



ABOVE BURDEN PROBE TEMPERATURE AND GAS MONITORING

BENEFITS

Above Burden Probes are fixed, cantilevered or full span probes which are permanently mounted in the top cone of the furnace providing continuous temperature readout with the option to obtain gas sampling. A unique adjustable roller support arrangement located in the mounting branch is designed to reduce the cantilever length of the probe.

FIELD OF APPLICATION

Blast furnace - temperature and gas monitoring

FUNCTION

Multiple thermocouples are used to measure the temperature above the furnace burden stockline permitting the operators to visualise the temperature distribution across the furnace from the wall to the centreline. Armed with this information, the blast furnace operator can adjust the charging practice (i.e. loading of burden materials into the top of the furnace) thereby controlling the furnace top temperature profile.

A single full span probe bridges directly across the furnace throat, whereas when a cantilever-type probe is used, they are generally fitted as pairs, consisting of one 'long' probe reaching to the furnace centreline. Since only one probe can occupy the space at the furnace centreline, the other probe is typically shorter diametrically opposite. Depending on operating capacity, the furnace can be equipped with either two or four probes. The probe can also be equipped with gas sampling capability, where a small gas pipe is fitted at radial intervals next to each thermocouple, in order to 'sniff' gas samples and allow the operators to determine gas flow and composition across the top cone.

PRODUCT MODEL RANGE

- Full span and cantilever probes
- Temperature and / or gas sampling
- Nitrogen- or water-cooled designs



1 | Water cooled probe

2 | Nitrogen cooled probe

3 | Temperature probe intalled

Technical data	
Construction	Welded stainless steel fabrication
Main body and thermocouple tubes	BS.EN.10088, X5CrNiMo17-12-2 (1.4401)
Probe mounting flanges	B.S EN 10025-2, S275JR carbon steel or equivalent
Thermocouples	Ø 3 mm Type 'K', stainless steel sheathed to required length, 2 m tail of cabling supplied for termination

SERVICES

- Integration engineering
- Erection advisory
- Commissioning advisory
- Logistics
- Spare parts

OTHER CUSTOMERS BOUGHT ADDITIONALLY

- Radar Stockline Recorder
- Mechanical Stockline Recorder
- Profilemeter
- Ignition Lance

Primetals Technologies
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