The gas fire extinguishing control system mainly consists of gas fire extinguishing controller, fire detector, manual automatic switch, emergency start and stop button, sound and light alarm, gas spraying indicator light and so on.

The fire detector generally adopts smoke fire detector and temperature fire detector. In special cases, manual alarm buttons or other types of fire detectors can also be used.

Gas fire extinguishing controller linkage control gas fire extinguishing equipment, linkage control fan, air valve, fire valve, ventilation and air conditioning, automatic doors and windows and other equipment, and receive feedback signals.

For the carbon dioxide fire extinguishing system can also receive the weightlessness alarm signal, weightlessness alarm.

The gas extinguishing system shall be controlled by a dedicated gas extinguishing controller. The gas fire extinguishing controller is used for linkage control of the gas fire extinguishing system. It mainly includes:

Gas extinguishing controller with fire detection and alarm function.

This controller can be connected to fire detector and various linkage control modules, with automatic fire alarm and gas fire control functions, can be used as an independent system.

In case of fire, the gas fire control controller will receive the fire alarm signal from the fire detector or the manual alarm button and issue the linkage control command. Perform gas fire control.

Gas extinguishing controller without fire detection and alarm function.

This controller has only a single gas fire control function and must be used in conjunction with the fire alarm controller.

The fire detector is connected to the fire alarm controller.

In case of fire, fire alarm controller receives fire alarm signal from fire detector or manual alarm button, give instructions to the gas fire control controller, and then the gas fire control controller

linkage control related components to implement the gas fire extinguishing.

Fire detectors with high sensitivity should be selected in the protection area to alarm and extinguish fire early.

Two different types of fire detectors should be used in the protected area, usually smoke fire detectors and heat fire detectors.

Special places can also use other types of fire detectors or manual alarm buttons.

According to the specification requirements, the protection area of each type of detectors should be calculated separately and equipped with cross.

Sound and light fire alarm should be set inside the protected area. When the first fire alarm is received, activate the fire sound and light alarm inside the protection zone to warn personnel to evacuate.

The exterior of the exit of the protection zone shall also be equipped with a fire sound and light alarm. When the fire alarm is confirmed, activate the sound and light fire alarm outside the protection zone.

The upper part of the outlet of the protection zone shall be equipped with a deflating indicator light. When the gas extinguishing controller receives the feedback signal of the signal feedback device, start the exhaust indicator light to warn personnel not to enter.

The pipe network gas extinguishing system has three starting modes: automatic control, manual control and mechanical emergency operation. The fire extinguishing device of the prefabricated gas fire extinguishing system is set in the protection zone, and personnel must evacuate in case of fire. Therefore, the prefabricated gas fire extinguishing system has only two starting modes: automatic control and manual control.

In the state of automatic control, there are generally two ways to control gas fire extinguishing:

The first method is smoke and temperature composite alarm linkage. This is the most common control.

In the gas fire protection area, smoke fire detector and temperature fire detector are generally equipped.

When a detector gives an alarm, it activates the sound and light fire alarm in the protection zone, a different type of fire detector also alarms, then the fire alarm information is confirmed. Start the fire alarm outside the protection zone, and send out the linkage control signal at the same time.

Fire extinguishing start instruction will be issued after 0-30 seconds delay, and fire extinguishing device will be started.

The second method is the linkage of two independent fire alarm signals.

In some special places, other types of fire detectors may be required. A manual alarm button may also be available.

The different detectors are classified, and the linkage alarm and fire alarm are confirmed according to the above composite way of smoke and temperature sensing.

No matter the system is in automatic control state or manual control state, the manual control of gas fire extinguishing is always effective.

Manual control is implemented through the emergency start-stop button.

Emergency start/stop buttons must be installed at the exit of the protection zone.

The gas extinguishing controller also has an emergency start/stop button on the control panel.

Emergency start and stop buttons include emergency start and emergency stop buttons.

After pressing the emergency start button, the gas fire control controller sends out linkage control signal, fire extinguishing start instruction will be issued after 0-30 seconds delay, and fire extinguishing device will be started.

The emergency stop button has the highest priority.

Press the emergency stop button to terminate the fire extinguishing process.

Also, please note that the fire activation command is irreversible.

The emergency stop button is effective only before the fire activation command has been issued.

Mechanical emergency operation for gas fire extinguishing.

The mechanical emergency operation is to start the fire extinguishing by manually

operating the electromagnetic drive device that drives the gas cylinder set.

When the automatic and manual system fails and the personnel in the protection zone have been evacuated, you can pull the safety pin of the electromagnetic drive device of the drive gas cylinder group in the corresponding protection zone. Press the start button on the upper part of the electromagnetic drive device to start directly.

When there is no gas driving bottle set or the electromagnetic driving device fails to manually control, you can also manually open the selection valve and then manually open the container valve of the extinguishing agent bottle set to start the fire extinguishing.

Switch between manual control and automatic control

You can switch between manual control and automatic control on the panel of gas fire control.

Some protected areas shall also be equipped with manual control and automatic control switch devices outside the protected areas.

When personnel enter the protected area, it should be possible to switch the fire extinguishing system to manual control.

When personnel leave, it should be able to revert to automatic control.

For safety purposes, manual controls are always recommended for manned containment areas.

If there is more than one prefabricated fire extinguishing device in a protection zone, it must be able to start at the same time. The action response time difference shall not be greater than two

seconds.

Where there is a fire control room, information about the fire control system in each protection area should be transmitted to the fire control room.

The information to be transmitted to the fire control room includes fire information, fire fighting action, manual and automatic conversion, and system equipment failure information.

The setting position of the gas extinguishing controller

The gas extinguishing controller can be installed in the fire control room.

For convenient operation, it can also be set up in the duty room of the floor in the protection zone.

For the fire extinguishing system with pipe network without duty room, it can be set up in the gas drive bottle storage room.

For the prefabricated fire extinguishing system without duty room, it can be set up outside the protected area for easy operation.

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