



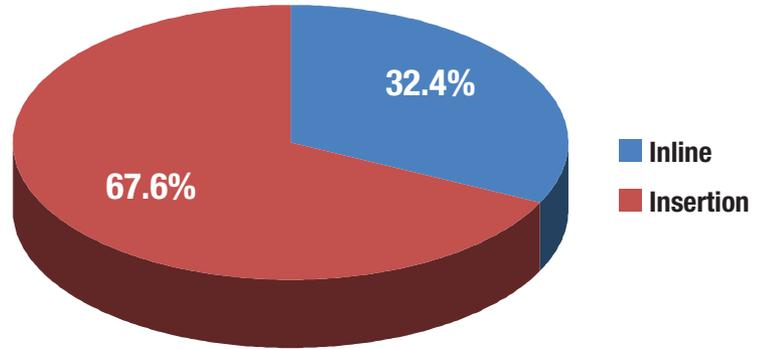
Emissions-Monitoring Market to Drive Demand

Both thermal and Coriolis flowmeters measure mass flow. However, thermal meters measure mass flow quite differently from Coriolis meters. Instead of using fluid momentum, as do Coriolis meters, thermal flowmeters make use of the thermal or heat-conducting properties of fluids to determine mass flow. While most thermal flowmeters are used to measure gas flow, a small percentage also measure liquid flow.

In the early 1990s, new environmental regulations began requiring companies to detect and reduce the emission of sulfur dioxide (SO₂) and nitrous oxide (NO_x) into the air. SO₂ and NO_x are two principal causes of acid rain. The Environmental Protection Agency (EPA, www.epa.gov) initiated a program to reduce pollution in the atmosphere. It is possible to determine how much of these substances are released into the atmosphere by combining a measurement of the flowrate with a measurement of the concentration of SO₂ and NO_x.

In response to CEM requirements, thermal flowmeter companies

→ Shipments of Inline and Insertion Thermal Flowmeters in Latin America in 2009 (Percent of Dollars)



Source: The World Market for Thermal Flowmeters

developed multipoint thermal flowmeters. In many cases, continuous emissions monitoring occurs in large stacks that emit pollution from industrial sources. Single-point thermal flowmeters measure flow at a point, making it difficult to accurately compute flow in a large pipe or smokestack. Multipoint thermal flowmeters measure gas flow at multiple points, and use these values to compute flow for the entire pipe, duct, or stack. Some multipoint flowmeters have as many as 16 measuring points.

While the need for CEM is ongoing, the 21st century has brought new environmental awareness and requirements. This is providing new opportunities for thermal flowmeters to measure emissions in applications such as recovery of landfill gas, monitoring of flue gas, measuring boiler emissions, ethanol refining, and biomass gasification.

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Fox Gives You the Green Light on CO₂e



Flow meters for flare and vent gases, digester and biogases, and natural gas.

If your company has been mandated by EPA's 40 CFR part 98 to report greenhouse gas (GHG) emissions, Fox Thermal Instruments has the flow instrumentation and applications expertise you need to implement a reliable, cost-effective solution.

Our thermal flow meters directly measure mass flow, have no moving parts, and can be installed via a single insertion point on a pipe or duct. Wide turndown and a specified accuracy that exceeds the EPA requirement means our flow meters can help you meet immediate reporting requirements as well as accurate, long-term compliance.

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