

How to improve emulsion pump stability in coal mining face?

Using advanced intelligent control method to realize the real-time response of emulsion pump under different working conditions is the key to improve the stability of fluid supply in the face. However, the current intelligent fluid supply technology in the coal mining face cannot ensure the speed and stability.

What is mining emulsion pump technology?

iMining's advanced pump technology ensures cost-effective and safe blasting operations with energy-efficient emulsion pumping systems. These pumps provide durability, reduced maintenance, and significant energy savings.

What is the fluid supply system of full-mechanized coal mining face?

The fluid supply system of full-mechanized coal mining face consists of emulsion pump station, accumulator station, fuel tank, fluid supply and return pipeline and its accessories, etc. As the power source, the emulsion pump station can supply fluid and power for the hydraulic support of the working face 1.

Why is accumulator station important in coal mining?

It can only play an auxiliary role to upgrade the long-distance fluid supply circuit and configure an accumulator station in terms of improving the stability of fluid supply in the coal mining face. But it can reduce pressure loss, alleviate hydraulic shock, and compensate system flow to a certain extent.

Can emulsion pump station control the fluid supply system at the working face?

The control method of emulsion pump station in the fluid supply system of the working face is the key to realize the stable fluid supply technology of the working face. In this paper, a new on-line adaptive learning technique is proposed to design the optimal tracking control of the fluid supply system at the working face.

Can emulsion pump control reduce energy consumption?

Ting and Hong⁵ studied the coal mining face fluid supply system, and obtained a conclusion that controlling the start and stop of the emulsion pump based on pressure sensor can effectively reduce energy consumption. Zhao et al.⁶ proposed an intelligent variable frequency speed control system to reduce the energy consumption of the station.

A smart emulsion pump station for mines relates to a safety production equipment of coal mining industry, which comprises an emulsion box, an emulsion pump, an emulsion pipeline and a ...

As of July 13, the first domestic 1350 L/min super large flow emulsion pump station developed by Shendong Coal Group under China Energy had been operating well for a ...

Emulsification pump accumulator for mining

Combined with the specific working face, this study analysed whether a single pump is equipped with an accumulator and the influence of the relevant parameters of the accumulator on the ...

A mining emulsion density online monitoring system belongs to an auxiliary mechanism for a mine emulsion pumping plant and comprises an emulsion case, a pour liquid room and a PLC ...

Accumulator give fluid energy back up for longer periods without keeping the pump running. Type of Accumulator. Dead weight type - A dead weight type hydraulic accumulator is a type of ...

Emulsion pump station is widely used to provide power for full-mechanized coal mining face equipment. With the development of the mining technique of longwall face and the extensive ...

A mining emulsion pump is the power source for the hydraulic system of a fully mechanized coal mining face and is widely used in fully mechanized coal mining [1,2].

High Shear Emulsifying Pump The sanitary emulsified pump is a cutting-edge solution designed for emulsifying and homogenizing applications in hygienic industries. This high shear ...

The present invention discloses a kind of emulsion liquid-feed device, liquid level sensor, liquid temperature sensor and mixing component are provided with emulsion box, emulsion box, ...

Request PDF | On Dec 13, 2021, Lirong Wan and others published Analysis of the influence of accumulator on the stability of liquid supply of emulsion pump station | Find, read and cite all ...

The test system for emulsion pump is facing serious challenges due to its huge energy consumption and waste nowadays. To settle this energy issue, a novel energy ...

MHS stock a range of hydraulic accumulators, designed to store energy, regulate the performance and enhance the operational efficiency of hydraulic systems. STAUFF accumulators are ...

The influence of the relevant parameters of the accumulator on the working process of a single pump in the working face was analysed, and the combination scheme of the accumulator ...

The pump compresses the pre-emulsion to pass through micro-channels, accelerating the velocity of the emulsions as they pass the interaction chamber, producing nano-sized emulsions

Unleash the true potential of your mining operations with AECI Mining Chemicals" cutting-edge solutions! Our surface bulk, underground bulk, and packaged explosives emulsifiers are ...

The accumulator (2) is disposed between the liquid supply component (3) and the liquid collection component

(4), and is connected to the second connection port. The liquid supply system for ...

1. INTRODUCTION As the power source of fully mechanized working face equipment in coal mines, the emulsion pump station mainly provides power for mining, the driving working face, ...

A new type of shaft system based on herringbone gear pair input shaft and crankshaft is designed, which solves the problem of low stability of gear pair transmission system in ...

The mining emulsion pump is mainly used on a fully mechanized coal mining face, but it is rarely used on other occasions, so research on its loading test ...

The utility model relates to a multi-pump group intelligent emulsion pump station which is mainly and structurally comprises a base, a liquid collection block, an emulsion tank, a centralized ...

An optimization method based on accumulator theory research and engineering practice is proposed to reduce noise and extending the service life of multiple components and promote ...

A kind of mine-used emulsion pump energy saving discharge mechanism, constitute by control valve, execution valve, have two valve pockets in the valve body, one logical fluid passage is ...

The mining emulsion pump is mainly used on a fully mechanized coal mining face, but it is rarely used on other occasions, so research on its ...

With the development of comprehensive mining technology of underground coal mine, the single machine power of emulsion pump station is increasing constantly.

As the power source of hydraulic support in a fully mechanized mining face, the emulsion pump station directly affects the working efficiency and stability of hydraulic support, which is the key ...

Description technical field [0001] The invention relates to a mining device, in particular to a mining high-efficiency and energy-saving emulsification liquid supply unit. Background technique ...

Hydrofinio is a hydraulic and pump system integrator and we work with multiples high-end partners and suppliers to provides engineered high pressure ...

BRW series mine emulsion pump scope BRW series mine emulsion pump station is used in the operation of various mines, national defense, tunnel and tunnel. Mainly for the coal face, ...

An emulsion pumping station and emulsion pump technology, which is applied in the field of intelligent emulsion pumping stations for mines, can solve problems such as large power ...

Emulsification pump accumulator for mining

The fluid supply system of full-mechanized coal mining face consists of emulsion pump station, accumulator station, fuel tank, fluid supply and return pipeline and its ...

Emulsion pump station is widely used to provide power for full-mechanized coal mining face equipment. With the development of the mining technique of ...

energy-efficient emulsion pumping systems. These pumps provide durability, reduced maintenance, and significant energy savings. Our surface and underground loading systems, ...

Hauhinco designs customer-specific water hydraulic high pressure pump stations for the longwall hydraulics used in shortwall and longwall mining. Hauhinco high pressure pumps generate the ...

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