

Long-term stability and precision are the two most important features of platinum thin-film sensors on the heating, ventilation and air conditioning market. In heat meters, for example, the deviations per pair of sensors must not exceed 0.1 K and stability must be ensured for 5 years. Heat meters are used to determine the heating bills and are subject to strict official inspection in Germany. Only certified sensor pairs can be used. For many years, Heraeus Sensor Technology has been a leading supplier in this area. Our main customers are the manufacturers of heat meters and the operators of co-generation plants who supply district heat. Furthermore, Heraeus Sensor Technology's platinum sensors are used for decentralized heat metering, directly mounted at the heater.

Heating flame control

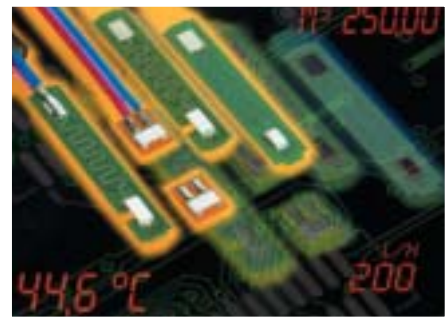
Gas composition and temperature are the two common parameters for combustion optimization of heating boilers. An optimization is required to compensate varying gas qualities with different heat content values. In this field, two measuring methods compete with each other. For both methods, Heraeus Sensor Technology offers high-quality solutions:

- **Gas sensors:** Supplemented by a sensitive layer, the multi-sensor platform can be used to determine either the oxygen content or the CO content in the exhaust gas. With the input of these two parameters, combustion can be optimized in a similar way as in the lambda probe in cars.

- **Temperature sensors:** The flame temperature likewise provides information about the combustion quality and hence the efficiency of heating burners. Arranged in the combustion section, high-temperature sensors made by Heraeus Sensor Technology reliably provide values up to temperatures of 1,000°C.

Air quality control/pollution alarm

By applying a gas-sensitive layer, the Multi-Sensor Platform is converted to a CO₂ or CH₄ sensor. The air conditioning industry utilizes the CO₂ sensor to determine the air quality in rooms. The key is the Pettenkofer number. If it increases, the addition of fresh air needs to be initiated. Another application is alarm systems for pollutant monitoring in public rooms. Officially prescribed in some countries, such as USA and Japan, the carbon dioxide and methane contents are primarily controlled. For this application, Heraeus Sensor Technology's Multi-Sensor Platform is an economic and reliable alternative.



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