

## Zirconium oxide Oxygen probes for continuous measurement of O<sub>2</sub>-residue concentration in waste gas



### Technical data

standard length:	1000 mm
diameter:	25 mm
probe voltage:	0 ... 500 mV
thermo voltage:	thermocouple type B
measuring range:	0.0 ... 30,0%O <sub>2</sub>
operation temperatur:	700°C up to max. 1500°C
measuring place:	regenerator crown or waste gas channel in vertically position

### Efficiency

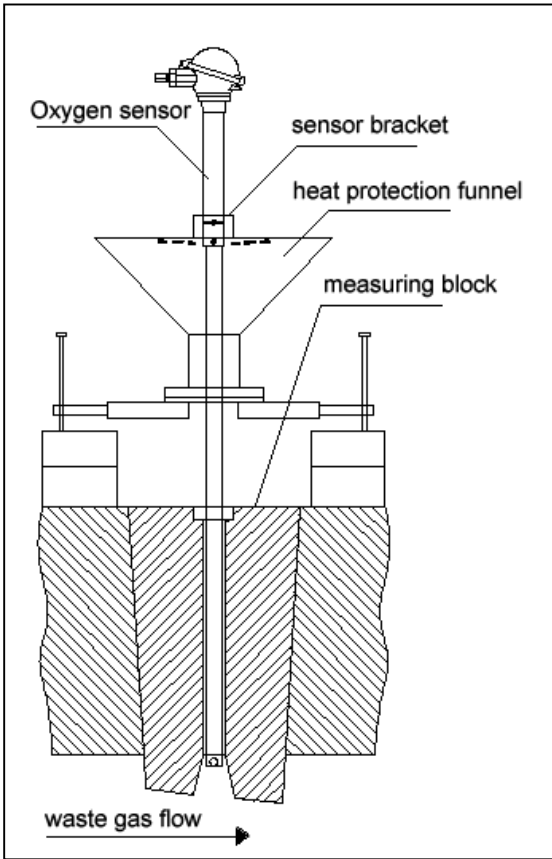
- ❖ Economical use of energy by controlled low excess air:  
depending on conditions approximately 1 ... 5% in combination with Lambda-control
- ❖ Controlled reliable near stoichiometric operation with O<sub>2</sub>-residue concentrations below 1% as requirement to reduce the NO<sub>x</sub>-emission down to a level of 500 mg/Nm<sup>3</sup> and less
- ❖ Monitoring and control of air-infiltration and air-losses
- ❖ **Attention to:** about 10 ... 20% of combustion air comes from air-infiltration, which is not covered by the measurement of combustion air amount!

### Delivery of complete Oxygen – measurement system

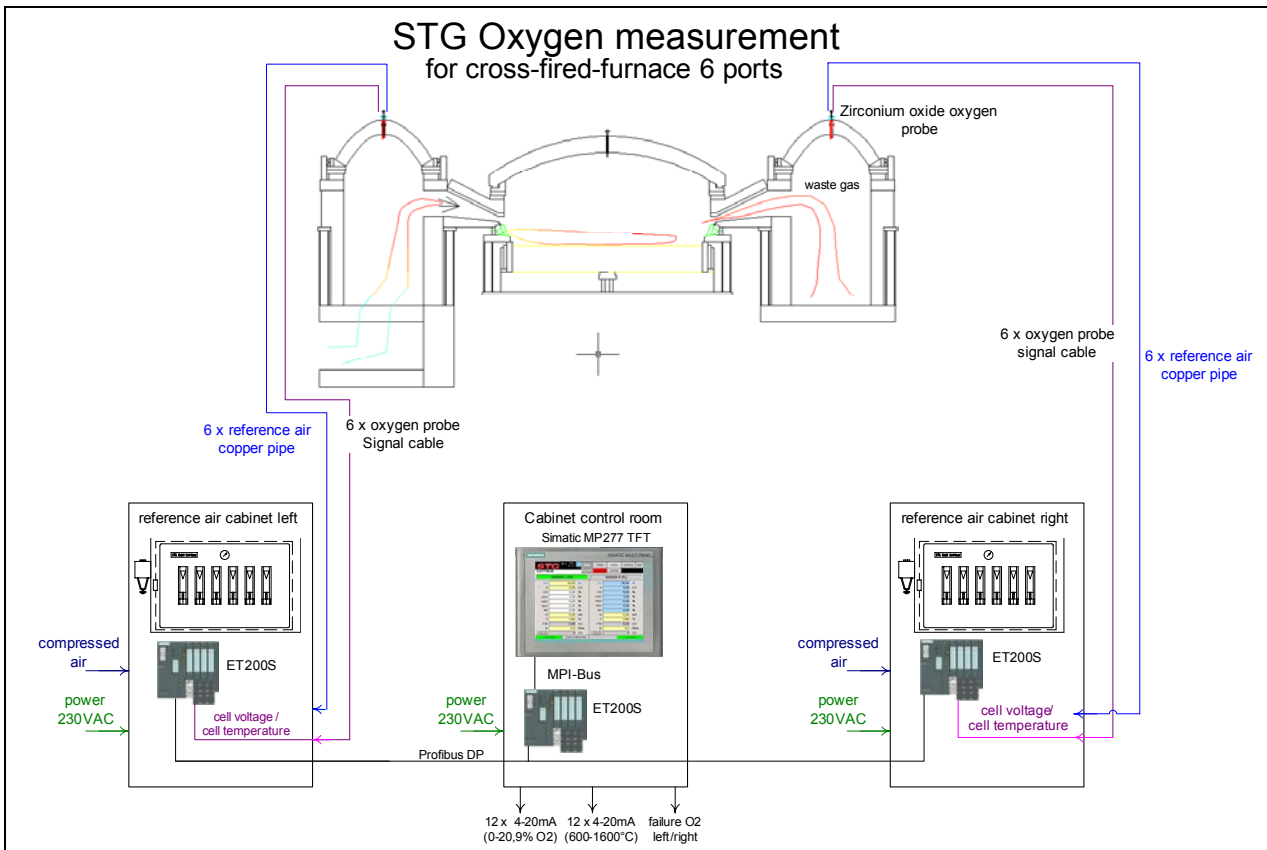
- Zirconium oxide oxygen probe in Standard and special design for oxy fuel and technical glasses Measuring block in Dinas, Magnesite, Zirconia silicate and Zirconia mullite
- Protection funnel, to use as heat protection and sensor rack
- Signal cable junction box and coupling for copper reference pipe
- High temperature signal cable and copper reference pipe
- Reference air control box with air pump or pressure regulator for compressed air, air filter, microflowmeter and valves
- **Evaluation unit:**
  - SIEMENS ET 200S with operator panel (prepared for profibus)
  - or Signalprozessor OXY for 1 and up to 6 probes
  - or Software modules for SIEMENS PCS7 or S7 PLC
- Installation and start up

### Options

- Rent or service contract instead of purchasing probes and measuring components including exchange of all working parts and preventive service
- Installation of Lambda control with the measuring results of the oxygen probes, Integration in an existing automation system or supply of an efficient new system
- Discount in case of ordering a new STG probe in exchange for an old STG probe



Oxygen sensor probes with measuring block, after installation, reference box (example for 2 probes)



Example –Sensor data processing