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Centrum Transferu Technologii
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ALFA-06/3E

Absorption system for on-line monitoring of coal quality

On-line measurement of ash moisture content, calculating calorific value of coal transported on conveyor belt

- on-line information about coal quality parameters
- measurement of coal layers from the depth of 50 mm
- contactless measurements in layered coal of different quality
- adapted to work in control systems
- user-friendly software adapted to the needs of the user, on-line work
- simple, easy-to-install construction

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Absorption system for on-line monitoring of coal quality

TECHNICAL DATA

✓ Type of measurement	dynamic, contactless, automatic
✓ Type of tested material	hard coal
✓ Grain size of tested coal	0 ÷ 30 (80) mm
✓ Depth of coal layer on the belt	50 ÷ 250 (300) mm
✓ Range of measuring parameters:	
- ash	3 ÷ 95% A^r
- moisture	3 ÷ 30% W^r_t
✓ Measuring error specified by the on-line measurement error:	
- for ash meter in the range 3÷30%	σ ≤ 1,5% A^r
- for ash meter in the range 30÷95%	σ ≤ 2% A^r
- for moisture	σ ≤ 1,5% W^r_t
✓ Basic measurement duration: frequency of measurement results visualization	multiplied cycle time
✓ Power supply:	
- ash meter electronic unit	230 V AC 50 Hz
- moisture meter electronic unit	24 V DC
✓ Casing protection degree:	IP 54
Ash meter characterictis:	
^{137}Cs	0,555 GBq
^{241}AM	11,1 GBq
Moisture meter:	electromagnetic wave with the power of 10 mW
✓ Standard outputs	RS 422
(optionally)	4÷20 mA current loop
✓ Measurement results visualisation	monitors, displays
✓ Condition for installation and proper operation	all belts have to be standard and non-reinforced; coal of different quality layered centrally on conveyor belts
✓ Overall dimensions and weight of the ash meter of moisture meter:	
- mechanical part	1400×600× s mm (s=belt conveyor width)
- ash meter electronic block	280×280×150 mm
- moisture meter electronic block	140×160×30 mm
- weight	depending on s - about 200 kg
✓ Working conditions:	
- ambient temperature	-10°C ÷ 40°C
- relative humidity at 20°C	20 ÷ 80%
- atmospheric pressure	700 ÷ 1060 hPa

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