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

GB 8031-2015

Replacing GB 8031-2005

Industrial electric blasting cap

工业电雷管

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Foreword

This standard 5.1.1, 5.2, 5.4, 5.5, 5.6.3, 5.6.4, 5.6.6, 5.6.7, 5.6.8,

5.6.9 in 2 ms series, 8.1.2.1, 8.1.3, 8.2, some indicators in Table 2 (maximum current is not angry, electrostatic sensitivity) are mandatory, the rest are recommended. This standard GB/T 1.1-2009 given rule drafting. This standard replaces GB 8031-2005 "Industrial electric detonators" and GB/T 16625-1996 "seismic exploration electric detonators." This standard and GB 8031-2005 and GB/T 16625-1996 compared to the main changes are as follows:

--- Modify the classification of industrial electric detonator (see 4.1, GB 8031-2005 of Chapter 4);

--- Modification on foot line requirements, increasing the "insulation thickness of the thinnest point" and "anti-high voltage breakdown performance" requirements (see 5.1.2,

5.4.2 And 5.4.3, GB 8031-2005 5.2);

--- Revised industrial electric detonator material requirements (see 5.5, GB 8031-2005 5.3);

--- Modify the whole industrial electric detonators resistance requirements (see 5.6.1, GB 8031-2005

5.4.1 and GB/T 16625-1996 Table 1);

--- To the maximum safe current will not firing current, revised seismic exploration electric detonators misfire maximum current (see 5.6.2,

5.4.3 GB 8031-2005 and GB/T 16625-1996 Table 1);

--- Ability to detonate the perforation diameter makes specific requirements (see 5.6.4, GB 8031-2005

5.4.8 and the GB/T 16625-1996 Table 1);

--- Modify the water resistance index of industrial electric detonator (see

5.6.6.1 and 5.6.6.2, GB 8031-2005 and the

1 Scope

GB 8031-2015 is the Chinese national standard on industrial electric blasting cap, 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 9 October 2015 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 July 2016. 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 electrical detonator industrial classification and nomenclature, requirements, test methods, inspection rules and signs, packaging, transportation, storage and so on. This standard applies to industrial electric detonators.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein Member. For undated references, the latest edition (including any amendments) applies to this document.

GB 190 packaging and marking of dangerous goods

GB/T 191 Packaging - Pictorial signs

GB/T 2828.1 Sampling procedures - Part 1. batch inspection sampling plan according to accepted quality limit (AQL) retrieval

GB/T 2829 periodic inspection Sampling procedures and tables (suitable for process stability test) Analyzing and processing GB /statistical processing and interpretation of normal sample values T 4883-1985 data

GB/T 6378 percent nonconforming sampling inspection procedures and charts (Apply to inspection of successive lots)

GB/T 8170 repair value expressed about the rules and limit values and judgment

GB 9969 Industrial Products General Instructions

GB/T 13225 Industrial detonator delay time measuring method

GB/T 13226 Test method for industrial detonator grid

GB/T 13227 Industrial detonator immersion test method

GB/T 14436 General industrial products assurance documents

GB/T 14659 civilian blasting equipment terminology, symbols

GB/T 18014-2008 electric detonators PVC insulated wire Electric detonators flammable gas safety test method

3 Terms and Definitions

Terms and definitions GB/T 14659 apply to this document defined.

3.5 Electrostatic Sensitivity a/kV ≥ 8 ≥ 10 ≥ 12 ≥ 25

Note. The table in bold mandatory elements. a static sensitivity expressed in feet between the line and the envelope electrostatic withstand voltage.

5.6.3 Seismic Performance After the vibration test, industrial electric detonators should not explode, structural damage, short circuit, open circuit and resistor unstable phenomenon, the whole resistance should meet

5.6.1 requirements.

5.6.4 Initiating Capacity No. 6 industrial electric detonator shall ripped through 4mm thick sheet of lead No. 8 industrial electric detonator shall ripped through 5mm thick sheet of lead perforation diameter should be not less than 7mm.

5.6.5 tensile properties Loss not lower than 19.6N static pull effect lasted 1min, closures and feet line of industrial electric detonators should not occur visual evidence Or bad move,

remove the ignition test done, it should explode completely.

5.6.6 water resistance

5.6.6.1 ordinary electric detonators and electric detonators Mine Xu was immersed in water to maintain pressure 0.05MPa 4h, after removing the test do get angry, should burst Fried completely.

5.6.6.2 seismic exploration electric detonator was immersed in water pressure of 0.3MPa maintained 72h, after removing the ignition test done, it should explode completely.

5.6.7 heat resistance 4h kept not lower than 100 °C environment, industrial electric detonators should not explode.

5.6.8 flammable gas safety Permitted Electric Detonator detonate when the coal mine at a concentration of 9% of the combustible gas, the gas can not ignite.

5.6.9 Delay Time Extended electric detonator in the name of an extension of time should generally be in line with the requirements of Table 3, the delay time can be negotiated other series with the user. Table 3 in the name of an extension of time series

ms Series 2 ms ms

ms The first series of 4 ms ms 1/4 second series Half a second series Second series 100
 12.5 00 12.5 00 12.5 00 0.6 00 0.25 00 0.125 00 0.50 2 25 25 12.6 37.5 25 12.6 37.5
 12.637.5 0.6 1.5 1 0.250.126 0.375 0.50 0.26 0.75 1.00 0.51 1.50 350 50 37.6 62.5
 37.662.5 37.6 62.5 50 2 1.6 2.5 1.00 0.76 1.25 2.00 0.625 0.500.376 1.51 2.50 475 75 62.6
 92.5 62.687.5 62.6 87.5 75 3 2.6 3.5 1.50 1.26 1.75 3.00 0.875 0.750.626 2.51 3.50 5110
 92.6 130.0 112.5 87.6 4 3.6 4.5 10087.6112.4100 1.000.876 1.125 2.00 1.76 2.25 4.00
 3.51 4.50 6150 130.1 175.0 - - - 125,112.6 137.5 5 4.6 5.5 2.50 2.26 1.375 1.251.126 2.75
 5.00 4.51 5.50 7200 175.1 225.0 - - - 150,137.6 162.5 6 5.6 6.5 3.00 2.76 3.25 6.00 1.625
 1.501.376 5.51 6.50 8250 225.1 280.0 - - - 175,162.6 187.5 7 6.6 7.5 - - - 3.50 3.26 3.75
 7.00 6.51 7.50 9310 280.1 345.0 - - - 200,187.6 212.5 - - - - 4.00 3.76 4.25 8.00 7.51
 8.50 10380 345.1 420.0 - - - 225,212.6 237.5 - - - - 4.50 4.26 4.74 9.00 8.51 9.50 11 460
 420.1 505.0 - - - 250237.6 262.5 - - - - - 10.009.5110.49 12550 505.1 600.0 - - - 287.5
 275262.6 - - - - - 13650 600.1 705.0 - - - 300,287.6 312.5 - - - - - 14760
 705.1 820.0 - - - 337.5 325312.6 - - - - - 15880 820.1 950.0 - - - 362.5 350337.6 -
 - - - - - 161020 1110.0 950.1 - - - 387.5 375362.6 - - - - -
 12001110.11300.0 17 - - - 400387.6 412.5 - - - - - 14001300.11550.0 18 - - -
 425412.6 437.5 - - - - - 17001550.11850.0 19 - - - 450437.6 462.5 - - - - -
 - 20001850.12149.9 20 - - - 475462.6 487.5 - - - - - 21 - - - - 500487.6 512.4 - -
 - - - - -

Note 1. Table 2 ms series Coal Mine Permissible MS Delay time by electric detonators, the series is mandatory.