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GB 25204-2010

Auto tracking and targeting jet suppression system

自动跟踪定位射流灭火系统

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Foreword

In this Standard, Chapter 5 is mandatory; the remaining is recommended. Appendix A of this Standard is normative. This Standard was proposed by The Ministry of Public Security of the People's Republic of China. This Standard shall be under the jurisdiction of Fire Truck Pump Sub-Technical Committee of National Technical Committee 113 on Fire Protection of Standardization Administration of China (SAC/TC 113 / SC 4). The drafting organization of this Standard. Shanghai Fire Research Institute of Ministry of Public Security. The main drafters of this Standard. Rongjun, Wanming, Jinwei, Min Yonglin, Xuelin, Wangyi, Zhangyan, Li Jianzhong, Xuyan, Wang Lijing, Yu Yingfei, Yan Riming, Gu Shengkang. Auto Tracking and Targeting Jet Suppression System

1 Scope

GB 25204-2010 is the Chinese national standard on auto tracking and targeting jet

suppression system, in the field of environment and health protection, safety. It carries no /T suffix, which in the Chinese system means compliance is mandatory: a product or a practice within its scope has to meet it to be lawfully made, sold or carried out in China. It was issued on 26 September 2010 by the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China; Standardization Administration of China, and has been in force since 1 March 2011. Classification: ICS 13.220.10, CCS C84. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This Standard stipulates the definition, classification, model, performance requirements, test methods, inspection rules, marking, packaging, storage, transportation and instruction manual of auto tracking and targeting jet suppression system (hereinafter referred to as system). This Standard is applicable to various auto tracking and targeting jet suppression systems, which take water or foam mixture as the jet medium; utilize infrared rays, digital images or other fire detection components for automatic targeting of early fires; adopt automatic control technology to implement fire suppression.

2 Normative References

Through the reference in this Standard, clauses of the following documents become clauses of this Standard. In terms of references with a specific date, all the subsequent modification sheets (excluding the corrected content) or the revised editions are not applicable to this Standard. However, all parties that reach an agreement in accordance with this Standard are encouraged to explore the possibility of adopting the latest version of these documents. In terms of references without a specific date, the latest version is applicable to this Standard.

GB/T 2423.1-2008 Environmental Testing for Electric and Electronic Products - Part 2. Test Methods - Tests A. Cold (IEC 60068-2-1.2007, IDT)

GB/T 2423.2-2008 Environmental Testing for Electric and Electronic Products - Part 2. Test Methods - Tests B. Dry Heat (IEC 60068-2-2.2007, IDT)

GB/T 2423.3-2006 Environmental Testing for Electric and Electronic Products - Part 2. Testing Method - Test Cab. Damp Heat, Steady State (

IEC 60068-2-78.2001, IDT)

3 Terms and Definitions

The following terms and definitions are applicable to this Standard.

3.1 Auto Tracking and Targeting Jet Suppression System Auto tracking and targeting jet

suppression system refers to various indoor and outdoor fixed jet suppression systems which utilize infrared rays, digital images or other fire detection components to detect fire and temperature for automatic tracking and targeting of early fires;

3.2 Targeting Time Targeting time refers to the time from the start of test fire to the start of system jet.

3.3 Jet Radius Jet radius refers to the length of the horizontal projection of the fire suppression device to the farthest jet landing point, or, the radius of the circular projection of the ground plane of the maximum jet protection range.

3.4 Maximum Protection Radius Maximum protection radius refers to 90% of the length of the horizontal projection of the fire suppression device to the farthest jet landing point, or, the radius of the circular projection of the ground plane of effective spray projection range.

3.6 Working Pressure Working pressure refers to fire suppression device's rated outlet pressure.

4.1 Classification

4.1.1 In accordance with flow, it may be classified into.

4.2 Model The model composition of fire suppression device is as follows: Example 1.automatic jet suppression device whose rated jet pressure is

0.25 MPa; rated flow is 5 L/s; mode of jetting is spraying; jet medium is water. The model is ;

5.1 Appearance, Structure, Horizontal Slewing Angle and Pitch Slewing Angle

5.2 Performance Parameters Performance parameters of fire suppression device shall comply with the stipulations in Table 1.

5.3 High and Low Temperature Performance In accordance with

6.3 and 6.4, fire suppression device shall receive high and low temperature test. During the test, the fire suppression device shall not trigger malfunctions, such as starting and jetting. After the test, the fire suppression device shall not manifest phenomenon of damaged coating or corrosion.

5.5 Insulation Resistance In accordance with 6.6, fire suppression device shall receive insulation resistance test. The insulation resistance between the external live terminals of the fire suppression device and the casing shall be larger than 20 M.

5.6 Dielectric Strength In accordance with 6.7, fire suppression device shall receive dielectric strength test. It shall be able to withstand voltage test for 1 min under the frequency of

50 Hz and the voltage of 1,500 V.

5.8 Voltage Fluctuation Adaptability In accordance with 6.9, fire suppression device shall receive voltage fluctuation adaptability test. Within the rated voltage range of -10% ~ + 10%, it shall be able to normally start and function.

5.9 Vibration Resistance In accordance with 6.10, fire suppression device shall receive vibration resistance test. After the test, the fire suppression device shall not manifest shedding, cracking or obvious deformation; it shall be able to normally function.

5.11 Requirements for Automatic Control

5.11.1 Requirements for intelligent detection and targeting and linkage decision management Fire suppression device shall be equipped with the function of intelligent detection and targeting and linkage decision management, which shall be normally functioning.

5.12 Requirements for Fire-fighting Liquid Supply of System The system (except from storage tank-type liquid supply) shall at least be equipped with fire pump set, pipelines and valves, foam proportion mixing device and foam liquid tank (if necessary) and corresponding fire-fighting accessories. In addition, it shall be able to automatically jet and suppress fire.

5.13 Requirements for Backup Power Supply of System In accordance with 6.12, the system shall receive backup power supply test. The system shall at least set up two power connection ports; the two-way power supply shall be able to automatically (manually) switch power supply.

5.14 Requirements for On-site Archive Video Recording of System The system shall be equipped with the function of on-site archive video recording of not less than 24 h (may be jointly adopted with other video surveillance systems).

6 Test Methods

6.1 Appearance, Structure, Horizontal Slewing Angle and Pitch Slewing Angle Adopt the method of visual inspection and angle gauge to check the pitch slewing angle and horizontal slewing angle of fire suppression device. The result shall comply with the requirements in 5.1.

6.2 Performance Test

6.2.1 Measurement of rated pressure, flow, maximum protection radius, jet radius and monitoring radius

6.2.2 Measurement of targeting time Respectively fix the fire suppression device at the minimum installation height and the maximum installation height. At the measured maximum protection radius, use test fire to induce the system to initiate the action of