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

GB/T 46082.2-2025

**Safety devices for gas welding equipment - Part 2: Other
devices**

(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 1 of GB/T 46082 "Safety devices for gas welding equipment". GB/T 46082 has been published in the following parts.

--- Part 1: Flame arresters;

--- Part 2: Other devices.

This document is modified to adopt ISO 5175-2:2017 "Safety devices for gas welding equipment - Part 2: Devices without flame arrester".

Compared with ISO 5175-2:2017, this document has many structural adjustments. The structural number comparison table between the two documents is attached.

Record A.

This document has many technical differences compared to ISO 5175-2:2017.

A list of these technical differences and their reasons is given in Appendix B.

The following editorial changes have been made to this document.

--- Change the name of the standard to "Safety devices for gas welding equipment Part 2: Other devices";

--- Add unit conversion content and convert gas pressure unit into MPa;

--- Adjust the clause numbers of the technical requirements in Table 1 so that they correspond to the clause numbers of the test methods in accordance with the test sequence;

--- Added "Appendix A Structure numbering of this document compared with ISO 5175-2:2017";

--- Added "Appendix B Technical differences between this document and ISO 5175-2:2017 and their causes";

Introduction

GB/T 46082 "Safety devices for gas welding equipment" is the product standard for safety devices for gas welding equipment, which establishes the safety devices for gas welding equipment.

Technical requirements and test methods for equipment.

GB/T 46082 is intended to consist of the following parts.

--- Part 1: Flame arresters. The purpose is to standardize the design and materials, technical requirements and test methods of flame arresters.

--- Part 2: Other devices. The purpose is to standardize the design and materials, technical requirements, Test method.

--- Part 3: Low-pressure acetylene decomposition blocker. The purpose is to standardize the technology of low-pressure acetylene decomposition blocker below 0.15MPa Requirements and test methods.

This document is intended to address the functional reliability and stability of other safety devices used in gas welding equipment during design, production and application.

Provide a basis for the safe application of welding process.

Safety devices for gas welding equipment Part 2: Other devices

1 Scope

This document specifies other safety devices without flame arresters for welding, cutting and related processes using fuel gas, oxygen or compressed air (hereinafter referred to as the terms and definitions, design and materials, technical requirements, test methods, instructions and markings of safety devices (referred to as "safety devices").

The downstream outlet of the gas storage tank, manifold system or pressure reducer and the upstream inlet of the welding torch in the system.

This document does not specify the installation location of safety devices in the gas system.

This document does not apply to flame arresters specified in GB/T 46082.1.

2 Normative references

The contents of the following documents constitute the essential clauses of this document through normative references in this document.

For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies to this document.

GB/T 3375 Welding terminology GB/T 5107 Gas welding equipment - Hose connectors for welding, cutting and related process equipment GB/T 7899 Gas cylinder pressure reducers for welding, cutting and similar processes (GB/T 7899-2006, ISO 2503:1998, MOD) GB/T 25473 Pressure reducers for welding, cutting and similar processes (GB/T 25473-2010, ISO 7291:1999, MOD) GB/T 40337 Gas Welding and Related Process Equipment - Tightness (GB/T 40337-2021, ISO 9090:2019, MOD) GB/T 40371 Gas welding equipment - Materials for welding, cutting and related process equipment (GB/T 40371-2021, ISO 9539:2010, MOD)

GB/T 46082.1 Safety devices for gas welding equipment Part 1: Flame arresters (GB/T 46082.1-2025, ISO 5175-1.

2017, MOD)

GB/T 46073 Gas welding equipment Quick connectors with shut-off valves for welding, cutting and related process equipment (GB/T 46073-2025, ISO 7289:2018, MOD)

3 Terms and Definitions

The terms and definitions defined in GB/T 3375 and the following apply to this document.

Excess flow cut-off valve A safety device that stops the gas flow when the gas flow exceeds a predetermined value.

Example. A valve is held open by a spring. When the gas pressure exceeds the spring force, the valve closes. This valve is typically equipped with a reset mechanism, see Figure 1.