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

GB 10235-2012

Replacing GB 10235-2000

Hazard reducing device for arc welding power source

弧焊电源 防触电装置

(English Translation)

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Foreword

The standard Chapter 3 "Terms and definitions" are recommended, the rest are mandatory.

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

This standard replaces GB 10235-2000 "welding transformer electric shock devices." This standard compared with GB 10235-2000 major changes as follows.

--- Standard names arc welding power transformer to change.

--- Expanding the scope of the standard, the original standard applies only to single-phase power supply.

--- A reference to the standard has been updated.

--- The definition made some deleted or modified.

--- Increase the rated duty cycle rating, terminals can be connected to the wire nominal cross-sectional area and the range of terminals Protection Requirements, increasing the temperature rise limits of power devices.

--- On the conditions of use, time delay, starting resistor values and test methods, the dielectric strength test voltage, shell protection grade, normal Requirements, fault protection requirements of work instructions, drop test method, routine test items have been modified.

--- Cancel the provisions of the preparation and control products in the form of model provisions.

--- Canceled the electrode touches the workpiece a predetermined time, the electromagnetic contactor is, anti-jamming performance, capacity and complete sets of continuous action Claim.

--- Cancel the packaging, transportation and storage requirements.

The standard proposed by China Electrical Equipment Industrial Association.

This standard by the National Standardization Technical Committee Welder (SAC/TC70) centralized.

This standard was drafted. Nantong thirty-nine welding machines Manufacturing Co., Ltd., Beijing Sanjiang Electrical Equipment Factory, Zhejiang Kende Electromechanical shares have Limited Shenzhen Ruiling Industrial Co., Ltd., Wuxi Hanshin Electric Co., Ltd., Chengdu tripartite Electric Co., Ltd., Foshan City, Grand electricity Gas Co., Ltd., Chengdu Electric and Inspection.

1 Scope

This standard specifies the product type welding power source electric shock devices, the basic parameters, structural and safety requirements, test methods, inspection rules and Nameplate information.

This standard applies to GB 15579.1 under the various types of arc welding power source with electric shock devices (hereinafter referred to as the device).

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/T 2423.3 Environmental testing for electric and electronic products Part 2. Test methods - Test Cab. Damp heat test GB/T 2900.22 Electrotechnical terminology Welder GB 4208 housing protection (IP Code) GB/T 5169.10 Fire hazard testing for electric and electronic products - Part 10. Glowing/hot wire based test methods - Glow wire mounted General methods of test and set GB/T 5169.11 Fire hazard testing for electric and electronic products - Part 11. Glowing/hot wire based test methods for finished burning Hot wire flammability test method GB 15579.1 welding equipment - Part 1. Welding power

3 Terms and Definitions

GB/T 2900.22, GB 15579.1 define the following terms and definitions apply to this document.

Operation Resistance acting resistance the maximum resistance value of the device

operation of welding power output circuit.

Starting time operatingtime Contact with the workpiece from the electrode to the welding power reaches the rated load voltage.

Delay time delayingtime Rated load voltage generated from the welding power source to the load voltage down to low altitude of time.

Built-in units innerdevice Mounted within the housing arc welding power source, and a device sold separately. This device may be a separate housing, it can also be outside the arc welding power source Shell cater to the housing unit.

Outside-mounted device outerdevice Mounted on the welding power external devices.

Cabinet-mounted device deviceinsideswitchcabinet Mounted on the inside of the arc welding power supply low voltage distribution panel devices.

4.1 Product Type

According to the installation device into a built-in, externally mounted and cabinet-mounted.

4.2.1 Nominal input conditions

Rated input device using the power grid or energy to a secondary loop output arc welding power supply as the input device.

4.2.2 Rated current level

Rated current level and the arc welding power supply device corresponds to the rated input current, 100A according to R5 recommended the following priority number system tranches;

100A above recommended by R10 priority coefficient bins. Commonly rated current (A) rating.

25,40,63,100,125,160.

4.2.3 Rated duty cycle (%)

20,35,60,80,100.

4.2.4 Duty cycle

10min or continuous.

5.1 Environmental conditions

Shall comply with the relevant provisions of GB 15579.1.

5.2 Special environmental conditions

When the environmental conditions of use does not comply with 5.1, the user should be presented when ordering, be resolved through consultation with the manufacturer.

6 Installation conditions

Product demand device shall be specified by the manufacturer for installation.

7.1 Motor skills

Power supply grid using a device should work correctly in 85% to 110% of rated input voltage; the secondary welding power source Work within the loop output as a means of energy input welding power source should be specified load voltage range.

7.2 Start-up time

Starting time of the device should not exceed 0.06s.

7.3 Delay time

Measuring the delay time of the device under nominal input conditions, measuring 10 times. Delay time in 10 times the maximum and minimum measurement the difference should not exceed the values specified in Table 1, while the maximum delay time should not exceed 1 column in Table 2 of the limits specified.

Using the power grid supply apparatus input voltage of 110% and 85% rating, the device respectively 10 trials, seeking the average value of the delay time in each case, the average difference between them and under nominal conditions measured delay time should not exceed 1 List Regulations Value.

Table 1 Delay time

No-load voltage

Delay time

Difference between the maximum and minimum Delay time when the average value of power fluctuations the difference between the average value of the rated conditions GB 15579.1 exceed the risk of electric shock Rated load is not an environment for use Voltage 0.3 0.1 0.05 GB 15579.1 in greater danger of electric shock Rated no-load voltage used in the environment Shock and not very dangerous environment to allow when used between rated load voltage 2 0.5 0.3