# Magnetic Flowmeters

# A Meter Well Positioned to Meet the **Needs of Many Applications**

hile the magnetic flowmeter market is a mature and stable one, there are some new product developments in the magmeter market, and these new developments favor continued growth. In fact, a steady stream of new products has kept the magnetic flowmeter market vibrant with growth.

For example, the development of insertion meters gives more options to end-users who may hesitate to pay the high prices for large-line-size magnetic flowmeters. Suppliers have also brought out a wide variety of liners to handle sanitary and caustic liquids. And advanced diagnostics are making magmeters both more intelligent and more reliable.

Magnetic flowmeters offer lower cost of ownership when compared with many traditional technology flowmeters. The flowtube of a magnetic flowmeter is highly durable and subject to little change. Today's linings, including PTFE, EFTE, PFA, and hard rubber, are highly durable and designed to handle slurries as well as water containing chemicals. With no primary element to replace and no moving parts to introduce wear, magnetic flowmeters represent a very stable and reliable long-term method of measurement with minimal maintenance costs. For these reasons and others, magnetic flowmeters are displacing traditional-technology flowmeters for some applications.

Anther important product area for magnetic flowmeters is highstrength direct current (DC) meters, two-wire magmeters, and wireless/battery-operated meters. The high-strength DC meters are better able to handle dirty liquids and slurries than many of the standard DC meters. These high-strength DC flowmeters are now capable of handling applications that were formerly reserved for AC meters.

Nearly all magnetic flowmeters are shipped with wires that enable the meter to plug into a power source that is independent

of a process loop. These are referred to as 4-wire meters. Other magmeters can be plugged into another device that already has power. These are referred to as 2-wire devices. The chief advantages of these are reduced power requirements and lower installation cost, chiefly from lesser cabling costs.

In addition to 2-wire devices, the use of wireless and batteryoperated magnetic flowmeters is growing. Wireless and batteryoperated magmeters are well suited to remote locations and also offer reduced installation costs. However, magnetic flowmeters typically have significant power requirements, and this can present challenges for battery operation. Even so, the need to use magnetic flowmeters in remote locations will continue to be a driving force behind wireless and battery-operated magmeters.

The inability of magnetic flowmeters to measure nonconductive liquids will always be a barrier to their use in the oil & gas and refining industries, barring some unforeseen technological breakthrough. However, suppliers have succeeded in reducing the amount of conductivity required to measure flow with a magnetic flowmeter. This has been done in part by boosting the amount of power used to excite the magnetic coils, thereby creating a stronger signal. By pushing back the boundaries of conductivity, suppliers are making magnetic flowmeters usable in a broader range of applications.

### FlowMags.com

Flow Research recently published the latest update of its "Volume X: The World Market for Flowmeters" study, highlighting application and technology trends in flow measurement worldwide. For more details on this study, visit **FlowEverything.com**.

## Flowmeter Suppliers

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