Mine terminology –equipment

**Anemometer**

An instrument for measuring the velocity of air within a mine passage.

**Arch**

A steel support of two or three sections which, when bolted together, form a strong

permanent support.

**Armoured Face Conveyor (AFC)**

An articulated chain conveyor that transports the coal along the longwall face after it has been cut by the coal shearer. From the AFC, the coal is transferred to the beam stage loader.

**Auxiliary Fan**

Used in conjunction with air ducting to direct portion of the main ventilating current to the working face.

**Baulk**

Horizontal timber roof support.

**Belt Extension**

A job of adding lengths of structure to a conveyor belt to move its termination point in bye.

**Belt Idler**

A cylindrical roller which is mounted on a frame and supports and guides a conveyor belt.

**Belt take-up**

A pulley mechanism that is attached under tension to the drive head of the conveyor belt. It is used to maintain tension in the belt conveyor for optimum performance.

**Bolt Torque**

The torque applied to a roof bolt when it is being installed to achieve a required

tension.

**Booster Fan**

An appliance used in ventilation district return airway to increase air flow within that district.

**Boot end**

End of conveyor belt, which accepts coal from the shuttle car.

**Brattice**

This is an anti-static woven material used in ventilation to direct the flow of air.

**Breaker**

Circuit breaker in electrical circuits.

**Buntings**

Horizontal members placed across vertical shafts at intervals down the shaft to support guide rails, pipes etc in the shaft

**Cage**

Box-like container attached to a winding rope and used to hold the skips or the men during the hoisting operation in the shaft.

Like an elevator. The structure used for conveying miners or materials up or down a mine shaft.

**Cap Lamp**

A rechargeable, battery operated, light worn on a miner's safety helmet.

**Car Cable**

The electric trailing cable on a shuttle car.

**Chain Conveyor**

A conveyor on which material is transported along solid pans by the scraping action of crossbars that are connected by chains. AFC's and beam stage loaders are two examples of chain conveyors that are used in long wall mining.

**Chain Pillar**

The pillars that are left to along the entry roads to a working panel in order to support the roof.

**Chock**

A roof support unit for use in large openings which consists of wooden or steel blocks stacked between the floor and the roof often filled with stone for added stability.

**Continuous Miner**

An electric powered cutting machine used to remove coal from the face and load it into the shuttle car.

**Conveyor**

The means of transporting coal from the coal panels to the underground storage bin. It consists of an endless belt driven by a motor drum system over a structure roller assembly. They are popular choice for most mines because of their ability to handle production surges high tonnage rates that are achieved from longwall mines.

**Crusher**

A machine that is used for crushing coal and other materials in order to reduce their particle size.

**Cut Through**

This is the roadway that joins one to another; they are numbered in sequence going

inbye along the length of the development. – connects two headings

**Dragline**

A large machine used for removing overburden during open cut mining

**Drivehead**

The driving mechanism of motor, gearbox and drive drum which is responsible for the movement of the conveyor belt.

**Engine Plane Haulage**

A haulage system used to lower skips into and to raise skips from a mine at the same time. One rope winds off the drum whilst the other winds onto the bottom thus allowing skips to go in and skips to come out. It is used where access to the workings is by a tunnel sloping down towards the coal seam.

**Feeder**

A machine that moves coal onto a conveyor belt, an example being a beam stage

loader.

**Flameproof Equipment**

Equipment within which an explosive mixture of gas can ignite without igniting the explosive gases surrounding the outside of the equipment.

**Gate end box**

An electrical control centre used in a panel to control and distribute power to face

machinery.

**Girder**

Heavy steel horizontal roof support

**Prop**

A timber prop roof support set tightly between the roof and the floor.

**Roof Bolt**

A length of steel rod used as a roof support by securing it in a hole drilled into the roof. It binds the roof strata together to prevent them from collapsing into the roadway.

**Roof Jack**

A steel hydraulic jack that is used as a temporary roof support.

**Roof Support**

Any material that is used to support the overlying roof strata. Examples of roof

supports are roof bolts, cable bolts, arches, powered supports, timber chocks or

hydraulic roof jacks.

**Self-Contained Breathing Apparatus**

A self-contained supply of oxygen used during rescue work from coal mine fires and explosions. Sometimes called self-contained self rescuer (SCSR).

**Self-Rescuer**

Worn by miners and used in the event of a suspected explosion Used to remove lethal quantities of carbon monoxide (and other poisonous gases) from the breathed air.

**Skip**

Waggon used for hauling coal

**Shuttle Car**

An electrically driven machine that is used to transfer the coal from the continuous

miner to the start of a conveyor belt.

**"W" Strap**

A flat steel plate used as a cross roof support and is held in position by roof bolts.

Mining Equipment manufactures

**DBT**

DBT are a manufacturer of longwall mining equipment. DBT's main focus is on

longwall shield supports, high-capacity face conveyors, electro-hydraulic controls,

advanced drive systems and conveyor systems. The company's head office is in

Germany and it's Australian head office is in Rooty Hill, NSW

You can visit their website  
mining.cat.com <MINING.CAT.COM>

**Eickhoff**

They are a mining equipment manufacturer specializing in longwall shearers and

chainless haulage system for AFC's.You can visit their website at www.eickhoffcorp.com

**Joy Mining Machinery**

A manufacturer and supplier of mining equipment. Joy can supply all the components for a longwall mining installation. Their Australian headquarters are in Moss Vale NSW. You can visit their website at:

[www.joy.com.au](http://www.joy.com.au)

**Mitsui Miiki**

They are a shearer manufacturer that is based in Japan. Most of their web-site is in

Japanese but some of it is in English. It is also a useful resource to gain an insight into coal mining in Japan. You can visit their website at:

[www.jcoal.or.jp](http://www.jcoal.or.jp)