

# Product Overview for the Coal-, Steel- and Mining Industry



INDUTECH was established in 1994 and is specialized on high performance online-analysis for process control purposes, and with more than 30 years of experience INDUTECH's Engineers are working mainly in the following fields:

## **Analyzers for Coal Mines, Coking Plants and Power Stations to determine:**

- ash content
- moisture content
- sulphur content
- carbon in fly ash
- calorific value / inerts
- ash fusion
- volatiles
- trace elements, as arsenic
- solid and ash content of slurries
- complete elemental composition of ash
- recognition of coal, coke, petrol coke and slag

## **Analyzers for the Steel Industry to determine:**

- basicity of sinter
- moisture content
- zink content of converter dust up to 300°C

## **Analyzers for Ore Mines and Ore Preparations Plants:**

- copper ore
- bauxite
- moisture content
- elemental composition of the concentrate
- elemental composition of ore
- silicon content of magnesite ore

## **Analyzers for the cement industry:**

- raw meal
- moisture content
- limestone
- elemental composition of cement

## **Analyzers for the Potash industry:**

- potash content in silos
- belt potash meter
- potash belt weigher
- moisture content

All systems include a sophisticated evaluation with data acquisition, calibration, visualization and data recording on a PC and an interface to the PLC.

# Know How

## PMD 2450

Precision **M**icrowave **D**evice - Microwave-Moisture Measurements

The PMD 2450 covers the experience gained over 4 generations of the instruments, based on the microwave transmission and the phase method, which was developed by the founder of the company. The original method was remarkably improved by Indutech. This gains large advantages compared to earlier generations of the instrument, in a noticeably increased accuracy, especially for thin layers, inhomogeneous products and concentration measurements.

## GTA

Gamma Transmission **A**shmeter

The GTA-product line is based on the well known **Dual Energy Method** with nuclear gamma sources of different energies. This method is known to be strongly influenced by changes of the elemental composition of the ash, especially of the calcium and iron content. To reduce these disturbances Indutech developed the **Triple Energy Method** and solved finally these interferences by a combination of GTA and **OXEA®**.

## OXEA®

Online **X**-ray Elemental **A**nalyzers (Patented)

The **OXEA®** product line is based on X-ray fluorescence (XRF) and determines the elemental composition of the measured product. Indutech has modified the well known XRF technique, for online applications. All elements with an atomic number > 10 can be detected down to the ppm-range.

The **OXEA®** was at first mainly used in power stations to determine the sulphur and ash content of coal and gives a high level of accuracy obtainable with online analyzers. In the meantime **OXEA®** is also used for a large variety of non-coal applications. **OXEA®** is protected by several worldwide patents.

## K- 40

Natural Gamma Analyzers

The natural gamma radiation of the K 40 isotope is used to determine the potassium content of potash salt in silos, on conveyer belts or in pipes.

All devices are also available as **explosion-proof** versions for zone **21** or **22**.

## Service

Remote service per modem or internet connection is available for all devices. This saves time and money.

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