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

GB/T 3836.17-2019

**Explosive atmospheres -- Part 17: Equipment protection by
pressurized room p and artificially ventilated room v**

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Foreword

The Explosive Environment is divided into several sections.

- Part 1. General requirements for equipment;
- Part 2. Equipment protected by flameproof enclosure "d";
- Part 3. Equipment protected by increased safety "e";
- Part 4. Equipment protected by intrinsically safe "i";
- Part 5. Equipment protected by positive pressure housing "p";
- Part 6. Equipment protected by liquid immersion "o";
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- Part 11. Classification test methods and data of gas and vapor substance characteristics;
- Part 12. Test method for characteristics of flammable dust substances;
- Part 13. Equipment repair, overhaul, repair and transformation;
- Part 14. Classification of places for explosive gas environments;
- Part 15. Design, selection and installation of electrical devices;
- Part 16. Inspection and maintenance of electrical installations;

- Part 17. Equipment protected by positive pressure room "p" and artificially ventilated room "v";
- Part 18. Intrinsically Safe Electrical System;
- Part 19. Fieldbus Intrinsic Safety Concept (FISCO);
- Part 20. Equipment with protection level (EPL) of Ga level;
- Part 21. Application of equipment production quality system;
- Part 22. Protective measures for optical radiation equipment and transmission systems;
- Part 23. Class I EPLMa equipment for gas and/or coal dust environments;
- Part 24. Equipment protected by special type "s";
- Part 25. Process sealing requirements between flammable process fluids and electrical systems;
- Part 26. Guidelines for electrostatic hazards;
- Part 27. Static electricity hazard test;

This section is Part 17 of "Explosive Environments".

This section is drafted in accordance with the rules given in GB/T 1.1-2009.

This section replaces GB 3836.17-2007 "Electrical Equipment for Explosive Gas Atmospheres-Part 17. Connections in Positive Pressure Rooms or Buildings

Structure and Use ", compared with GB 3836.17-2007, the main technical changes are as follows.

- Change of standard name, clear positive pressure room "p", added artificial ventilation room "v";
- Increased explosion-proof pb, pc and vc;
- Increased equipment protection level (EPL);
- Added requirements related to dust;
- Added requirements for various doors to prevent the entry of explosive environments;
- Increased the air intake can be located in zone 2 under certain conditions.

This part uses the redrafting method to modify and adopt IEC 60079-13..2017 "Explosive atmospheres Part 13. By positive pressure room" p "and

Equipment for artificially ventilated rooms "v".

The technical differences between this part and IEC 60079-13..2017 and their causes are as follows.

--- Regarding the normative references, this section has made adjustments with technical differences in order to apply China's technical conditions.

The situation is reflected in Chapter 2 "Regulatory Reference Documents", and the specific adjustments are as follows.

- * Replace IEC 60050-426 with GB/T 2900.35 equivalent to the international standard.
- * Replace IEC 60079-0 with GB 3836.1, which adopts the international standard.
- * Replace IEC 60079-10-1 with GB 3836.14 equivalent to the international standard.
- * Replace IEC 60079-29 (all parts) with GB/T 20936 (all parts), consistency between the parts of the two standards

The degree is as follows.

- * GB/T 20936.1-2017 Gas Detectors for Explosive Atmospheres Part 1. Flammable Gas Detector Performance Requirements

(IEC 60079-29-1..2007, MOD);

- * GB/T 20936.2-2017 Gas detectors for explosive atmospheres Part 2. Combustible gas and oxygen detectors

Selection, installation, use and maintenance (IEC 60079-29-2..2007, MOD);

- * GB/T 20936.3-2017 Gas detectors for explosive atmospheres Part 3. Functions of fixed gas detection systems

Energy Safety Guide (IEC 60079-29-3..2014, MOD);

- * GB/T 20936.4-2017 Gas detectors for explosive atmospheres Part 4. Open path detection of combustible gases

Performance requirements (IEC 60079-29-4..2009, MOD).

- * Added reference to GB/T 3836.16.

--- Adjust Appendix A from an informative appendix to a normative appendix, and strengthen maintenance requirements to ensure explosion-proof performance after the equipment is put into use.

The following editorial changes have been made in this section.

--- Modified the part number in the standard name.

This section is proposed by China Electrical Equipment Industry Association.

This part is under the jurisdiction of the National Explosion-proof Electrical Equipment Standardization Technical Committee (SAC/TC9).

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1 Scope

This section of the Explosive Environment specifies the design, construction, assessment, testing and marking of rooms used to protect internal equipment in the following locations

Requirements.

--- Located in Zone 1 or Zone 2, or Zone 21 or Zone 22 in explosive environments (areas that normally require EPLGb, Gc, Db or Dc),

A room protected by positive pressure without a gas/vapor release source inside;

--- Located in the explosive environment of Zone 2 (the area where EPLGc is usually required), the interior does not contain gas/vapor release sources and is manually ventilated

Protected room;

--- In non-hazardous areas, rooms containing gas/vapor release sources inside, protected by artificial ventilation;

--- Located in Zone 1 or Zone 2, or Zone 21 or Zone 22 in explosive environments (areas that normally require EPLGb, Gc, Db or Dc),

The room contains a gas/vapor release source and is protected by both positive pressure and artificial ventilation.

The rooms in this section include independent rooms, multiple rooms, a complete building or rooms inside a building. Room is set for

Access for personnel, and pipes for gas in and out. Sound enclosures and other similar enclosures designed to allow personnel access are also considered a room

between. This section also specifies requirements for related safety devices and controls necessary to ensure that artificial ventilation, ventilation and positive pressure are achieved and maintained.

Rooms assembled or built on site can be built on land or at sea. This type of room is mainly installed by the end user, but can be manufactured at

It is manufactured and evaluated by commercial factories, and the final pipeline connection is completed on site.