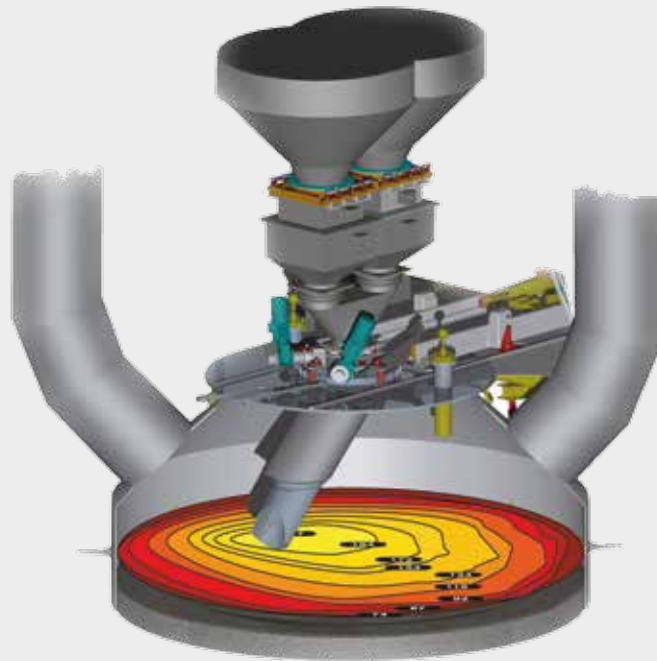



t-matrix




Engineering
GREAT Solutions

2D Gas Temperature Measurement System

2D Gas Temperature Measurement System

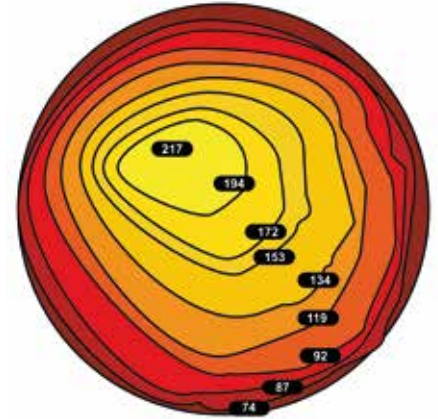
The measurement system t-matrix is based on the principle of sound pyrometry and measures the temperatures in large furnaces along individual paths. The sound pyrometry, also called acoustic gas temperature measurement, uses the effect of the temperature depending sound propagation in gaseous media. The process measures the duration of a sound signal between a sending and several receiving units.

Key features

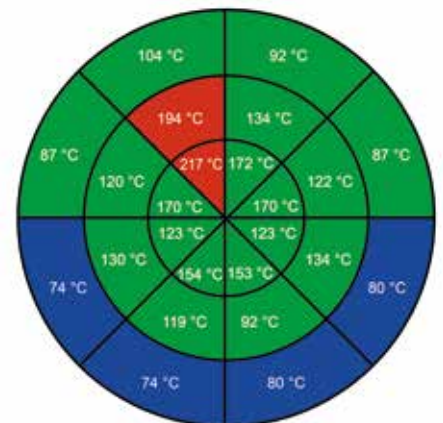
- > 2-dimensional temperature profile of the acoustic measurement plane
- > Animation of the temperature distribution over any periods of time
- > Diagnosis of the temperatures in the complete measurement plane
- > Remote maintenance
- > Minimal use of process gas (nitrogen)
- > Easy accessibility of all components
- > Exchange of data via various interfaces to the PLC
- > Automatic hotspot identification, warning and archiving
- > Open data bank for archiving measurement data
- > No installation within the blast furnace
- > Error report by e-mail
- > Monitoring of user defined sectors

Benefits

- The acoustic gas temperature measurement system t-matrix records the gas temperature without the use of radiation in the strongly dust loaded and aggressive blast furnace atmosphere. Temperature peaks can be clearly identified in the process room based on the delay-free measurement. No mechanical parts of the measurement system are located inside the blast furnace and are therefore protected against gas channeling and burden, distributed by the charging system into the blast furnace.
- > The gas temperature measurement system is virtually maintenance free although the t-matrix can be easily accessed and maintained while the blast furnace is in operation.
 - > Customer specific requirements are integrated fast and easily by using a modular program structure.



Temperature profile across furnace surface



Create your own defined sectors to monitor

Product Specification

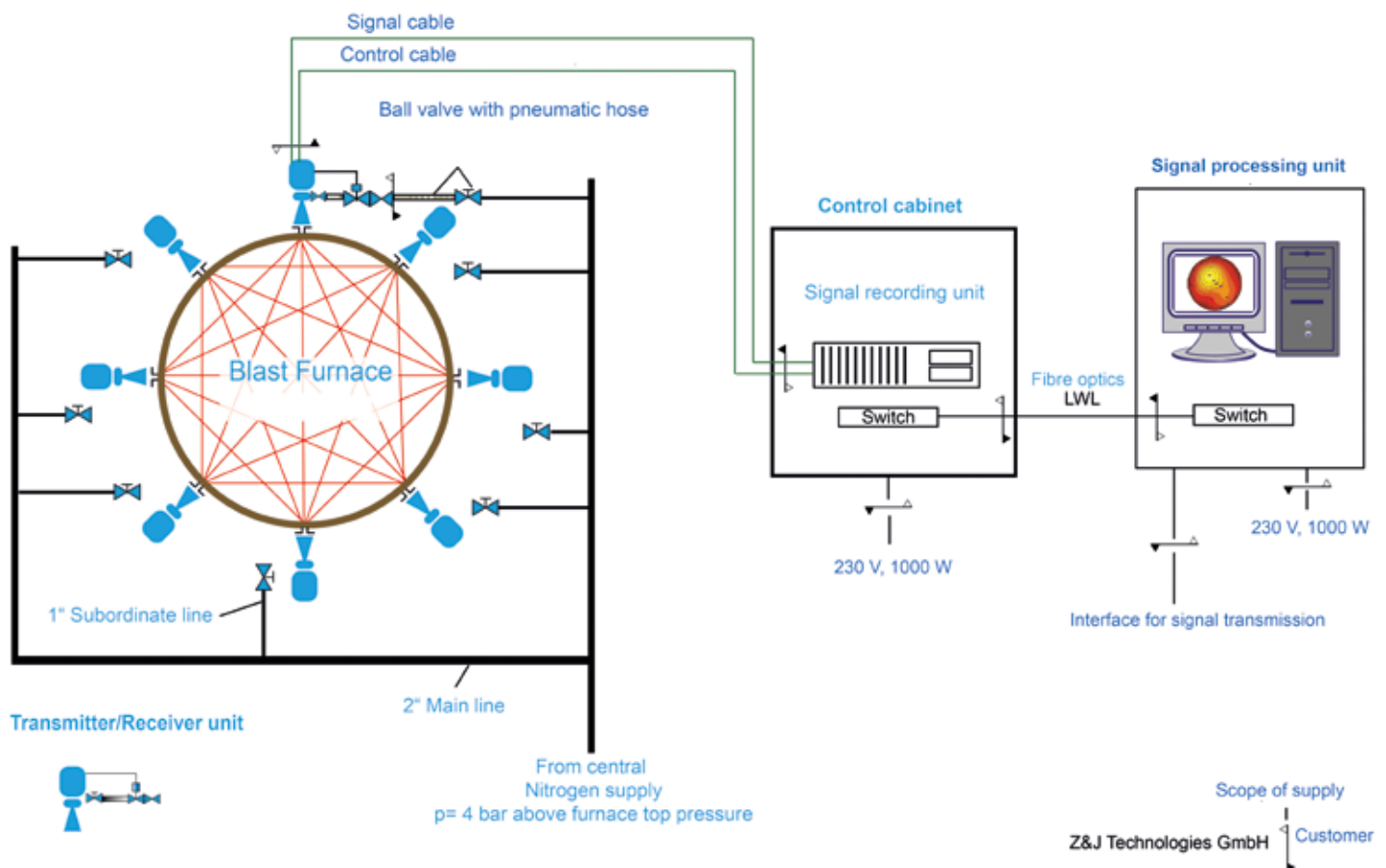
No. of send/receiver units
8

Nitrogen pressure
min. 4 bar(g) above furnace top pressure

No. of paths
28

Material
Stainless steel

Nitrogen consumption
up to 150 Nm³/h



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