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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB 5135.22-2019

Automatic sprinkler systems - Part 22: Specific application sprinklers

自动喷水灭火系统 第22部分：特殊应用喷头

Issued on: December 17, 2019 **Implemented on: July 1, 2020**

Issued by: State Administration for Market Regulation;
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Foreword

Chapters 6 and 8 of this part are mandatory, and the rest are recommended. GB 5135 "Sprinkler system" is planned to be divided into the following parts.

--- Part 1. sprinkler head;

--- Part 2. Wet alarm valve, retarder, hydraulic alarm bell;

--- Part 3. water spray nozzle;

--- Part 4. Dry-type alarm valve;

--- Part 5. rain alarm valve;

--- Part 6. General purpose valves;

--- Part 7. water flow indicator;

--- Part 8. accelerator;

--- Part 9. Early suppression fast response (ESFR) sprinkler;

--- Part 10. Pressure switch;

--- Part 11. grooved pipe fittings;

--- Part 13. Water curtain nozzle;

--- Part 14. Pre-action device;

1 Scope

Part 22 of China's mandatory series on automatic sprinkler systems, covering specific application sprinklers - the heads designed for a particular hazard rather than for general use, where the ordinary sprinkler of Part 1 will not do the job. This part specifies the classification, the nominal operating temperature, the colour marking, the model designation, the requirements, the test methods, the inspection rules, and the packaging,

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transport and storage of specific application sprinklers. A standard sprinkler is designed to control a fire: to wet the surroundings, hold the fire in check and let the fire brigade finish it. That is enough in an office and not enough in a high-piled warehouse, where the fire develops in the flue spaces between racks and the water from an ordinary head never reaches the seat of it. A specific application sprinkler is designed instead to deliver a droplet with enough momentum to penetrate the fire plume and reach the burning surface, which requires a different orifice, a different deflector and a much higher flow - and which means the head cannot be judged by the criteria of Part 1. The requirements therefore centre on the delivered density and the distribution at the design pressure, the momentum of the spray and its penetration, and the operating characteristics that make the head open early enough for that to matter. Around them sit the same durability requirements as the rest of the series - the corrosion, leakage, vibration, thermal shock and water hammer tests that a head must survive over decades - and the colour marking and model designation that let an installer tell one head from another, which on this family matters more than usual, because a specific application head fitted where a standard one belongs, or the reverse, produces a system that looks right and is not. Issued on 17 December 2019 and in force since 1 July 2020.

This part of GB 5135 specifies the classification, nominal operating temperature, color marking, and model of sprinkler heads for special applications in sprinkler systems. Specifications, requirements, test methods, inspection rules and packaging, transportation, storage, etc. This section applies to non-warehouse special application nozzles with nominal flow coefficients K161, K202, K242, K363 and nominal flow systems. Count K161, K242, K282, K363 warehouse-type special application nozzles. Refer to this section for other types of special application sprinklers. This section does not apply to early suppression fast response (ESFR) sprinklers.

2 Normative references

The following documents are essential for the application of this document. For dated references, only the dated version applies to this article Pieces. For undated references, the latest version (including all amendments) applies to this document.

GB 5135.1 sprinkler systems-Part 1. Sprinklers

GB 5135.9 sprinkler systems-Part 9. Early suppression fast response (ESFR) sprinklers

GB/T 7306.2 55 ° sealed pipe threads. Part 2. Conical internal and external threads

GB/T 31431-2015 Standard Combustion Materials for Class A Fire Tests of Fire Extinguishing Systems

3 Terms and definitions

The terms and definitions defined in GB 5135.1 and the following apply to this document.

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