Superior with Solids SWR

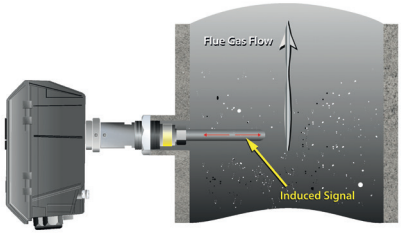
Production of boron carbide
Emissions monitoring according to QAL1

Application

A chemicals company produces boron carbide from the raw materials boric oxide and carbon. Boron carbide powder is used for sintering and hot pressing.
In other applications boron carbide is used as filler material for plastics, metals and concrete or, when used as a material component, increases the wear resistance of electrodes. The production process takes place in an arc furnace at temperatures of 2400 °C.
To monitor limit values and to comply with legal requirements a continuous measurement of exhaust gas and a monitoring of the dust emission, according to QAL1, is required in this process. Therefore our customer needs an emission measuring device which fulfils these requirements and documents and records the measured values continuously.

Process data

Customer:	Chemical manufacturer (Germany)
Product:	Boron carbide
Quantity:	20 mg/m³
Installation place:	Exhaust gas duct
Function:	Measurement of dust concentration in exhaust gas duct after flue gas filtering



Solution

The basis for optimum environmental protection is the installation of a tested and certified measurement system for the continuous measurement and monitoring of emissions and immissions.
In Europe for the measurement and monitoring according to DIN EN 14181, specified by the authorities, only type approved measuring- and data acquisition devices are defined.
With quality assurance tests according to standards EN 14181, EN 13284-2 and EN 15267-3, as well as the TÜV certification concerning to the 13., 17., 27. and 30. BImSchV a system QAL 991 can be used in nearly all industrial applications in which dust emissions have to be measured. Utilising probe electrification technology (ElectroDynamicTM) the QAL 991 is, in comparison with optical systems, much more resistant against contamination and can therefore also be used in challenging applications. In this application our customer measures the dust concentration in his process waste gases.

Customer benefit

- insensitive to contamination
- reduction of material-, downtime- and maintenance costs
- tested for suitability according to QAL1

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Product link

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