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

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Replacing GB/T 15579.7-2013

Arc welding equipment - Part 7: Torches

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part 1. Structure and Drafting Rules of Standardization Documents"

Drafting.

This document is Part 7 of GB/T 15579 "Arc Welding Equipment". GB/T 15579 has released the following parts.

- Part 1. Welding power source;
- Part 2. Liquid cooling systems;
- Part 3. Arc starting and arc stabilizing devices;
- Part 4. Periodic inspection and testing;
- Part 5. Wire feeding device;
- Part 6. Load limiting equipment;

- Part 7.Welding torch (gun);
- Part 8.Gas circuit devices for welding and plasma cutting systems;
- Part 9.Installation and use;
- Part 10.Electromagnetic compatibility (EMC) requirements;
- Part 11.Welding clamps;
- Part 12.Welding cable coupling device;
- Part 13.Welding clamps;
- Part 14.Calibration, validation and consistency testing.

This document replaces GB/T 15579.7-2013 "Arc welding equipment Part 7.Welding torch (gun)" and is consistent with GB/T 15579.7-2013

In addition to structural adjustments and editorial changes, the main technical changes are as follows.

- a) Increase and refinement of "scope" (see Chapter 1);
- b) Two items are added and one item is deleted in "Terms and Definitions" (see Chapter 3, Chapter 3 of the.2013 edition);
- c) One item is deleted for the ambient air temperature range and one item is added for the relative air humidity (see Chapter 4, Chapter 4 of the.2013 edition);
- d) The test environment temperature and electrical measuring instrument accuracy requirements have been changed (see 6.1,.2013 version of 6.1);
- e) Add voltage rating requirements for mechanically guided submerged arc welding torches (guns) and torch (gun) coupling devices (see 7.1);
- f) Delete the requirements related to the welding torch (gun) arc ignition and arc stabilizing voltage (see 7.3 of the.2013 edition);
- g) Added additional requirements for plasma cutting torches (see 7.3.2);
- h) Added requirements for arc starting and arc stabilizing voltage (see 7.5);
- i) Added requirements for mechanically guided welding torches (guns) and smoke exhaust welding torches (guns) (see 8.1);
- j) Added submerged arc welding torch (gun) (see 8.3.5);
- k) Added the inapplicable scope of "resistance to welding spatter" (see Chapter 10);
- l) Add requirements for handle materials in "Mechanical Protection" (see 11.3);
- m) Add requirements for smoke exhaust welding torches (guns) in the "Instructions for Use"

(see Chapter 13).

This document is equivalent to IEC 60974-7:2019 "Arc Welding Equipment Part 7: Welding Torch (Gun)".

Please note that some content in this document may be subject to patents. The publisher of this document assumes no responsibility for identifying patents.

Introduction

Arc welding equipment mainly includes power supplies powered by power grids or batteries, as well as mechanical devices driven by arc welding and similar processes (such as arc welding

Power supply and plasma cutting system, etc.), auxiliary equipment, welding accessories, etc.

GB/T 15579 "Arc Welding Equipment" stipulates the safety requirements, performance requirements and electromagnetic compatibility requirements of arc welding equipment, and consists of 14 parts

composition.

---Part 1: Welding power source. The purpose is to specify the safety requirements and performance requirements of welding power sources.

---Part 2: Liquid cooling systems. The purpose is to specify the safety requirements and structure of the liquid cooling system of the auxiliary equipment welding torch (gun).
structural requirements.

---Part 3: Arc starting and arc stabilizing devices. The purpose is to specify the safety requirements for arc starting and arc stabilizing devices of auxiliary equipment.

---Part 4: Periodic inspection and testing. The purpose is to specify the periodic inspection and test procedures for welding power sources and to ensure that after maintenance electrical safety requirements.

---Part 5: Wire feeding device. The purpose is to specify the safety requirements and performance requirements for wire feed devices of welding accessories.

---Part 6: Limiting load equipment. Intended for connection to single-phase public low-voltage supply systems and designed for non-professionals

Safety requirements and performance requirements for load-limited arc welding and cutting power sources and auxiliary devices used.

---Part 7: Welding torch (gun). The purpose is to specify the safety requirements and structural requirements for welding accessories welding torches (guns).

---Part 8. Gas circuit devices for welding and plasma cutting systems. The purpose is to provide for auxiliary equipment flammable gas or oxygen

Safety requirements and performance requirements for gas circuit devices.

---Part 9. Installation and use. The purpose is to specify the requirements for the installation and use of arc welding equipment.

---Part 10. Electromagnetic compatibility (EMC) requirements. The purpose is to specify the electromagnetic compatibility requirements for arc welding power sources and auxiliary equipment.

---Part 11. Welding pliers. The purpose is to specify the safety requirements and performance requirements for welding accessories and welding clamps.

---Part 12. Welding cable coupling devices. The purpose is to specify the safety requirements and performance of welding accessories and welding cable coupling devices
Require.

---Part 13. Welding clamps. The purpose is to specify the safety requirements and performance requirements for welding accessories and welding clamps.

---Part 14. Calibration, validation and consistency testing. The purpose is to specify the validation requirements for arc welding and its external monitoring equipment and arc
Requirements such as actual verification operation of welding equipment.

Arc welding equipment part 7. welding torch (gun)

1 Scope

This document specifies the safety requirements and structural requirements for welding torches (guns) used in arc welding and similar processes. This document is suitable for manual and mechanical

Guided, air-cooled, liquid-cooled, electric, wire-spoiled and fume-exhaust torches (guns).

In this document, the welding torch (gun) consists of the main body of the welding torch (gun), cable hose assembly and other components.

This document also applies to cable hose assemblies connected between the power source and auxiliary equipment.

This document does not apply to welding clamps used for manual arc welding and cutting torches used for air arc gouging/cutting.

Note 1. Typical similar processes include arc cutting and spraying.

Note 2. For other components, see Table A.1 in Appendix A.