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

MT/T 767-1998

**Flameproof mining DC. motor
(English Translation)**

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Foreword

The international standards on which this standard is based are IEC 44 (1981) General Requirements for Electrical Equipment for Explosive Atmosphere, IEC 34-1 (1983) "Rating Machine Quota and Performance", national standard has GB 3836.1 ~ 3836.3 "Explosion-proof electrical equipment for explosive environments", GB/T 755-1987 "Basic Technical Requirements for Rotating Motors".

This standard specifies the basic technical requirements for flameproof DC motors in underground coal mines Appendix A to this standard is an appendix to the standard.

This standard is proposed by the Industry Management Department of the State Coal Industry Bureau.

This standard is under the jurisdiction of the Technical Committee for Standardization of Special Equipment for Coal Mines.

1 Scope

This standard specifies the product classification, technical requirements, test methods, and inspection regulations for mine flameproof DC motors (hereinafter referred to as motors).

Rules, signs, packaging, transportation and storage.

This standard applies to electric motors used in coal mines that contain explosive gas mixtures of coal dust, gas and air.

This standard does not apply to DC traction motors for mine explosion-proof battery vehicles.

2 Reference standards

The following standards contain provisions that, through reference in this standard, constitute provisions of this standard. When this standard was published, the editions shown were all effective. All standards will be revised, and all parties using this standard should explore the possibility of using the latest versions of the following standards.

191-1990 packing storage and transportation pictogram GB/T 755-1987 Basic technical requirements for rotating electrical machines GB/T 997-1981 Motor structure and installation type code GB/T 1311-1989 Test methods for DC motors GB/T 1971-1980 motor wire end sign and rotation direction GB/T 2423.4-1993 Basic environmental test procedures for electric and electronic products Test Db. Alternating damp heat test method GB/T 2829-1987 Sampling procedures and sampling tables for periodic inspection (suitable for inspection of production process stability) GB 3836.1-1983 General requirements for explosion-proof electrical equipment for explosive environments GB 3836.2-1983 Explosion-proof electrical equipment for explosive atmospheres Flameproof electrical equipment "d" GB/T 4207-1984 Method for determination of tracking index and tracking resistance index of solid insulation materials under humid conditions GB/T 4772.1 ~ 4772.2-1984 motor size and tolerance GB/T 4942.1-1985 motor enclosure protection classification GB/T 10068.1-1988 Rotating electrical machine vibration measurement method and limit vibration measurement method GB/T 10069.1-1988 Rotating electrical machine noise measurement method and limit noise engineering measurement method GB/T 13384-1992 General technical requirements for packaging of electromechanical products MT/T 154.1-1992 guidelines and management measures for coal mine electromechanical products

3.1 Type

The electric motor is a mine flameproof type.

3.2 Cooling method

Motor cooling methods are divided into air-cooled (IC410) and water-cooled (IC31W).

3.3 Degree of protection

The protection level of the motor is IP44 for the main body part and IP54 for the wiring compartment.

3.4 Quota

The motor quota is the maximum continuous quota based on the S1 working system. Special requirements can be specified separately in the product technical conditions.

3.5.1 Motor product model should meet MT/T

154.1.

3.5.2 Product model composition

The product model mainly includes the type code Z for DC motors, the first feature code B for mine flameproof type, and the main parameter code for Motor output power. If it is difficult to distinguish in this way, add a second feature code and a supplementary feature code to indicate the structure distinction.

3.5.3 Arrangement of product models

3.5.4 The type code and characteristic code in the product model are indicated by Chinese pinyin letters, the main parameters are expressed by Arabic numerals, and the serial number is modified by -1 and -2 are shown in sequence (see Table 1, Table 2).

Table 1 Second feature code symbol

Second feature code QFJP (default) Product features Traction fan winch pump Other controls

Table 2 Supplementary feature code symbols

Supplementary feature code S (default) Product Features Water Cooling Other Features

3.6 Structure and installation type

Motor structure and installation type according to GB/T Regulation 997.

3.7 Rated power of the motor

The motor shall be manufactured at the following rated power.

0.25, 0.37, 0.55, 0.75, 1.1, 1.5, 2.2, 3, 4, 5.5, 7.5, 11, 15, 18.5, 22, (23) (1), (26) (1), 30,37,45,55, kW.

3.8 Rated voltage of the motor

The rated voltage of the motor is generally 110,220,250,440 V.

3.9 Motor rated speed

The rated speed of the motor is generally 3000, 1500, 1000, 750, 600, 500, 400 r/min.

3.10 Excitation method

The excitation method of the motor is divided into multiple excitation, parallel excitation or other excitation. Special requirements can be specified separately in the product technical conditions.

3.11 Tolerance of installation dimensions

Motor installation dimension tolerance should conform to GB/T 4772.1 ~ 4772.2

3.11.1

The radial runout tolerance of the motor shaft extension shall not be greater than that specified in Table 3.

(1) This level is a non-preferred number system and is not recommended

Table 3 Radial runout tolerance mm

Shaft extension nominal diameter D ≤ 18 18 ~ 30 30 ~ 50 50 ~ 80 80 ~ 120 120 Radial
runout tolerance 0.03 0.04 0.05 0.06 0.07 0.08

3.11.2

The flange stop diameter (N) should not affect the radial circle runout of the shaft centerline and the end face runout of the flange support facing the shaft centerline vertical plane.

Greater than given in Table 4.

Table 4 Tolerance of circle runout of flange and bearing surface mm

Nominal diameter of flange stop N 50 ~ 95 95 ~ 230 230 ~ 450 450 ~ 680 Tolerance for flange runout and bearing surface 0.08 0.10 0.125 0.16

4 Technical requirements

4.1

The motor shall meet the requirements of this standard and be manufactured in accordance with the drawings and technical documents approved by the prescribed procedures.

4.2

The motor shall be capable of operating under rated conditions under the following conditions.

a) Altitude does not exceed 1000 m;