

FOX APPLICATION GUIDE

Thermal Flow Meters Help Improve Efficiency in Mining Processes

TYPICAL APPLICATIONS INCLUDE:

- Ventilation Air Flow
- Mining Ventilation System Flow Monitoring
- Purge Air
- Oxygen Flow Measurement
- Natural Gas Flow to Boilers
- Natural gas Flow to Heaters

Accurately Measuring Air Flow for Improved Systems Monitoring

Fitting your ventilation systems with accurate air flow meters is an effective first step in controlling energy costs and monitoring flow rates to each mine tunnel. For the safety of workers deep underground, it's important to monitor data collected by air flow meters to assist in improving control of compressors, blowers, and other equipment involved in delivering air underground.

With a mass air flow meter system, leaks, blockages, and blower failures can be identified on a system-wide scale. This is especially important when considering that leaks are frequently a significant source of lost energy, sometimes wasting up to 30% of output in standard cubic feet or liters per minute of air flow.

Detecting air leaks from gas locks during air purging is an effective way to avoid overburdening gas generators and to prevent the accumulation of vapors. Fox Thermal flow meters can monitor air flow to detect interruptions that can cause damage to the system.

Fuel Usage and Efficiency in Mining Processes

Optimizing combustion processes of mining operations can result in significant savings in fuel costs. Natural gas and air flow meters can be used to read the flow of those gases to a burner, boiler, heater, or smelter to determine the proper air-to-fuel ratio needed for the highest possible efficiency. Accurate flow measurement of the natural gas and combustion air is paramount in order to achieve the best results.



Mining processes require robust equipment and instrumentation.



A mine shaft with equipment to provide ventilation and power other processes.

Benefits of Fox Thermal Mass Flow Meters

Air monitoring applications benefit from Fox Thermal flow meters' accurate and repeatable measurement of mass flow rate, fast response, and low-flow sensitivity.

Fox flow meters offer these beneficial features for combustion applications:

- Accurate mass flow measurement
- No pressure or temperature compensation needed
- Repeatability
- Up to 1000:1 turndown
- Easy installation with inline and insertion styles
- Safety and reliability with safety approvals
- NIST traceable calibration



The Model FT1 is a cost-effective solution for air and fuel flow monitoring.



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