

ICS 25.160.30

CCS J 64



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

GB/T 15579.10-2020

**Arc welding equipment - Part 10: Electromagnetic
compatibility(EMC)requirements**

Issued on: June 2, 2020

Implemented on: December 1, 2020

**Issued by: State Administration for Market Regulation, China National
Standardization Administration**

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Foreword

GB/T 15579 "Arc Welding Equipment" is divided into 13 parts.

---Part 1.Welding power supply;

---Part 2.Liquid cooling system;

---Part 3.Arc starting and arc stabilizing device;

---Part 4.Periodic inspection and testing;

---Part 5.Wire feeder;

---Part 6.Load-limiting equipment;

---Part 7.Welding torch (gun);

---Part 8.Pneumatic installation of welding and plasma cutting systems;

---Part 9.Installation and use;

---Part 10.Electromagnetic compatibility (EMC) requirements;

---Part 11.Welding tongs;

---Part 12.Welding cable coupling device;

---Part 13.Welding clamps.

This part is Part 10 of GB/T 15579.

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

This part replaces GB/T 15579.10-2008 "Arc Welding Equipment Part 10.Electromagnetic Compatibility (EMC) Requirements". versus

Compared with GB/T 15579.10-2008, the main technical changes are as follows.

--- Added the option to use decoupling network and load outside the shield (see 4.6);

--- Increase the test layout of portable equipment (see 5.1);

--- Added test conditions for complex control equipment, liquid cooling system, arc starting and arc stabilizing devices (see 5.3);

--- Cancellation of the narrow band limit relaxation in RF emissions (see 6.3.3 of the 2008 edition);

--- According to the changes of IEC 61000-3-11:2000 and IEC 61000-3-12, the limits of harmonics and flicker are modified and the process is added

Figure (see 6.3.4);

--- Increased output current ripple requirements (see 6.3.5);

--- Modified the voltage sag requirements based on the changes in GB/T 17626.11 and GB/T 17626.34 (see 7.4);

--- Modify the informational appendix "Installation and Use" (see Appendix A);

--- Based on the changes in CISPR11:2009, the applicable limits were modified (see Appendix B);

--- Increasing the symbol of RF equipment category and use restrictions (see Appendix C).

The translation method used in this part is equivalent to the use of IEC 60974-10:2015 "Arc Welding Equipment Part 10: Electromagnetic Compatibility (EMC)

begging".

The Chinese documents that have a consistent correspondence with the normatively cited international documents in this section are as follows.

--- GB/T 4365-2003 Electrotechnical term electromagnetic compatibility [IEC 60050(161):1990, IDT];

--- GB 4824-2019 Industrial, Scientific and Medical Equipment Radio Frequency Disturbance Characteristics Limits and Measurement Methods (CISPR11:2016, IDT);

--- GB/T 6113.101-2016 Specification for radio disturbance and immunity measuring equipment and methods Part 1-1: Radio

Disturbance and immunity measuring equipment measuring equipment (CISPR16-1-1:2010, IDT);

--- GB/T 6113.102-2018 Specification for radio disturbance and immunity measurement equipment and methods Part 1-2: Radio

Coupling device for conducted disturbance measurement of harassment and immunity measuring equipment (CISPR16-1-2:2014, IDT);

---GB/T 6113.104-2016 Specification for radio disturbance and immunity measuring equipment and methods Part 1-4.Wireless

Electrical disturbance and immunity measuring equipment Antenna and test site for radiated disturbance measurement (CISPR16-1-4.2012, IDT);

---GB/T 15579.1-2013 arc welding equipment part 1.welding power supply (IEC 60974-1.2005, IDT);

---GB/T 15579.6-2018 Arc welding equipment Part 6.Load-limiting equipment (IEC 60974-6.2010, IDT);

---GB/T 17625.2-2007 Electromagnetic compatibility limits are available for equipment with rated current $\leq 16A$ per phase and unconditionally connected

Limitation of voltage changes, voltage fluctuations and flicker generated in low-voltage power supply systems (IEC 61000-3-3.2005, IDT);

---GB/T 17625.7-2013 The electromagnetic compatibility limit is lower than the equipment with rated current $\leq 75A$ and conditional access.

Limits of voltage changes, voltage fluctuations and flicker generated in high-voltage power supply systems (IEC 61000-3-11.2000, MOD)

---GB/T 17625.8-2015 Electromagnetic compatibility limit The input current per phase is greater than 16A and less than or equal to 75A.

Harmonic current limits generated by equipment using low-voltage systems (IEC 61000-3-12.2004, IDT);

---GB/T 17626.2-2018 Electromagnetic Compatibility Test and Measurement Technology Electrostatic Discharge Immunity Test (IEC 61000-4-2. 2008,IDT);

---GB/T 17626.3-2016 Electromagnetic compatibility test and measurement technology RF electromagnetic field radiation immunity test (IEC 61000-4-3.2010, IDT);

---GB/T 17626.4-2018 Electromagnetic Compatibility Test and Measurement Technology Electrical Fast Transient Pulse Group Immunity Test (IEC 61000-4-4.2012, IDT);

---GB/T 17626.5-2019 electromagnetic compatibility test and measurement technology surge (shock) immunity test (IEC 61000-4-5.2014,IDT);

---GB/T 17626.6-2017 Electromagnetic compatibility test and measurement technology RF

field induced conducted disturbance immunity

(IEC 61000-4-6.2013, IDT);

---GB/T 17626.11-2008 Electromagnetic Compatibility Testing and Measurement Technology Voltage sag, short interruption and voltage change resistance

Disturbance test (IEC 61000-4-11.2004, IDT);

---GB/T 17626.34-2012 Electromagnetic compatibility test and measurement technology Voltage sag, short interruption and voltage change immunity test (IEC 61000-4-34.2009, IDT).

This part is proposed by China Electrical Equipment Industry Association.

This part is under the jurisdiction of the National Electric Welding Machine Standardization Technical Committee (SAC/TC70).

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1 Scope

This part of GB/T 15579 specifies.

a) RF emission standards and test methods;

b) Standards and test methods for harmonic current emission, voltage fluctuation and flicker;

c) Immunity requirements and test methods, including continuous disturbance, transient disturbance, conducted disturbance, radiated disturbance and electrostatic discharge.

This section applies to equipment for arc welding and similar processes, including power supplies and auxiliary equipment, such as wire feeders, cooling systems, arc starting and