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

GB 15579.8-2014

**Arc welding equipment -- Part 8: Gas consoles for welding and
plasma cutting system**

弧焊设备 第8部分：焊接和等离子切割系统的气路装置

(English Translation)

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Table of Contents

Introduction

1 Scope

2 Normative references

3 Terms and definitions

4 Environmental Conditions

5 Test

5.1 Test conditions

5.2 Measuring Instruments

5.3 Compliance component

5.4 Type test

5.5 Routine Tests

6 Protection against electric shock

6.1 Insulation

6.2 Normal use protection against electric shock (direct contact)

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 8 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 60974-8:2009 "welding equipment - Part 8. Gas welding and plasma cutting systems Circuit device. " Consistency correspondence between this part of the normative international documents referenced with our document Appendix NA.

This part made the following editorial changes.

- Increase the informative appendix NA.

This part is proposed by the China Electrical Equipment Industrial Association.

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

This section is drafted. Welder Shanghai GM Co., Ltd., Chengdu tripartite Electric Co., Ltd., Chengdu Institute of electric welding machine, Shenzhen City Christie Technology Co., Ltd., Zhejiang Kende Mechanical & Electrical Co., Ltd., Tangshan Matsushita Industrial Equipment Co., Ltd., located in Zhejiang Juba Welding Preparation Manufacturing Co., Ltd.

1 Scope

This part of GB 15579 specifies safety and performance requirements of flammable gas or oxygen gas path apparatus. The pneumatic device to arc welding, plasma cutting in explosive environment is not easy, gouging or similar processes provide a gas.

Pneumatic device may be installed in an external or internal power supply. When installing the internal power supply, this section also applies to the power supply.

NOTE: mechanized plasma system shown in Appendix A.

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) and magnetic devices IEC 60050-151 International Electrotechnical terminology electricity [International Electrotechnical Vocabulary (IEV) -Part 151.

Electrical and magnetic devices] IEC 60529 protection provided by enclosures (IP code)
[Degrees of protection provided by enclosures (IP Code)]

3 Terms and Definitions

GB 15579.1-2013 IEC 60050-151 and define the following terms and definitions apply to this document.

Air passage means gas console Having one or more open structure or housing and for conveying the gas, mixed gas, or a combination comprising two kinds of electrical devices and functions Means.

Lower Explosive Limit lower explosion limit; LEL Airborne concentrations of combustible gas or vapor, below which the concentration can not form an explosive atmosphere.

[IEV426-02-09, revised] 3.3 Lower flammable limit lower flammability limit; LFL Fire ignition source minimum concentration of flammable gas in the mixed gas.

Upper explosive limit upper explosion limit; UEL Airborne concentrations of flammable gas or vapor, the concentration is higher than can not form an explosive atmosphere.

[IEV426-02-10, revised] 3.5 Combustion limit upper flammability limit; UFL Fire ignition source maximum concentration of flammable gas in the mixed gas.

External air passage means external gas console Pneumatic device is not mounted inside the power supply.

Internal air passage means internal gas console Pneumatic device mounted inside the power supply.

Single fault condition Failure condition protective measures to prevent a dangerous place.

Note: If a single fault condition inevitably lead to another single fault conditions, such a two failures are considered a single fault condition.

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.

5.2 Measuring Instruments

GB 5.2 shall comply with the provisions of 15579.1-2013.

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

5.4 Type inspection

GB 5.4 shall comply with the provisions of 15579.1-2013.

The section above the other test items not mentioned may be any convenient order.

5.5.1 External air passage means

Each external pneumatic device should be in the following order the following tests.

- a) general visual inspection (see GB 15579.1-2013 3.7);
- b) the continuity of the protective circuit (see GB 15579.1-2013 10.4.2);
- c) Dielectric strength (see GB 15579.1-2013 6.1.5);
- d) tightness check (see 10.3);
- e) general visual inspection (see GB 15579.1-2013 3.7).

5.5.2 Internal air passage means

Each internal air passage means shall GB 5.5 15579.1-2013 provisions of inspection, test and add the following items.

- g) tightness check (see 10.3).

6.1 Insulation

GB 15579.1-2013 shall comply with the provisions of 6.1, with the following exceptions.

Printed circuit boards should be sealed, coated or encapsulated.

6.2.1 Enclosure protection

The minimum degree of protection pneumatic device should reach IP21S IEC 60529 requirements.

Compliance Check. Check by the following tests.

- a) prescribed by IEC 60529 test finger is applied to the ball or try any openings, should ensure that it does not contact with any hazardous parts; and
- b) After the prescribed IEC 60529 will be rain test, pneumatic device should be able to insulation resistance and dielectric strength test carried out immediately Experience and can work properly.

When the above test, the gas path apparatus is not energized.