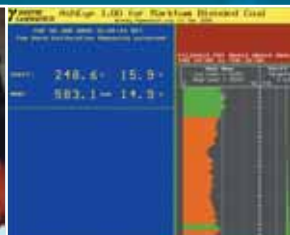




**BRETBY
GAMMATECH**

On-line Ash Monitor Ash Eye



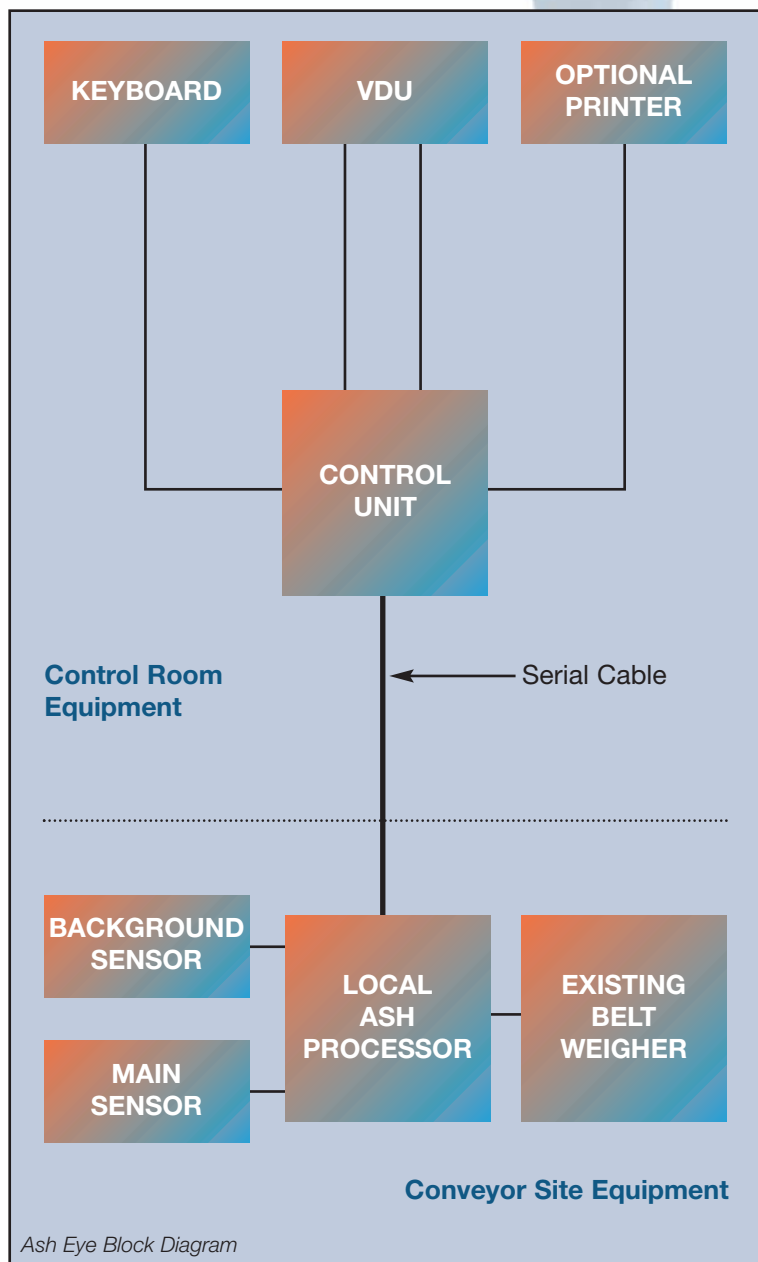
BRETBY GAMMATECH

The new Ash Eye is a much-improved instrument based upon the previous Bretby Gammatech NGCQM. It is a non contacting fully on-line ash monitor providing second-by-second information on the ash content of conveyed coal.

The Ash Eye contains no radio-active sources – it uses Natural Gamma Technology.

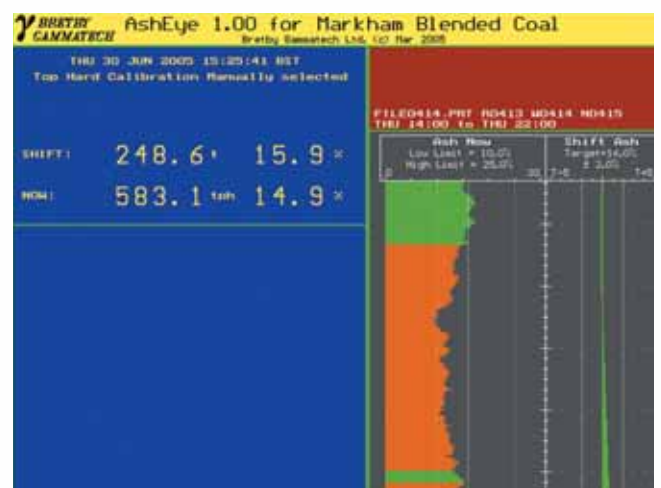
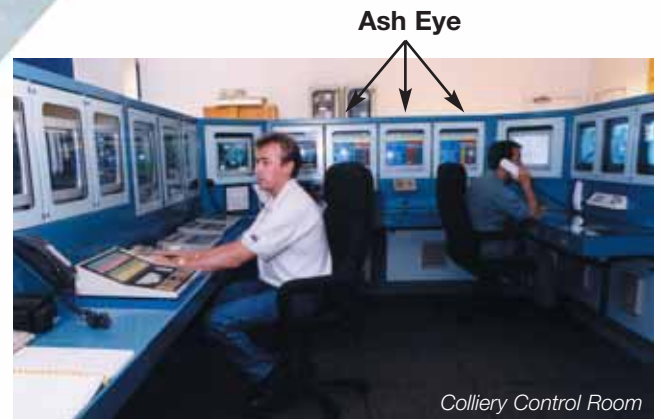
The Ash Eye incorporates a new and improved algorithm leading to greater consistency in ash measurement.

The Ash Eye often pays for itself in a few weeks!



Principle of operation

The dirt associated with coal contains a much higher concentration of radioactive material than the coal itself. The signal from a natural gamma detector mounted under the conveyor belt contains ash information. When this signal is combined with the mass of the material from a beltweigher a measurement of the ash content can be obtained.



Main Features

- Real time graphical and numerical display of instantaneous ash and shift ash
- Local numerical display of instantaneous ash, shift ash, tph & shift tonnes (new feature)
- Simple secure menu driven operation
- User-definable quality parameters
- User configurable shift patterns
- Optional batch operation
- Comprehensive end of shift (and batch) reporting
- User selectable graphical displays of archived trend information with user configurable overlays (new feature)
- Analogue output of any two measured parameters
- Serial (RS232) output of measured parameters (up to 10km with long line drivers) (new feature)
- Automatic restart on restoration of power
- Up to eight user nominated coal sources - switching being Automatic or Manual (new feature)
- Up to four automatically (or manually) activated calibrations (new feature)
- Automated scaling of background compensation leading to greater consistency (new feature)

Benefits

- In run of mine applications the Ash Eye has been used to identify the sources of dirty coal enabling managers to tackle the problem
- In a large mining complex a network of Ash Eyes was successfully used to apportion the proceeds on the basis of ash content and tonnage
- In blending control systems the good use of the Ash Eye information leads to a more consistent blend leading to higher financial proceeds for the coal producer
- In power station applications the Ash Eye is often used to identify dirty coal prior to it entering the boilers thus saving costly downtime and boiler cleaning
- In final product applications the Ash Eye has, in many cases, eliminated the requirement for hourly control samples – significant Heat Error improvements have been achieved – thereby reducing costs and increasing revenue to the user
- In many in-plant applications the Ash Eye information can be used to give advance warning of problems e.g. changes in gravity levels, blocked chutes etc.

Accuracy

The accuracy of the Ash Eye will depend upon the site and the belt weigher. Accuracies of (1 sigma) better than 0.5% ash on final product and between 1 and 3% ash with run-of-mine (ROM) have been achieved with production systems.

Precision

Precisions in the order of 0.5% are regularly being achieved with final product monitors (Measured to ISO 15239).

Applications

- Run of mine (ROM) monitoring
- Control of diverting system for high ash material
- Washed coal
- In blending control system
- Final Product Monitoring
- Monitoring Power Station coals



Local Ash Processor



Close up of Main Sensor

For further information contact:

Bretby Gammatech Ltd, Unit 4 Station Yard, Station Road
Melbourne, Derbyshire, DE73 8HJ. United Kingdom.

Tel: +44 (0) 1332 694594 **Fax:** +44 (0) 1332 865860

Email: info@bretbygammatech.com

Website: www.bretbygammatech.com

Site Specifications

Conveyor Speed	No limit (usually 1 – 8 m/sec)
Conveyor Width	No limit (usually 800 – 2400 m)
Tonnage rate	No upper limit*
Bed Depth	No upper limit*

*Mass loadings of <25kg/m should be avoided

Electrical Requirements

85 – 264 VAC, 47-440Hz single phase 5A at both Control Unit and Conveyor site

Environmental Requirements

Operating Temperature	-10 to 40°C
Moisture	5 to 95% relative humidity (non-condensing)

System Inputs

Tonnage Rate	0-10V, 0.4-2.0V or 4-20mA
Belt Speed	0-10V, 0.4-2.0V or 4-20mA or <24V pulse per unit of travel Or contact closure if constant speed

System Outputs

- 2 User configurable analogue outputs of any measured or calculated parameter (0.4 - 2.0V)
- 2 User configurable High/Low Ash alarms (voltage free contacts)
- Standard Serial output (RS232)

Shipping Details

Gross weight	1500 kg (approximate, depends upon conveyor dimensions)
Gross Volume	4.5m ³ (approximate, depends upon conveyor dimensions)

Specifications are subject to change without notice

