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

GB 31251.2-2014

**Resistance welding equipment -- Part 2: Electromagnetic
compatibility (EMC) requirements**

电阻焊设备 第2部分：电磁兼容性要求

(English Translation)

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Table of Contents

Introduction

1 Scope

2 Normative references

3 Terms and definitions

4 3 General test requirements

4.1 Test conditions

4.2 Measuring device

4.3 Artificial mains network

4.4 Voltage probe

4.5 Antenna

5 Emission and immunity test layout

5.1 General

5.2 Auxiliary equipment

6 Emission test

6.1 Equipment Category

6.2 Test conditions

6.3 5 emission limits

7 6 Immunity Test

Scope 7.1 Test

7.2 Test conditions

7.3 Immunity performance criterion

7.4 Immunity Level

8 User files

Appendix A (informative) limit

Appendix NA (informative) consistency correspondence between this part of the
normative international documents referenced with our file

References

The following table A.3 idle electromagnetic radiation disturbance limits

Foreword

All technical content in this section is mandatory.

GB 31251 "welding equipment" is divided into two parts.

--- Part 1. Design, manufacture and installation of safety requirements;

--- Part 2. Electromagnetic compatibility requirements.

This is Part 2 GB 31251's.

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

This section uses the translation method is equivalent to using the international standard IEC 62135-2:2007 "Resistance welding equipment - Part 2. Electromagnetic Compatibility To begging".

Consistency correspondence between this part of the normative international documents referenced with our document 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. Jiangsu University of Science and Technology, Tianjin seven high-tech Co., Ltd., Tangshan Matsushita Industrial Equipment Co., Ltd. Shenzhenshihong Parkinson Technology Industrial Co., Ltd. Miya Ji Trading (Shanghai) Co., Ltd., Hang Lung Guangzhou Electrical and Mechanical Co., Ltd., Chengdu Welding Institute, Zhejiang Jiang Kende Mechanical & Electrical Co., Ltd., Wuxi Hanshin Electric Co., Ltd., Jiangsu southern Zhejiang Equipment Technology Co., Ltd., Jiangyin five-star welding Copper has Limited Tianjin Branch Welding Equipment Co., Ltd., Chengdu tripartite Electric Co., Ltd., Chengdu Electric and Inspection.

1 Scope

GB 31251 This part applies to the input voltage does not exceed the maximum AC RMS to 1000V resistance welding and similar processes used provided Preparation. This section does not specify safety requirements.

Comply with this part of the welding equipment shall be deemed to meet the application requirements.

Frequency range from 0Hz ~ 400GHz.

This part of the electromagnetic compatibility requirements for resistance welding equipment is not lower than other common standards, so no need to add other electromagnetic compatibility test items.

Note 1: Typical processes are similar resistance brazing, soldering or resistance welding equipment by similar resistance heating process.

Note 2: The limit applies only to the frequency range specified in this part.

Resistance welding equipment is divided into Class A and Class B equipment.

This section provides.

- a) RF radiation testing using the method specified in GB 4824-2004;
- b) appropriate criteria and test methods for harmonic current emissions, voltage fluctuations and flicker.

Note 3: The distances using the welding equipment and receiving antenna is less than 30m, even if the resistance welding equipment standard limits, can not completely assure TV or radio reception cause interference.

Note 4: In special cases, when highly susceptible apparatus from relatively close range of resistance welding equipment, other measures should be adopted to reduce the electromagnetic radiation.

This section also provides for immunity requirements and test methods for continuous, instantaneous conduction and radiation harassment (including electrostatic discharge) of.

Note 5: These requirements do not include some special cases rarely occur.

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 4824-2004 industrial, scientific and medical (ISM) radio-frequency equipment - Electromagnetic disturbance characteristics - Limits and methods of measurement (IEC/CISPR11:2003, IDT) GB 17625.1-2012 Electromagnetic compatibility - Limits for harmonic current emissions (equipment input current ≤ 16 A) (IEC 61000-3-2:2009, IDT) GB 17625.2-2007 Electromagnetic compatibility limits of the rated current per phase ≤ 16 A and unconditional access to public low-voltage equipment Voltage power supply system generated voltage fluctuations and flicker limits (IEC 61000-3-3:2005, IDT) IEC 60050-161 Electrical term electromagnetic compatibility (International Electrotechnical Vocabulary-Chapter 161).

Electromagnetic compatibility) IEC 60050-851 Electrotechnical Vocabulary - Chapter 851. Welding (International Electrotechnical Vocabulary-Chapter 851. Electric welding) IEC 61000-3-11:2000 Electromagnetic compatibility - Part 3-11. Limits of rated current per phase and conditional access ≤ 75 A Voltage equipment produced in the public low-voltage power supply system, voltage fluctuations and flicker limits [Electromagnetic compatibility (EMC) -Part 3-11. Limits-Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems-Equipment with rated current ≤ 75 A and subject to conditional connection]

-tion] IEC 61000-3-12:2011 Electromagnetic compatibility - Part 3-12. For each phase rated current $> 16\text{A}$ and with the public low $\leq 75\text{A}$ Harmonic currents produced by equipment connected to the system limits [Electromagnetic compatibility (EMC) -Part 3-12. Limits for harmonic currents produced by equipment connected to public low-voltage systems with input current $> 16\text{A}$ and $\leq 75\text{A}$ per phase] IEC 61000-4-2 Electromagnetic compatibility - Testing and measurement techniques - Electrostatic discharge immunity test [Electromagnetic compatibility (EMC) -Part 4-2. Testing and measurement techniques-Electrostatic discharge immunity test] IEC 61000-4-3 Electromagnetic compatibility - Testing and measurement techniques RFEMS test [Electromagnetic compatibility (EMC) -Part 4-3. Testing and measurement techniques-Radiated, radio frequency, electromagnetic field immunity test] IEC 61000-4-4 Electromagnetic compatibility Testing and measurement techniques - Electrical fast transient burst immunity test [Electromagnetic compatibility (EMC) -Part 4-4. Testing and measurement techniques-Electrical fast transient/burst immunity test] IEC 61000-4-5 Electromagnetic compatibility test and measurement technology surge (impact) immunity test [Electromagnetic compatibility (EMC) -Part 4-5. Testing and measurement techniques-Surge immunity test] IEC 61000-4-6 Electromagnetic compatibility Testing and measurement techniques Immunity to conducted disturbances induced field [Electromagnetic compatibility (EMC) -Part 4-6. Testing and measurement techniques-Immunity to conducted disturbances, induced by radio-frequency fields] IEC 61000-4-7 Electromagnetic compatibility test and measurement technology power supply systems and equipment connected harmonics, interharmonics measurements and instrument Control guidelines [Electromagnetic compatibility (EMC) -Part 4-7. Testing and measurement techniques-General guide on harmonics and interharmonics measurements and instrumentation, for power supply systems and equipment connected thereto] IEC 61000-4-11 Electromagnetic compatibility Testing and measurement techniques - Voltage dips, short interruptions and voltage variations immunity tests [Electromagnetic compatibility (EMC) -Part 4-11. Testing and measurement techniques-Voltage dips, short interruptions and voltage variations immunity tests] IEC 61000-4-15 electromagnetic compatibility test and measurement technology scintillation functional and design specifications [Electromagnetic compatibility (EMC) -Part 4-15. Testing and measurement techniques-Flicker meter-Functional and design specifications] IEC 62135-1 Resistance welding equipment - Part 1. Design, manufacture and installation of safety requirements (Resistance Welding equipment-Part 1. Safety requirements for design, manufacture and installation) IEC/CISPR14-1 electromagnetic appliances, electric tools and similar apparatus compatible with the requirements of Part 1. Emission (Electromagnetic compatibility-Requirement for household appliances, electric tools and similar apparatus-Part 1. Emission) IEC/CISPR16-1-1 radio disturbance and