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

GB 25286.3-2010

**Non-electrical equipment for use in potentially explosive
atmospheres -- Part 3: Protection by flameproof enclosure
??d??**

(English Translation)

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Foreword

All technical contents of this section is mandatory.

GB 25286 "non-explosive atmospheres Electrical Equipment" contains the following sections.

--- Part 1. Basic method and requirements;

--- Part 2. limiting shell type "fr";

- Part 3. type flameproof enclosure "d";
- section 4. intrinsically safe type "g" (under consideration);
- Part 5. Structure safe "c";
- Part 6. Control type ignition source "b";
- part 7. Pressurized "p" (under consideration);
- Part 8. liquid immersion "k".

This part of GB 25286 "non-explosive atmospheres electrical equipment" Part 3, is modified using EN13463-3:2005 "potentially explosive

Environmental non-fried electrical equipment - Part 3. type flameproof enclosure "d" "(in English) developed.

This section and EN13463-3:2005 is the main difference. In order to converge with GB 3836.1 statements, this section will EN13463-3.

In 2005 M1, M2 respectively correspond to stage device of this section Ma, Mb stage equipment; the EN13463-3:2005 in class II 1G, 2G, 3G

Level equipment corresponds to a part of the class were II Ga, Gb, Gc-level device; and EN13463-3:2005 in class II 1D, 2D, 3D-level device respectively

This part corresponds to class III Da, Db, Dc stage equipment; flag also made the corresponding change. In addition, remove the EN13463-3:2005 and this

Part of the independent informative annex ZA.

Appendix A of this section, Appendices B and C are normative.

This section was proposed by China Electrical Equipment Industrial Association.

This part of the jurisdiction of the National Standardization Technical Committee explosion-proof electrical equipment.

This part was drafted. Nanyang Explosion Electric Institute, the national explosion-proof electrical products for Quality Supervision and Inspection Center, Changzhou Power Station Auxiliary Equipment

Factory Co., Ltd., Zhejiang Hangzhou Construction Machinery Co., Ltd. Guangzhou Hongxing ventilation equipment.

Introduction

A gas, vapor explosive atmosphere, air with mist and/or combustible dust and air is formed in some types of non-electrical equipment

Contains effective ignition sources under normal operating conditions, measures must be taken against these types of non-electrical equipment, it can not be the surrounding environment

The ignition source. One way of achieving this is to use a housing surrounding the ignition source, the interior of the housing is not transmitted to ignite the external environment. this Such predetermined portion is called a "type flameproof enclosure" type protection.

The basic principle of the flameproof housing preventing ignition, the gases or vapors may be/into the housing by flange joints, if the inner housing burst

Fried lit environment, there will be neither significant deformation of the housing, not by bonding the flame/flange escape outside explosive atmospheres. this

Principle requires the housing must be strong, and to control the size of the joining surface/flange, so that the maximum permissible safety gap may occur in the apparatus

Portion explosive gas/vapor type of fit.

Concept of protection flameproof enclosure thus formed, allowing a variety of devices continuously produce sparks safely used in a potentially explosive environment field

The. It is well known for electrical equipment, this type of protection may be used to protect the spark, arc element. This form of protection in

GB 3836.1-2010 has defined and specified. Because the electrical device comprises a universal test standard has been verified and marking requirements, in the present non-electric

Gas Devices section, to avoid unnecessary repetition claims by reference to electrical standards. In this section, only the full non-electrically write

Gas devices provide the necessary protection of the different part.

Present a different section, in addition to electrical equipment of type I Mb, GB 3836.2 explosive environment without considering dust formation, its associated

General requirements document, GB 3836.1-2010 defines explosive atmospheres (explosive mine mainly composed of methane gas) for biogas

The flameproof electrical equipment may be used where coal dust cloud appears, its design, construction and testing without changing or further testing.

In the gas/air mixture in the test prevent dust cloud ignition protection device in the present concept also applies to the section level class I Mb Mining

Equipment and class II Gb, Gc and grade class III Db, Dc stage non-mining equipment, because it presents an acceptable safety to prevent ignition

Full factor, it allows an easier way to test and validate the proof performance.

Flameproof enclosure can be non-electrical equipment protected by the following examples.

Device latent heat of friction surface a) has over its ignition temperature of the surrounding environment, for example. a friction clutch, brake linings;

b) In order to correctly implement the functions of the device which must operate at high temperatures, for example. catalytic combustion engine exhaust system flameproof trans

The reactor, the catalytic element or a heat measuring instrument combustible gas sensor;

c) generating a spark ignition friction device during normal operation.

Currently manufactured into flameproof equipment is rarely used in dusty environments, since the use of the device dust-tight enclosure is usually cheaper, but if it is both

Including dust and gas including non-mining environment, this is also applicable.

Where dust alone, although formation of dust accumulation, does not generally produce explosive dust cloud within the housing. This section does not consider

Dust accumulation occurs within the enclosure cause a fire hazard because it does not belong to the concept of protection flameproof enclosure.

Non-electrical equipment for explosive atmospheres

Part 3. type flameproof enclosure "d"

1 Scope

This section specifies the type employed flameproof enclosure "d" is designed for the protection of explosive gas and/or combustible dust device, Review

Set, and the structural requirements of the test.

This complements the part of GB 25286.1, GB 25286.1 content are also fully applicable to devices fabricated in accordance with the provisions of this section.

Equipment to comply with the relevant provisions of the section meet the requirements of the following levels.

--- Class I Mb stage device, when operating under normal operating conditions and harsh, especially in rough handling conditions and environmental changes, no

Now caused by the fire ignition source;

--- Class II Gb Db class III grade or stage device, does not occur under normal operating and fault conditions caused by the fire is expected ignition source.

Predetermined type of protection may be employed alone or in this section in conjunction