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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB 24284-2009

Regulation of safety and technology for fireworks show

大型焰火燃放安全技术规程

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Table of Contents

1 Scope
1.5 No. 6 or less (including 6)
2 Normative references
3 Shell barrel 100 No. 4 shell launcher
4 Classification and requirements
4.3 Other
5.3 Site
5.4 Requirements stage fireworks
5.5 Work program
5.6 Products, equipment and auxiliary materials and tools
5.7 Installation emission barrel
5.9 Ignition
6 Security Management
7 Security Assessment
8 Reference
10 Shell emitted more than
10.0 No. 7 and No. 8 launch barrel
Appendix A
Appendix B

Foreword

All the technical contents of this standard is mandatory. This standard is based on public safety industry standard GA183-2005 "fireworks discharge of fireworks safety regulations" years of implementation , While developed with national regulations and the discharge of fireworks safety, management needs. The Standard Appendix A, Appendix B is an informative annex. The standard proposed by the People's Republic of China Ministry of Public Security. This standard is under the jurisdiction of public safety applications based People's Republic of China Ministry of Public Security Standardization Technical Committee. This standard by the People's Republic of China Ministry of Public Security Administration is responsible for interpretation. This standard is drafted by: People's Republic of China Ministry of Public Security Administration. Participated in the drafting of this standard. Liuyang Dancing Fireworks Group Co., Ltd., Jiangxi lidu Fireworks Group Co., Ltd. Panda Fireworks collection Group Co., Ltd. Hunan Jingtai fireworks, Liuyang City

Yao Tong flower export fireworks factory Liuyang fireworks Ltd. Qi Hui, Liuyang City Ngau Shek export fireworks factory, Hepu abundance exports of fireworks Co., Ltd., Hunan Qingtai Fireworks Manufacturing Co., Ltd., Liuyang Dahu flower Cannon Art discharge of fireworks Group Co., Ltd., Liuyang Fireworks Manufacturing century red Sales Co., Ltd. Liuyang Guandu Fireworks Group Co., Ltd. Wenjiashi Liuyang fireworks export toy factory, Tonglu County, Zhejiang fireworks factory. The main drafters of this standard. yellow tea, Luo Jian-she, Li Zhongqi, Liu Gang, a dangerous flame, Huang Ming Zhang, Yan Zheng Bin, Li Jungang, Tian Yonghao. This standard is the first release. Large discharge of fireworks safety technology

1 Scope

GB 24284-2009 is the Chinese national standard on regulation of safety and technology for fireworks show, in the field of chemical technology. 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 24 July 2009 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 September 2009. Classification: ICS 71.100.30, CCS G89. 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 specifies the classification of large fireworks and requirements, discharge requirements, safety management and safety assessment. This standard applies to large-scale fireworks jobs.

1.5 No. 6 or less (including 6)

0.2 shell emission barrel group (barrel transmit distance of at least

0.04 when the group spacing should be not less than 0.1) No. 8 or less (including No. 8) shell emission barrel group

1.0 No. 10 and No.

2 Normative references

The following documents contain provisions which, through reference in this standard and become the standard terms. For dated references, subsequent Amendments (not including errata content) or revisions do not apply to this standard, however, encourage the parties to the agreement are based on research Whether the latest versions of these documents. For undated reference documents, the latest versions apply to this standard.

GB 10631 fireworks safety and quality

GB 19593 fireworks combination of fireworks GB 19594 fireworks shell GB 19595 fireworks fuse

GB 20208 fireworks shell emission barrel

3 Shell barrel 100 No. 4 shell launcher

80 No. 5 shell launcher 40 6 shell launcher 30 7 shell launcher 20 8 shell launcher

12 More than 10 shell barrel (When only one hair, fixed floor area should $\geq 0.5\text{m}^2$)

5.7.4 After installation launch barrel, before loading, on-site person in charge, technicians, security staff should be individually checked and accepted, check the contents of the package Including emission stability and shelf barrel, angle, firing barrel spacing.

5.8 filling, connection, testing

5.8.1 filling, connection, testing the job site should be set clear work area identification, and the organizers should arrange for someone to guard; to be packed with fireworks Products should take safety precautions.

5.8.2 Shell filling shall meet the following requirements. A) before loading the product should not be connected to the electrical igniter (and there is a short circuit connected measures excluded);

b) There should be no emission of water or other residues inside the barrel, a barrel of a bomb, and should not be repeated reloading; Should

c) lightly packed shell filled to the appropriate size launching barrel bottom should not be inverted;

d) moisture, leaks or cracking of the shell should not be filled; After

e) the filling, should take timely moisture, fire prevention measures for emission barrel mouth.

5.8.3 fireworks shelf construction scaffolding by professionals, should stand firm and stable, high rack should not exceed 30m.

5.8.4 Other products and fixed installation should meet the following requirements.

a) Fixed candles products should be firm, tilt emission, the safety distance should be 1.5 times the height to meet their emission requirements;

4 Classification and requirements

4.1 classification In accordance with the combination of fireworks discharge shell and the

size and number of large fireworks display is divided into I, II, III, IV, V five, see the specific Table 1, the other conditions specified in Table 1 of fireworks outside without grading. Table 1 large discharge of fireworks classification unit is made Level condition (one of the following conditions) No. I 10 or more (including 10) shell 3 or more (including 3) the total number of shell > 5000 II No. 8 or less (including No. 8) Shell Shell No. 3 to No.

8 Total ≤ 5000 Total number III 6 or less (including No. 6) on the 3rd to the 6th Shell Shell ≤ 4000 IV 4 the following numbers (including No. 4) No. 3 to No.

4 Shell Shell Total ≤ 3000 Other fireworks V without the shell, or a combination of fireworks ≥ 5000 stage fireworks, fireworks shelf

4.2 of levels required number of large-sized shell I grade fireworks. Shell No. 8 above shall not exceed 15% of the total shell, wherein the shell should not exceed more than 12 fireworks 2% of the total number of shells, shell 10 should not exceed 3% of the total shell, large shell trumpet shell instead of a predetermined number of available; II grade fireworks.

8 Shells should not exceed 5% of the total shell; III grade fireworks. No. 6 should not exceed the total number of Shell Shell Of 20%; IV, V grade fireworks are not specified.

4.3 Other

4.3.1 Non-blocking stage fireworks can only be set off fireworks stage rack (with waterfall), stage fountains (including bouquets, spray), revolving stage (there Axis) fireworks, smoke category, single comet.

4.3.2 Helicopters, aerial rocket launch height rotation, rotation range and drop objects shall meet the standard GB 10631 and other relevant Safety requirements.

5 discharge requirements

5.1 Qualification Unit undertake large-scale fireworks job should have appropriate qualifications large fireworks.

5.2.1 discharge site person in charge of operating units, security management, technical staff, and assume the discharge of jobs have drug installation, loading point Fire detection and other workers should have set off the job card. 5.2.2 I grade fireworks should have a senior professional and technical personnel to the scene to guide; II grade fireworks should be a mid-level or above (including the Level) professional and technical personnel to the scene to guide; III, IV, V stage fireworks shall have one or more primary (including primary) refers to professional and technical personnel to the scene Guide; professional and technical personnel should be the discharge of fireworks-related professionals.

5.2.3 fireworks should be located on-site full-time security staff and full-time custodians.

5.2.4 minors, or to interfere with the discharge of other security personnel shall not engage in operations fireworks.