

PSA Nitrogen Generator Safest Option For Coal Mine Fire Prevention

Basic Information

- Place of Origin:
- Brand Name: GASPU

CHINA

ccs ce NG -100

0.05-1.0 Mpa.

10-15 Years

Included PSA

Nitrogen

On Site

220V/380V 50Hz

White Or Customized

Pressure Swing Adsorption (PSA)

8419601100

0.8-1.0 MPa

Yes

Yes

Less Than -50°C

Aluminum Alloy

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- Certification:
- Model Number:

Our Product Introduction

for more products please visit us on nitrogengeneratorsystem.com

Minimum Order Quantity:



Product Specification

- Nitrogen Pressure:
- Service Life:
- Instrument:
- Status:
- Usage:
- Place Of Use:
- Voltage:
- Hs Code:
- Regeneration Method:
- Color:
- Adsorption Pressure:
- Dew Piont:
- Material:
- Manufacturer:
- Automatic Control:



Product Description

The use of nitrogen generators in the coal mining industry

Coal industry: Coal mine fire prevention and control, gas replacement during coal mining.

Coal mine nitrogen generators are mainly used for fire prevention and extinguishing in coal mines and oilfield industries. The essence of nitrogen fire prevention in mines is to inject a certain amount of nitrogen into the oxidation zone or fire zone of the goaf, reducing its oxygen content to below 5%, in order to achieve the purpose of fire prevention, extinguishing and gas explosion.

The three main uses of coal mine nitrogen generators are:

1, Eliminate the risk of gas explosion

In coal mines, once a fire occurs in the goaf, it can cause an explosion of mixed gases in the goaf. The explosion limit of a mixed gas not only depends on the percentage of the gas in air, but also partially on the temperature and pressure of the mixed gas. The increase in temperature and air pressure expands this limit, and vice versa. When the oxygen content is below 7%, the explosion of the mixture is significantly reduced. It is based on this theory that after injecting nitrogen, the oxygen content in the fire zone will decrease. As long as the oxygen content is below 7%, the possibility of explosion will be greatly reduced.

2, Prevent spontaneous combustion of coal

The three elements of coal spontaneous combustion are: coal has a tendency towards spontaneous combustion; Continuous oxygen supply conditions; Heat is prone to accumulate. If the air leakage in the goaf is not sufficient to carry away the heat generated by coal oxidation, the coal temperature will gradually rise, and then the coal will be in a state of spontaneous combustion. When the temperature reaches above the critical temperature of coal, oxidation will rapidly accumulate, generating a large amount of heat, and then the temperature of coal will rapidly rise. When the temperature reaches the ignition temperature of coal, it will ignite and burn, entering a state of spontaneous combustion. Based on this coal oxygen composite theory, a certain flow rate of nitrogen is injected into the oxidation zone of the goaf to reduce the oxygen content in the area, thereby destroying the self ignition elements of coal and reducing their oxygen content below the critical value of coal self ignition.

3, Plays a cooling effect

For goaf with internal fire, its temperature is higher than the external temperature. When using nitrogen for fire extinguishing, the temperature of the product nitrogen is between 0-5, much lower than the gas temperature in the fire area. In addition, the flow range of nitrogen injected into the fire zone is relatively large, which has a significant cooling effect on the goaf.





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