

Introduction for Code for Design of Automatic Fire Alarm System

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Abstract

This paper has made a comprehensive introduction to the new national standard GB50116, which is the code for the design of automatic fire alarm system. It gives a specific comparison between GB50116-2013 and GB50116-98. And the content of GB50116-2013 is more comprehensive than GB50116-98. The paper makes detailed analysis to their specific contents, and gives comparative analysis to these two standards, including terminology, basic provisions, design of fire linkage control, selection of fire detectors, settings of system equipment, system power supply, and cabling, etc.

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1. Introduction

On September 6, 2013, the GB50116-2013 "Code for Design of Automatic Fire Alarm System" was officially released. Meanwhile, the old standard GB50116-98 was repealed simultaneously. This paper makes further introduction to the content.

2. Design of fire linkage control

2.1. General provisions

- Added the mandatory provisions on the basic technical requirements of fire linkage control panel.
- Added the regulations on the voltage control output and power capacity of fire linkage control panel.
- Added the mandatory provisions on characteristics parameters of fire linkage control devices.
- Added the regulations on the start-up of the fire equipment with large starting current.

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- Added the mandatory requirements on the logic relationship of fire linkage trigger signals.

2.2. Linkage control design of automatic sprinkler system

- Refined the mandatory requirements of automatic sprinkler system linkage control design.
- Refined the mandatory requirements of pre-action sprinkler system linkage control design.
- Refined the mandatory requirements of deluge sprinkler system linkage control design.
- Refined the mandatory requirements of automatic drencher system linkage control design.

2.3. Linkage control design of hydrant system.

- Refined the mandatory requirements of hydrant system in linkage control mode.
- Refined the mandatory requirements of hydrant system in manual control mode.
- Refined the mandatory requirements of the hydrant pump operation signal.

2.4. 2.3.4 Linkage control design of gas fire extinguishing system and foam extinguishing system.

Gas fire extinguishing control unit is the newly-added content. And the content of foam extinguishing system is more concrete.

2.5. Linkage control design of smoke control system.

It is more concrete.

2.6. Linkage control design of fire door and fire shutter system.

It is more concrete.

2.7. Elevator control linkage design.

Newly-added chapter.

2.8. Linkage control design of fire alarm and fire emergency broadcast system.

Newly-added chapter.

2.9. Linkage control design of fire emergency lighting and evacuation indicating system.

Newly-added chapter.

2.10. relevant linkage control design.

Newly-added content.

3. Selection of fire detector

3.1. Selection of point-type fire detector

- Some new occasions have been added to the applicable areas of point-type smoke detector, that is, "shopping mall", "train passenger compartment", and "garage", etc.; Its application in electrical occasions with fire risk is eliminated.

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