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

GB 15579.2-2014

Arc welding equipment -- Part 2: Liquid cooling systems

弧焊设备 第2部分：液体冷却系统

(English Translation)

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Foreword

Part 3 of this chapter are recommended, the rest are mandatory.

GB 15579 "arc welding equipment" is divided into 13 parts.

- Part 1. Welding power sources;
- Part 2. Liquid cooling systems;
- Part 3. Arc and Arc Stabilisation Unit;
- Part 4. Periodic inspection and testing;
- Part 5. Wire feeders;
- Part 6. Load limits for manual metal arc welding power source;
- Part 7. torch (gun);
- Part 8. Welding and plasma cutting system gas path means;
- Part 9. Installation and Use;
- Part 10. Electromagnetic compatibility (EMC) requirements;

- Part 11. Electrode holders;
- Part 12. Coupling devices for welding cables;
- Part 13. Welding clamp.

This is Part 2 GB 15579's.

This section drafted in accordance with GB/T 1.1-2009 given rules.

This section uses the translation method is equivalent to using IEC 60974-2:2007 "Arc welding equipment - Part 2. Liquid cooling systems." Correspondence between the consistency of the standards of international documents and normative references of the following documents.

--- GB 15579.10-2008 welding equipment - Part 10. Electromagnetic compatibility (EMC) requirements (IEC 60974-10:2007, IDT) this part is proposed by the China Electrical Equipment Industrial Association.

This part of the National Welding Standardization Technical Committee (SAC/TC70) centralized.

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1 Scope

GB 15579 of the provisions of this part of the arc welding and similar processes for cooling torch (gun) used by industrial or professional liquid cooling system System security requirements and structural requirements.

This section applies to stand-alone liquid cooling systems. The cooling system may be provided inside or outside the welding power source.

This section does not apply to the refrigeration system.

Note 1: The typical similar processes such as plasma arc cutting and spraying.

Note 2: This section does not include electromagnetic compatibility (EMC) requirements.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein Member. For undated references, the latest edition (including any amendments) applies to this document.

GB 15579.1-2013 welding equipment - Part 1. Welding power sources (IEC 60974-1:2005, IDT) GB 15579.7-2013 welding equipment - Part 7. torch (gun) (IEC 60974-7:2005, IDT) IEC Part 1060974-10 arc welding equipment. Electromagnetic compatibility (EMC) requirements [Arcweldingequipment-Part 10.

Electromagneticcompatibility (EMC) requirements]

3 Terms and Definitions

GB 15579.1-2013 and GB 15579.7-2013 defined and the following terms and definitions apply to this document.

Cooling power Cooling energy under the rated flow.

Liquid cooling system for reducing the cooling liquid circulation system for arc welding and similar processes the temperature of the device is used with.

4 Environmental conditions

Chapter 4 should be consistent with GB 15579.1-2013 provisions.

5.1 Test conditions

Shall comply with the provisions of 5.1 GB 15579.1-2013.

Independent external liquid cooling system can not be tested welding power supply.

Built-in liquid cooling system shall be tested together with the welding power source.

5.2 Measuring Instruments

Measuring instrument accuracy or precision requirements.

a) electrical measuring instruments. 0.5 ($\pm 0.5\%$ of full scale), insulation resistance and dielectric strength measurement exceptions for measuring insulation Precision resistance and dielectric strength of the instrument does not require, but shall be tested for accuracy problems;

b) temperature measurement devices. $\pm 2K$;

c) pressure measuring instruments. 2.5;

d) flow measurement instruments. 2.5.

Compliance 5.3 components GB 5.3 shall comply with the provisions of 15579.1-2013.

5.4 Type inspection

Unless otherwise specified, all type of inspection should be carried out under the same cooling system.

Type test according to the following order.

- a) general visual inspection (see GB 15579.1-2013 3.7);
- b) Enclosure protection (see GB 15579.1-2013 6.2.1);
- c) mechanical requirements (see Chapter 7);
- d) Insulation resistance (see 6.1.4);
- e) Dielectric strength (see 6.1.5).

Above in this section may be other tests that are not mentioned in any convenient order.

5.5 Routine Tests

Each cooling system should be followed by the following routine tests.

- a) general visual inspection (see GB 15579.1-2013 3.7);
- b) protection circuit continuity (see GB 15579.1-2013 10.4.2);
- c) Dielectric strength (see 6.1.5);
- d) general visual inspection (see 3.7 GB 15579.1-2013, such as liquid leakage inspection and checks the traffic regulations according to the manufacturer's Action or pressure sensor).

6.1.1 General

GB 6.1.1 shall comply with the provisions of 15579.1-2013.

6.1.2 CLEARANCE

GB 6.1.2 shall comply with the provisions of 15579.1-2013.

6.1.3 Creepage distance

GB 6.1.3 shall comply with the provisions of 15579.1-2013.

6.1.4 Insulation resistance

GB 6.1.4 shall comply with the provisions of 15579.1-2013.

Test may be carried out when impassable coolant.