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GB/T 3836.36-2022

Explosive atmospheres - Part 36: Electrical safety devices for the control of potential ignition sources from Ex Equipment

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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 of Standardization Documents"

drafted.

This document is part 36 of GB/T 3836 "Explosive Atmospheres". GB/T 3836 has published 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 intrinsically safe "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 the "n" type;

--- Part 9.Equipment protected by encapsulation type "m";

--- Part 11.Test methods and data for the classification of gas and vapor substance properties;

--- Part 12.Test methods for the characteristics of combustible dust substances;

--- Part 13.Repair, overhaul, restoration and alteration of equipment;

--- Part 14.Location classification for explosive gas atmospheres;

--- Part 15.Design, selection and installation of electrical installations;

--- Part 16.Inspection and maintenance of electrical installations;

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--- Part 17.Equipment protected by positive pressure room "p" and artificial ventilation room "v";

--- Part 18.Intrinsically safe electrical systems;

--- Part 20.Equipment with equipment protection level (EPL) Ga level;

--- 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 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 hazard test;

--- Part 28.Basic methods and requirements for non-electrical equipment for explosive atmospheres;

--- Part 29.Structural safety type "c" for non-electrical equipment for explosive atmospheres, type "b" for controlled ignition sources, and type "k" for liquid immersion;

--- Part 30.Equipment and components for explosive atmospheres in underground mines;

--- Part 31.Equipment protected by a dust ignition-proof enclosure "t";

--- Part 32.Electronically controlled spark timing intrinsically safe systems;

--- Part 33.Equipment for severe working conditions;

--- Part 34.Complete sets of equipment;

--- Part 35.Classification of explosive dust atmosphere sites;

--- Part 36.Electrical safety devices for controlling potential ignition sources of explosion-proof equipment.

This document is modified to adopt IEC TS60079-42.2019 "Explosive Atmospheres - Part 42.Electricity for Controlling Potential Ignition Sources of Explosion-Proof Equipment"

Gas Safety Device", the document type is adjusted from IEC technical specifications to my country's national standards.

Compared with IEC TS60079-42.2019, this document has made the following structural adjustments.

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---Appendix A corresponds to Appendix B of IEC TS60079-42.2019;

---Appendix B corresponds to Appendix C of IEC TS60079-42.2019;

---Appendix C corresponds to Appendix A of IEC TS60079-42.2019.

The technical differences between this document and IEC TS60079-42.2019 and their reasons are as follows.

--- Replaced IEC 60079-0 (see Chapter 3) with the normatively quoted GB/T 3836.1 to adapt to the technical conditions of our country, increase

Operability;

--- Replaced ISO 60079-37 (see Chapter 3) with the normatively cited GB/T 3836.29 to adapt to my country's technical conditions, increase

plus operability;

--- Replaced IEC 61508-4 (see Chapter 3) with the normatively cited GB/T 20438.4 to adapt to my country's technical conditions, increase

plus operability;

--- Replaced IEC 61511-1 (see Chapter 3) with the normatively cited GB/T 21109.1 to adapt to my country's technical conditions, increase

Add maneuverability.

The following editorial changes have been made to this document.

--- In order to be consistent with the existing standard series, change the name of this document to "Explosive Atmospheres Part 36.Controlling Potential Points of Explosion-Proof Equipment"

Electrical Safety Devices for Ignition Sources";

--- Adjusted the description of the scope of Chapter 1;

--- Replace the informative reference IEC 61508 (all parts) with GB/T 20438 (all parts), and move it from Chapter 2 to

references;

--- Replaced the international documents cited for information with Chinese documents, and revised the references.

Please note that some content of this document may be patented. The issuing agency of this document assumes no responsibility for identifying patents.

Introduction

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GB/T 3836 "Explosive Atmospheres" aims to establish the basic technical requirements for equipment and its application in explosive atmospheres, covering

The design, manufacture, inspection, model selection, installation, inspection, maintenance, repair and site classification of equipment for explosive atmospheres shall be divided into parts

Standard form, including but not limited to the following 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 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 the "n" type;

--- Part 9.Equipment protected by encapsulation type "m";

--- Part 11.Test methods and data for the classification of gas and vapor substance properties;

--- Part 12.Test methods for the characteristics of combustible dust substances;

--- Part 13.Repair, overhaul, restoration and alteration of equipment;

--- Part 14.Location classification for explosive gas atmospheres;

--- Part 15.Design, selection and installation of electrical installations;

--- Part 16.Inspection and maintenance of electrical installations;

--- Part 17.Equipment protected by positive pressure room "p" and artificial ventilation room "v";

--- Part 18.Intrinsically safe electrical systems;

--- Part 20.Equipment with equipment protection level (EPL) Ga level;

--- Part 21.Application of the production quality management system for explosion-proof products;

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--- Part 23.Class I EPLMa equipment for gas and/or coal dust environments;

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