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

GB 15579.12-2012

Replacing GB/T 15579.12-2012

**Arc welding equipment - Part 12: Coupling devices for welding
cables**

弧焊设备 第12部分：焊接电缆耦合装置

(English Translation)

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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 12 of GB/T 15579 "Arc Welding Equipment". GB/T 15579 has already published the following parts.

- Part 1: Welding Power Sources;
- Part 2: Liquid Cooling Systems;
- Part 3: Arc initiation and stabilization devices;
- Part 4: Periodic Inspections and Tests;
- Part 5: Wire Feeding Device;
- Part 6: Load-limiting devices;
- Part 7: Welding Torch (Gun);
- Part 8: Gas Circulation Devices for Welding and Plasma Cutting Systems;
- Part 9: Installation and Use;
- Part 10: Electromagnetic Compatibility (EMC) Requirements;
- Part 11: Welding Pliers;
- Part 12: Welding Cable Coupling Devices;
- Part 13: Welding Clamps;

This document supersedes GB/T 15579.12-2012 "Arc Welding Equipment - Part 12: Welding Cable Coupling Devices" and is consistent with...

Compared with GB/T 15579.12-2012, apart from structural adjustments and editorial changes, the main technical changes are as follows.

- a) The term "self-locking device" has been removed (see 3.5 in the 2012 edition);
- b) The accuracy requirements for measuring instruments have been changed (see 5.2, 5.1 in the 2012 edition);
- c) The design requirements have been changed (see Chapter 6, Chapter 6 of the 2012 edition);
- d) General requirements for dielectric strength have been added (see 7.3.1);
- e) The temperature rise limit requirements have been changed (see 8.1, 2012 edition of

8.1);

f) Increased inspection requirements for welded cables (see 9.2);

g) Added a specification for the conductor displacement distance after the test (see 9.4);

h) The test time requirement for extrusion strength has been changed (see 9.5, 2012 version 9.5);

i) The requirements for the sign have been changed (see Chapter 10, Chapter 10 of the 2012 edition);

j) Three new maximum profile shape requirements for locking pins have been added (see Appendix A, Appendix A of the 2012 edition).

This document is modified to adopt IEC 60974-12:2022 "Arc welding equipment - Part 12: Welding cable coupling devices".

The technical differences between this document and IEC 60974-12:2022, and the reasons therefor, are as follows.

---The temperature for the damp heat treatment was changed (see 7.2). Because my country has a vast territory, and summers in the south are typically hot and humid, this...

The document, in accordance with GB/T 2423.3, specifies a damp heat treatment temperature of 40°C. This conforms to national conditions and is also consistent with GB/T 8118, etc.

Standards should be consistent and coordinated.

---The test current data at 60% load duty cycle in Table 1 (see Chapter 6) has been revised. This is both in line with national conditions and...

The relevant standards such as GB/T 8118 are consistent with each other. The current ratings in IEC 60974-12 are reserved in parentheses.

This document was proposed by the China Electrical Equipment Industry Association.

This document is under the jurisdiction of the National Technical Committee on Standardization of Welding Machines (SAC/TC70).

Introduction

Arc welding equipment mainly includes power supplies for arc welding and similar processes (such as arc welding) powered by the power grid or batteries, as well as those driven by mechanical equipment.

Power supplies and plasma cutting systems, auxiliary equipment, welding accessories, etc.

GB/T 15579 "Arc Welding Equipment" specifies the safety requirements, performance

requirements, and electromagnetic compatibility requirements for arc welding equipment, and is proposed to be standardized by 14 departments.

Composed of components.

---Part 1: Welding Power Sources. The purpose is to specify the safety and performance requirements for welding power sources.

---Part 2: Liquid Cooling Systems. The purpose is to specify the safety requirements and structural specifications for liquid cooling systems of auxiliary equipment such as welding torches (guns).

Structural requirements.

---Part 4: Periodic Inspections and Tests. The purpose is to specify the procedures for periodic inspections and tests of welding power sources and to ensure post-repair maintenance.

Electrical safety requirements.

---Part 5: Wire Feeding Device. The purpose is to specify the safety and performance requirements for wire feeding devices used in welding accessories.

---Part 6: Equipment for Limiting Loads. The purpose is to specify the connection to a single-phase common low-voltage power supply system for use by non-specialists.

The design specifies the safety and performance requirements for the arc welding and cutting power supply and auxiliary equipment used under limited load conditions.

---Part 7: Welding Torch (Gun). The purpose is to specify the safety and structural requirements for welding accessories, specifically welding torches (guns).

---Part 8: Gas Circulation System for Welding and Plasma Cutting Systems. The purpose is to specify the flammable gas or oxygen supply for auxiliary equipment.

Safety and performance requirements for pneumatic circuit devices.

---Part 9: Installation and Use. This section specifies 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 supplies and auxiliary equipment.

---Part 11: Welding Pliers. The purpose is to specify the safety and performance requirements for welding pliers, a welding accessory.

---Part 12: Welding Cable Couplers. The purpose is to specify the safety requirements and performance of welding cable couplers for welding accessories.