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

GB/T 3836.16-2022

Replacing GB/T 3836.16-2022

**Explosive atmospheres - Part 16: Specification of electrical
installations inspection and maintenance
(English Translation)**

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting.

This document is part 16 of GB (GB/T) 3836 "Explosive atmospheres". GB (GB/T) 3836 has published the following parts.

Parts 15 and 16 are mandatory, and the other parts are recommended.

- 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 intrinsic safety type "i";
- Part 5: Equipment protected by a positive pressure enclosure "p";
- Part 6: Equipment protected by liquid immersion type "o";
- Part 7: Equipment protected by sand-filled mold "q";
- Part 8: Equipment protected by "n" type;
- Part 9: Equipment protected by encapsulation type "m";
- Part 11: Test methods and data for classification of properties of gases and vapors;
- Part 12: Test methods for characteristics of combustible dust materials;
- Part 13: Repair, overhaul, restoration and modification of equipment;
- Part 14: Classification of places with explosive gas atmospheres;
- Part 15: Specifications for design, selection and installation of electrical equipment;
- Part 16: Specification for inspection and maintenance of electrical installations;
- Part 17: Equipment protected by pressurized rooms "p" and artificially ventilated rooms "V";
- Part 18: Intrinsically safe electrical systems;
- Part 20: Equipment with equipment protection level (EPL) Ga;
- Part 21: Application of the production quality management system for explosion-proof products;
- Part 22: Protective measures for optical radiation equipment and transmission systems;
- Part 23: Class I EPLMa equipment for use in gas and/or coal dust environments;

- Part 24: Equipment protected by special type "s";
- Part 25: Requirements for process seals between flammable process fluids and electrical systems;
- Part 26: Guide to electrostatic hazards;
- Part 27: Electrostatic hazard test;
- Part 28: Basic methods and requirements for non-electrical equipment for explosive atmospheres;
- Part 29: Non-electrical equipment for explosive atmospheres. structural safety type "c", controlled ignition source type "b", liquid immersion type "k";
- Part 30: Equipment and components for explosive atmospheres in underground mines;
- Part 31: Equipment protected by dust ignition proof enclosure "t";
- Part 32: Electronically controlled spark time-limited intrinsically safe systems;
- Part 33: Equipment for severe working conditions;
- Part 34: Complete equipment;
- Part 35: Classification of places with explosive dust atmospheres;
- Part 36: Electrical safety devices for controlling potential ignition sources in explosion-proof equipment.

This document replaces GB/T 3836.16-2022 "Explosive atmospheres - Part 16: Inspection and maintenance of electrical installations" and Compared with GB/T 3836.16-2022, in addition to structural adjustments and editorial changes, the main technical changes are as follows.

- Added provisions on overall equipment system (see 4.3);
- Added the provisions for the initial inspection and inspection agency (see 5.1.1);
- Added the provisions for inspection basis (see 5.1.2);
- Added provisions for third-party inspection (see 5.3);
- Deleted the provisions on specific items in the inspection list (see 4.12 of the 2022 edition);
- Changed the provisions for ground continuity inspection of non-galvanic isolation circuits (see 5.7.3.8, 5.3.9 of the 2022 edition);
- Added inspection requirements for liquid immersion type "o" (see 5.7.7).

Introduction

GB (GB/T) 3836 "Explosive Atmospheres" aims to establish the basic technical requirements for equipment used in explosive atmospheres and related aspects of their application.

It covers the design, manufacture, inspection, selection, installation, inspection, maintenance, repair and site classification of equipment for explosive atmospheres.

The form of some standards includes but is not limited to the following parts.

- 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 intrinsic safety type "i";
- Part 5: Equipment protected by a positive pressure enclosure "p";
- Part 6: Equipment protected by liquid immersion type "o";
- Part 7: Equipment protected by sand-filled mold "q";
- Part 8: Equipment protected by "n" type;
- Part 9: Equipment protected by encapsulation type "m";
- Part 11: Test methods and data for classification of properties of gases and vapors;
- Part 12: Test methods for characteristics of combustible dust materials;
- Part 13: Repair, overhaul, restoration and modification of equipment;
- Part 14: Classification of places with explosive gas atmospheres;
- Part 15: Specifications for design, selection and installation of electrical equipment;
- Part 16: Specification for inspection and maintenance of electrical installations;
- Part 17: Equipment protected by pressurized rooms "p" and artificially ventilated rooms "V";
- Part 18: Intrinsically safe electrical systems;
- Part 20: Equipment with isolated components or combined protection levels;
- Part 21: Application of the production quality management system for explosion-proof products;
- Part 22: Protective measures for optical radiation equipment and transmission systems;
- Part 23: Class I EPLMa equipment for use in gas and/or coal dust environments;