



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

GB/T 3836.28-2021

**Explosive atmospheres - Part 28: Non-electrical equipment for
explosive atmospheres - Basic method and requirements**

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Foreword

This Standard was drafted in accordance with the rules given in GB/T 1.1-2020

"Directives for standardization - Part 1: Rules for the structure and drafting of standardizing documents".

This Standard is Part 28 of GB/T 3836 "Explosive atmospheres". The following parts of GB/T 3836 have been issued:

- Part 1: Equipment - General requirements;
- Part 2: Equipment protection by flameproof enclosures "d";
- Part 3: Equipment protection by increased safety "e";
- Part 4: Equipment protection by intrinsic safety "i";
- Part 5: Equipment protection by pressurized enclosure "p";
- Part 6: Equipment protection by liquid immersion "o";
- Part 7: Equipment protection by powder filling "q";
- Part 8: Equipment protection by type of protection "n";
- Part 9: Equipment protection by encapsulation "m";
- Part 11: Material characteristics for gas and vapor classification - Test methods and data;
- Part 12: Material characteristics for combustible dusts - Test methods;
- Part 13: Equipment repair, overhaul, reclamation and modification;
- Part 14: Classification of hazardous areas;
- Part 15: Electrical installations design, selection and erection;
- Part 16: Inspection and maintenance of electrical installation (other than mines);
- Part 17: Construction and use of rooms or building protected by pressurization;
- Part 18: Intrinsically safe system;
- Part 20: Equipment with equipment protection level (EPL) Ga;
- Part 21: Application of quality systems for equipment manufacture;
- Part 22: Protection of equipment and transmission system using optical radiation;
- Part 23: Group I, category EPL Ma equipment intended to remain functional in atmospheres endangered by firedamp and/or coal dust;

- Part 24: Equipment protection by special protection "s";
- Part 25: Requirements for process sealing between flammable process fluids and electrical systems;
- Part 26: Electrostatic hazards - Guidance;
- Part 27: Electrostatic hazards - Test;
- Part 28: Non-electrical equipment for explosive atmospheres - Basic method and requirements;
- Part 29: Non-electrical equipment for explosive atmospheres - Constructional safety "c", control of ignition source "b", liquid immersion "k";
- Part 30: Equipment and components in explosive atmospheres in underground mines;
- Part 31: Equipment dust ignition protection by enclosure "t";
- Part 32: Intrinsically safe systems with electronically controlled spark duration limitation;
- Part 33: Equipment in adverse service conditions;
- Part 34: Equipment assembly;
- Part 35: Classification of areas for explosive dust atmospheres.

This Standard replaces GB 25286.1-2010 "Non-electrical equipment for potentially explosive atmospheres - Part 1: Basic method and requirements".

Compared with GB 25286.1-2010, in addition to structural adjustments and editorial changes, the main technical changes in this Standard are as follows:

- changed the supplementary standards of this Standard (see Clause 1; Clause 1 of GB 25286.1-2010);
- added the use of explosion-proof type "d", "p", "t" (see Clause 1 and Annex A);
- added the applicability of corresponding clauses in GB/T 3836.1-2021 (see Table 1);

- added the assessment and control methods for possible ignition sources (see Clause 6);
- changed the requirements for verification and testing (see Clause 8; Clause

13 of GB 25286.1-2010);

- added the document requirements (see Clause 9);
- changed the requirements for marks (see Clause 11; Clause of GB 25286.1-2010).

This Standard uses redrafting method to modify and adopt ISO 80079-36:2016 "Explosive atmospheres - Part 36: Non-electrical equipment for explosive atmospheres - Basic method and requirements".

Compared with ISO 80079-36:2016, the structural adjustments in this Standard are as follows:

- Annex A corresponds to Annex G of ISO 80079-36:2016;
- Annex C corresponds to Annex I of ISO 80079-36:2016;
- Annex D corresponds to Annex A of ISO 80079-36:2016;
- Annex F corresponds to Annex C of ISO 80079-36:2016;
- Annex G corresponds to Annex H of ISO 80079-36:2016;
- Annex H corresponds to Annex F of ISO 80079-36:2016;
- deleted Annex D of ISO 80079-36:2016.

The technical differences between this Standard and ISO 80079-36:2016 and the reasons are as follows:

- Regarding normative reference documents, this Standard has been adjusted with technical differences to adapt to Chinese technical conditions. The adjustments are collectively reflected in Clause 2 "Normative references", and the specific adjustments are as follows:

* Use GB/T 3836.1-2021 that adopts IEC 60079-0 to replace IEC 60079-

0 (see Clause 1);

* Use GB/T 3836.2 that adopts IEC60079-1 to replace IEC60079-1 (see