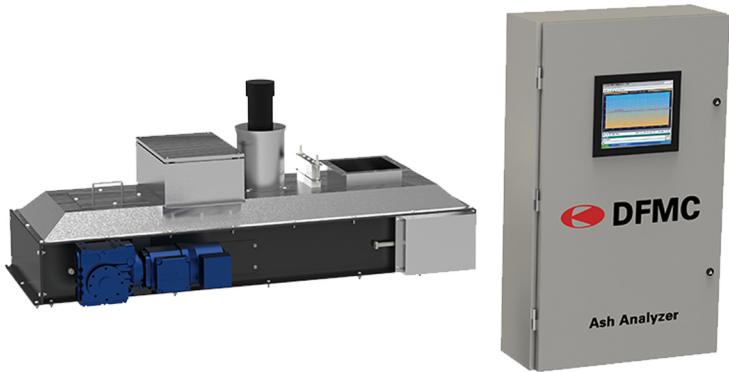




## X-Ray Ash and Moisture Analyzer

### Overview

X-Ray Ash Analyzer (AA-XRAY) can be installed directly on the belt of sampling machine to detect the coal ash online.



### Principle

- The instrument combines X-ray fluorescence technology with X-ray absorption. The coal sample is irradiated with X-rays, the ray intensity of different energy after interception with material is measured, and the ash value of coal is calculated through data analysis and processing.
- Moisture was measured by microwave transmission method.
- GCV can be calculated according to the measured ash and moisture value.

### Function

- Real time measurement of ash, moisture and calorific value;
- Data quantity display includes instantaneous, shift, current day, accumulated ash content and curve;
- Data query, report and statistics;
- Indication of control and meter like operation status;

### Features

- None radioactive source. No radiation in case of power failure, which is safe and reliable.
- Real time online nondestructive non-contact testing, no sampling, strong representativeness.
- Less influencing factors and wider application scope: the principle of combining X-ray fluorescence technology with X-ray absorption and the measurement method of reflection and transmission are adopted to solve the influence of the change of element content, coal thickness and density in coal on the measurement.
- Fast analysis speed: the detection results are given in real time, which solves the lag problem of traditional mining, manufacturing and industrialization.
- Equipped with calorific value function: microwave moisture content data is introduced to automatically calculate the starting heat index in real time.
- Modular design, simple installation and small maintenance.
- Industrial Ethernet communication mode can be connected to the field DCS control system.



### Technical Parameters

| Measurement accuracy   |           |                  |
|--|-----------|------------------|
| Ash content  | < 15%     | ≤ 0.5%, 1σ       |
| Ash content  | 15%~30%   | ≤ 1.0%, 1σ       |
| Ash content  | > 30%     | ≤ 1.5%, 1σ       |
| Moisture Accuracy  |           |                  |
|  | 5%~10%    | ≤ 0.5%, 1σ       |
|  | 10%~20%   | ≤ 1.5%, 1σ       |
|  | Above 20% | ≤ 2.0%, 1σ       |
| Reference accuracy of calorific value<br>(specific accuracy shall be given according to site conditions) |           |                  |
| Clean Coal   |           | ≤ 100Kcal/Kg, 1σ |
| Raw Coal with Low Ash Content  |           | ≤ 150Kcal/Kg, 1σ |
| Raw Coal with High Ash Content   |           | ≤ 200Kcal/Kg, 1σ |

### Application

X-Ray Ash Analyzer (AA-XRAY) is suitable for online measurement in coal mines, coal washing plants, coal preparation plants, coking plants, coal-burning power plants and coal wharf, etc.



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