

INLINETM

30 years
in Flow
Measurement

with Hoffer Flow Controls

HOFFER INSERTION METERS USED FOR LEAK DETECTION IN PIPELINE

Hoffer Flow Controls continues to supply many “insertion” type turbine flowmeters to the petroleum pipeline industry. This type of meter is commonly used for leak detection and not custody transfer. Custody transfer applications are addressed with “in-line” axial flowmeters such as the Hoffer API Series. Leak detection flow applications, for checking the integrity of the pipeline, can be addressed with the HP Series of insertion turbine flowmeters.

The principle of operation for an insertion type turbine flowmeter is much the same as an in-line turbine flowmeter. The insertion meter includes a rotor assembly and pickup coil. The flowmeter measures velocity at a specific point in the fluid stream. Volumetric flow can be inferred provided the I.D. of the line is known. Accuracies can approach $\pm 0.25\%$ depending on the type of transmitter specified with the flowmeter.

Insertion turbine meters provide multiple advantages when compared both to in-line turbine flowmeters and other types of flowmeter technologies. These advantages include low cost, negligible pressure drop, low installation costs, minimal potential points of leakage, and avoidance of high pumping costs. Additionally, the HP insertion turbine flowmeter can be specified for use in velocities up to 50 FPS. This allows pipeline companies to move a maximum amount of product in the shortest time possible.

Leak detection and pipeline integrity is not only essential to the bottom line for the pipeline company, it is an environmental issue. In California, in particular, Hoffer has supplied insertion turbine flowmeters for pipeline integrity verification. Many of the petroleum products being measured include the additive MTBE. Proper selection of the flowmeter seal is essential for any application, however, is sometimes more challenging with various additives factored into the equation. Hoffer has successfully specified and supplied the insertion turbine flowmeter for a wide cross section of pipeline applications.

The HP Series flowmeters are available in both low pressure and high pressure versions. The unit produces a frequency pulse output. Hoffer can supply either a pulse producing preamplifier or an analog signal converter with the HP meter. The recent introduction of the HIT-1 smart signal converter allows user to take advantage of the excellent repeatability of the HP flowmeter. This means that users can achieve $\pm 0.25\%$ linearity over a 10:1 flow turndown range when they specify the HIT-1 transmitter with the HP insertion turbine flowmeter.



Whether your flow application calls for a linearity of $\pm 0.15\%$, $\pm 0.25\%$, $\pm 0.5\%$ or $\pm 1\%$ turbine flowmeter, call us. We design and manufacture a wide variety

of turbine flowmeter solutions for gas and liquid applications. Let us put our flow expertise to work for you.