

Zirconium oxide Oxygen probes for continuous measurement of O₂-residue concentration in waste gas



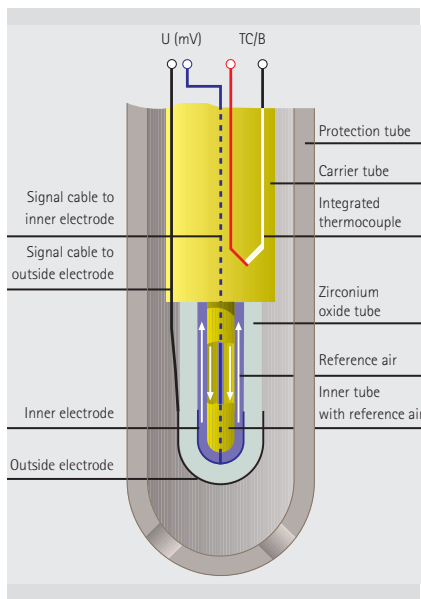
Technical data

Standard length:	1000 mm
Diameter:	25 mm protection tube
Probe voltage:	0 ... 500 mV
Thermo voltage:	thermocouple type B
Measuring range:	0,1 ... 30,0 % O ₂
Operation temperature:	700 °C ... 1.500 °C
Measuring place:	regenerator crown or waste gas channel, vertical position

Benefit

- Economical use of energy by controlled low excess air: approx. 1,5 % energy saving potential, depending on conditions (in a combination with STG Lambda Control)
- Controlled reliable near stoichiometric operation with O₂ residue concentrations below 1 %, as requirement to reduce the NO_x emission
- Monitoring and control of air infiltration, e.g. reversal leakages, ingressed air

Important: About 2 ... 10 % of combustion air is ingressed air, which is not detected by combustion air flow measurement!



Delivery of complete Oxygen measurement system

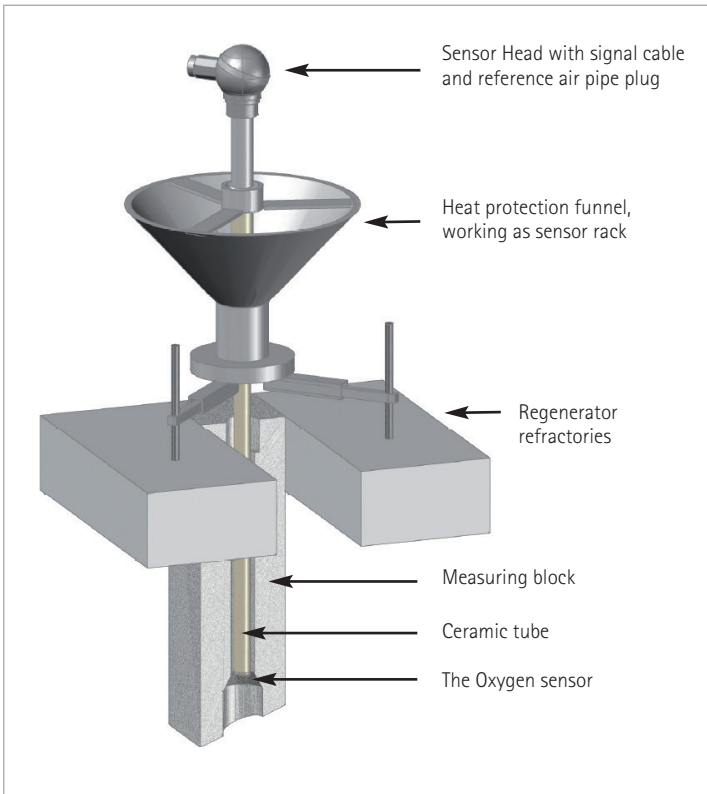
- Zirconium oxide Oxygen probe, type standard
 - special designs for oxyfuel and technical glass
- Measuring blocks in Silica, Magnesite, Zirconia silicate and Zirconia mullite
- Protection funnel, to use as heat protection and sensor rack
- Signal cable junction box and coupling for reference air copper pipe
- High temperature signal cable and reference air copper pipe
- Reference air control boxes with:
 - Pump for ambient air or
 - Pressure regulator for compressed air
 - Air filter, microflowmeter and valves
- Installation and start up

Signal processing units

- Basic processing in control box: processor type OXY for 1 ... 6 probes, local display
- Advanced processing in separate box or control room: SIMATIC modules or Mini PLC with operator panel (prepared for profibus)
- Or signal implementation into customer SIEMENS PCS7 or S7 PLC, with special software module

Options

- Renting or After Sales maintenance contracts instead of just purchasing sensors and measurement components, including replacement of all defective or worn out parts and preventive maintenance
- Installation of STG Lambda Control Software, based on measuring results of oxygen sensors; Integration into existing control system or supply of an efficient new system



Oxygen sensor with measuring block (l.), after installation (r.t.), reference air control box (for 2 sensors) (r.d.)

STG Oxygen measurement for 6 port cross-fired-furnace

