Hoffer Flow Controls

## Sun Selects Hoffer Flowmeters For Custody Transfer Pipelines

of pipelines criss-cross the US providing the safest and most economical transportation of petroleum products. Sun Pipeline operates and oversees more than 7000 miles of crude oil and petroleum product pipelines in 12 states and has additional equity interests in another 3000 miles of pipelines in 3 other states. Sun has selected Hoffer Flow Controls' premium performance American Petroleum Institute (API) rated flowmeters to monitor these lines.

"We operate as a common carrier transporter of crude oil, gasoline, home heating oil, diesel fuel and petrochemicals which are produced and marketed not only by Sun, but by several other energy

companies. Flow measurement accuracy is crucial to our ability to adequately service pipeline customers," according to Mr. Pat Rowell, measurement technician for Region III, Eastern Area of Sun Pipeline Company, a wholly owned subsidiary of Sun Company, Philadelphia, PA. Pat continues "Constant maintenance and verification of precise line balances throughout our custody transfer pipeline are key to profitability and pipeline integrity. Computer analysis and processing of flow rate and volume data from all pipeline divisions, within the network, are instantaneously transmitted via satellite, microwave and phone lines to our Philadelphia, PA facility. Most important for flow measurement integrity are

premium performance turbine flowmeters that provide consistent linearity and repeatability, regardless of the specific gravity and viscosity of liquid petroleum products being transferred"

**Pipeline operators** have extensive safety systems and programs in place to assure pipeline performance. They include: com-

puter-assisted control centers capable of detecting and interpreting subtle pressure and flow changes in the pipeline; regular air patrols by experienced pilots and observers; periodic ground patrols for detailed inspection of the pipeline environment; and, continuous monitoring of the product flow.

**Sun Pipeline** Company's Eastern Area pipelines cover nearly 2500 miles in Pennsylvania, New Jersey, New York, Ohio and Michigan. Metering stations throughout the region monitor the network. "Flow rate data from each metering station is compared to assure accurate line pressure and flow balances. Each flowmeter is calibrated monthly to verify accuracy of the readings," Rowell explains.

Sun requires that the meters meet API Chapter 5.3 requirements and maintain at least  $\pm 0.02$  repeatability for their custody transfer. There are only four vendors worldwide capable of supplying a premium performance turbine flowmeter that complies with the API standard. Sun also demands the meter calibration is proven before putting it on line. It is critical that the turbine meter vendor consistently meet Sun's rigorous proving program; otherwise, valuable man hours are wasted proving and rejection out-of-spec meters.

**Hoffer is proud** to be Sun's vendor of choice for pipeline applications.



*In house calibration facilities allow Hoffer to verify flowmeter performance for Sun Pipeline.*