

Thermal mass flowmeter Sensyflow FMT500-IG

Natural gas and air flow measurement to control industrial burners

Energy cost reduction by monitoring the fuel to air ratio in industrial burners.

Measurement made easy



Introduction

Controlling the fuel to air ratio to your industrial burner, steam generator or process heater represents a key fact to make the operation energy efficient and ensure the quality of your product.

Optimization of the combustion control is one of the most important ways to make the operation of your industrial burner more energy efficient.

By sensitively and accurately measuring the flow rates of fuel and air to the burner an optimal fuel to air ratio can be achieved even under varying process conditions. In this way fuel consumption can be reduced, which will also reduce your energy costs. At the same time the environmental impact will be lower and the quality of your product better because the product temperature can be controlled precisely over the whole process duration.

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Instrumentation

Common applications for ABB Sensyflow FMT500-IG thermal mass flowmeters will be found in fuel and air feed lines in industries like glass manufacturing, aluminium and steel production, pulp and paper, power, chemical and petrochemical due to their sensitive and accurate mass flow measuring capabilities, wide measuring dynamics and their maintenance friendly and robust design.

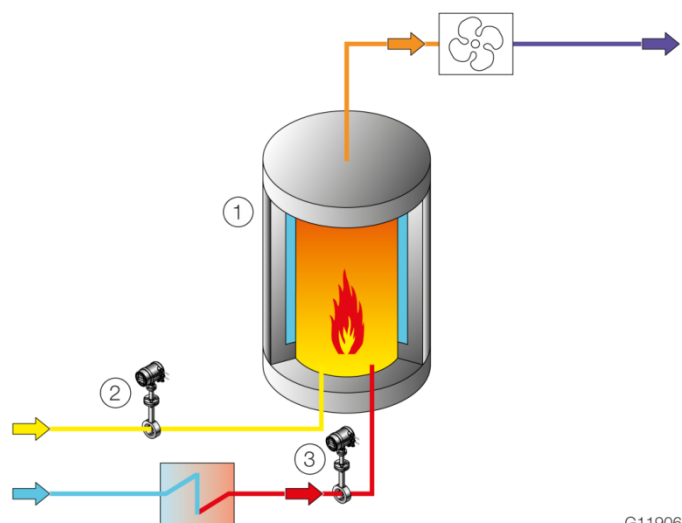


Fig. 1: Sensyflow installation scheme for burner control

- ① Oven with burner
- ② Gas flow measurement
- ③ Air flow measurement

ABB Sensyflow FMT500-IG thermal mass flowmeters measure the mass of streaming gas directly. There is no need to install additional temperature and pressure transmitters to compensate the measurement. No moving parts ensure a maintenance friendly installation and the pressure loss created by the obstruction in the line is negligible.

The extremely wide measuring range of up to 1:150 is a result of advanced digital signal processing as well as the market outperforming accuracy and the fast response time of less than 0.5 seconds. The integrated design comes with illuminated graphical display and various communication options like analog / HART, digital output, or PROFIBUS DP. It has a totalizer inbuilt and features temperature measurement, alarm functionality and diagnostic functions. For difficult to reach installation spots a remote design is available, too.

ABB Sensyflow meters are easy to install. They come with pipeline matching pipe components that ensure a perfect and repeatable alignment of the meter and can be equipped with ball valves, hot tap fittings, or integrated flow straighteners for difficult applications.



Fig. 2: Sensyflow FMT500-IG installation in a glass manufacturing process

Flowmeter benefits

Optimize fuel to air ratio

- Ensure a sensitively controlled burner

Reduce energy costs

- Prevent excessive fuel consumption

Improve the quality of your product

- Temperature control throughout the process

Notes

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