

ICS 29.260.20

CCS K35



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

**GB/T 12173-2008**

Replacing GB 12173-1990

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**Mining electrical apparatus for non hazardous area**

矿用一般型电气设备

**Issued on: June 30, 2008**

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Quarantine of the People's Republic of China;  
Standardization Administration of China**

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### Foreword

This standard replaces GB/T 12173-1990 "Mine general electrical equipment." This standard compared with GB/T 12173-1990, the main changes are as follows:

5.1 structural inspection";

--- Added "maximum surface temperature measuring 5.6";

--- Modify the scope (1990 edition Chapter 1; Chapter 1 of this standard);

--- Modify the definition (1990 Edition Chapter 3; Chapter 3 of this standard);

--- Modify the "heat-resistant properties," the requirements and test methods (1990 edition 4.1.1,5.2; this standard 4.8,5.5);

--- Modify the "shell strength" requirements (1990 version 4.1.2.2;  
4.2.2 of this standard);

--- Modify the "shell protection grade" requirements (1990 version 4.1.2.3;  
4.2.3 of this standard);

--- Modify the "fasteners" requirements (1990 version 4.1.2.6;  
4.2.5 of this standard);

--- Modify the "Cable glands" requirements (1990 version 4.1.3; this standard 4.3);

--- Modify the "connection" requirement (1990 version 4.1.4; this standard 4.4);

### 1 Scope

GB/T 12173-2008 is the Chinese national standard on mining electrical apparatus for non hazardous area, in the field of electrical engineering. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most

foreign buyers meet it. It was issued on 30 June 2008 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 April 2009.

Classification: ICS 29.260.20, CCS K35. 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 general mining electrical equipment (hereinafter referred to as equipment) requirements, test methods, inspection rules and signs. This standard applies to non-coal mine gas and other industrial sectors like underground coal dust explosion hazard and non-coal mines such as the use of Manufacture and testing of electrical equipment. This standard does not apply to cables and wires.

## 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 1984-2003 high voltage AC circuit breaker ( IEC 62271-100.2001, MOD)

GB/T 2423.4-1993 electric and electronic products environmental testing procedures Test Db. Damp heat test, cyclic (Eqv IEC 60068-2-30. 1980)

GB 3836.1-2000 Electrical equipment for explosive gas atmospheres - Part 1. General requirements (eqv IEC 60079-0.1998)

GB 3836.3-2000 Electrical equipment for explosive gas atmospheres Part 3. Increased Safety "e" (eqv IEC 60079-7.1990)

GB 4208-1993 housing protection (IP Code) (eqv IEC 60529. 1989)

GB 14048.1-2006 Low-voltage switchgear and control equipment Part 1. General ( IEC 60947-1.2001, MOD)

GB 14048.2-2001 Low-voltage switchgear and control equipment low voltage circuit breaker  
AQ1043-2007 mining product safety signs logo

## 3 Terms and Definitions

The following terms and definitions apply to this standard.

3.1 Electrical similar underground coal mine industrial sectors for no gas, and coal dust explosion dangerous places such as the use of non-coal mines equipment.

## 4.1 General Requirements

4.1.1 Mine general electrical equipment shall comply with the requirements of this standard and manufactured in accordance with prescribed procedures approved by the drawings and technical documents.

4.1.2 In addition to meeting this standard, the mine with the general provisions of electrical equipment should also meet the standards of their respective products.

4.1.3 Mine general electrical equipment should be able to work under the following conditions.

a) Altitude. low voltage electrical equipment for the 2000m, high-voltage electrical equipment for the 1000m; NOTE. High-voltage electrical equipment at an altitude of more than 1000m, conducted in accordance with JB/Z102-1971 conversion related parameters.

b) ambient temperature  $-20^{\circ}\text{C} \sim +40^{\circ}\text{C}$ ;

c) the ambient air monthly average relative humidity less than 95% ( $25^{\circ}\text{C}$ );

d) in the absence of damage to the insulating gas or steam environment.