

RODOS – U ASH MONITOR WITHOUT ISOTOPE



Safety, Comfort, Current Information, Data Base

**ON-LINE QUALITY – QUANTITY MONITORING OF RAW
COAL**



Applications

The ash monitoring system RODOS – U, is an advanced, safe and on – line oriented system for measuring the ash content in “hard coal” and “brown coal”, being transported through belt conveyors. RODOS, used in conjunction with belt-conveyor scales, results in a powerful tool that is used for quality and quantity monitoring of

- Raw Fuel
- Supply Units and Fuel Preparation
- Fuel that Supplies the Production Station

Method of Measurement

The operation principle of the ash monitoring system RODOS, is based in the value of the ash content of the fuel in relation to the natural gamma ray (γ).

System Structure

The system is consisted of two main components:

- The Measuring Component
- The database Unit

The Measuring Component includes:

- A device that contains the measurement head (sensor) which is located underneath the belt-conveyor.
- Electronic Unit with μ Controler.
- Belt-Conveyor Scale
- Indications Instrumentation

The Database Unit is an Industrial PC equipped with a color monitor that executes the following processes:

- Presentation of the Current Measurement
- Measurement Data
- Presentation of pre-selected Previous Measurements
- Creation of Reports in the form of Tables and Charts

There is also the possibility for the user to desirably adjust and use this data according to his requirements for either fuel management or fuel quality control.



TECHNICAL SPECIFICATIONS

Measurable Materials:	Hard Coal, Brown Coal
Grain Size	0-200/300 mm (in practice 500mm)
Minimum Material Quantity on the belt	100mm
Measurement Range	5 – 75 % A α
Measurement Error (Statistically, absolutely defined With a typical deviation of 1 σ) which is allowed for sampling and the chemical composition error according to the fuel type:	
For Fuel sized 0 –200 mm :	<2% A α
For small size Fuel	< 1 – 1,5% A α
Indication Accuracy	0,1%
Type of Measurement	Dynamic, Contact Free, Automatic
Measurement Display	On-Screen, Digital Recorders
Measurement Output	Analog 4-20 mA , RS-485/422, modems
External Dimensions and Mass According to the Belt-Conveyor Width Measurement Head	
Length	2500-4800 mm
Height	750-340mm
Width	1520- 2700mm
Mass	1500-4200Kg
Electronic Unit	280X280X150 mm, 3Kg
Belt-Conveyor Scale Size	Belt WidthX960mm,
Weight	161-272kg
Power Supply	220 V, 50 Hz , Optional 42 V, 50 Hz
Power Consumption	<10 VA
Operation Conditions:	
Ambient Temperature	5 - 40 °C, Optional -20 - 40°C
Relative Humidity	20-80%
Atmospheric Pressure	700-1060 mBar



Advantages

- Wide Range of Measurements
- High Accuracy in contrast with the conventional isotope device accuracy
- Moisture Content and Chemical Composition of the Fuel do not affect the accuracy of the ash content measurement
- Fuel Grain Size 0 – 200/300 mm (in practice up to 500 mm)
- Ability to use in conjunction with Automatic Control Systems
- Ability to be installed in all types of Belt-Conveyors
- The Electronic Units features highest technology modules
- Ability for Co-operation with Belt Conveyor Scales
- Dynamic Software:
 - Digital Presentation of the results in the form of Tables and Charts
 - The database is adapts to the specific user's need
 - Network Operation

No license from the Atomic Energy Commission is required.

Approvals

Approved License of Use for Underground Mines issued by the Mines Command Authority.



KON/NOS ASLANIDIS & Co.
ATHENS OFFICES: ASPASIAS KAPSALA 4, POSTAL CODE 151 21,
MAROUSI, ATHENS, GREECE
TEL.: 210 6107465-6, FAX: 210 6107115, E-mail: info@aspo.gr