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

GB/T 32514.4-2016

**Resistance welding -- Welding current measurement for
resistance welding -- Part 4: Calibration system**

电阻焊 焊接电流的测量 第4部分：校准系统

(English Translation)

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Table of Contents

Preface
1 Scope
2 Normative reference document
3 Terms and definitions
4 The structure of the calibration system
4.1 Reference welding current measurement system
4.2 Test device
4.3 Basic functions required for calibration of welding current measurement system
4.4 Basic functions required for current sensor calibration
4.5 Basic functions required for calibration of welding current measuring instrument without sensor
5 Environmental conditions
6 Calibration requirements
6.1 Baseline welding current measurement system
6.2 Reference current sensor
6.3 Data acquisition equipment
6.4 Test stand and power supply
7 Test Report
7.1 Welding current measurement system calibration test report
7.2 Current sensor calibration test report
7.3 Calibration test report of welding current measuring instrument without sensor
8 Test procedure
8.1 Overview
8.2 Calibration of welding current measurement system
8.3 Calibration of current sensors
8.4 Calibration of welding current measuring instrument without sensor
8.5 Special calibration situation
Appendix A (informative) Measuring device
Appendix B (informative) Contents of the project to be recorded or archived as a calibration reference document
Appendix C (informative) Test Report Example

Foreword

GB/T 32514 "resistance welding current measurement" is divided into five parts.

- Part 1. Measurement guidelines;

Part 2. welding current measuring instrument with current sensing coil;

Part 3. Current sensing coils;

- Part 4. Calibration system;

Part 5. Confirmation of welding current measurement systems.

This part is part 4 of GB/T 32514.

This part is drafted in accordance with the rules given in GB/T 1.1-2009.

This part uses the translation method equivalent to ISO 17657-4.:2005 "Measurement of resistance welding current Part 4. Calibration system".

And the normative reference in this standard international documents are consistent with the relationship between China's documents are as follows.

GB/T 8366-2004 Mechanical and electrical requirements for solder resist welding machines (ISO 669.:2000, MOD);

Measurement of welding current for resistance welding - Part 2. Welding current measurement with current - induced coil GB/T 32514.2-2016 (ISO 17657-2.:2005, IDT).

This part is made by China Electrical Equipment Industry Association.

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

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Measurement of welding current of resistance welding Part 4. Calibration system

1 Scope

This part of GB/T 32514 specifies the use of resistance welding current measurement in single-phase alternating current (50Hz or 60Hz) or DC Measurement system for current measurement systems, current sensors, welding current meters, and monitoring devices

with current sensors and calibration procedures.

The calibration procedure applies to a welding current range of 0.5kA to 25kA.

2 Normative reference documents

The following documents are indispensable for the application of this document. For dated references, only the dated edition applies to this article. For undated references, the latest edition (including all modifications) applies to this document.

GB/T 32514.3-2016 Resistance welding current measurement - Part 3. Current sensing coils (ISO 17657-3:2005, IDT) ISO 669 resistance welding resistance machine mechanical and electrical requirements

(Resistance welding-Resistance welding equipment-mechanical and electrical requirements ISO 17657-2 Resistance welding current measurement - Part 2. Welding current measuring instrument with current sensing coil

(Resistance welding-Welding current measurement for resistance welding-Part 2. Welding current meter with current sensing coil)

3 Terms and definitions

The following terms and definitions apply to this document.

Test (current) sensor test (current) sensor the current sensor to be calibrated.

Reference (current) sensor reference (current) sensor A high-precision condition has been calibrated for the current sensor to calibrate the current sensor.

Test welding current measuring instrument test welding current meter the welding current meter to be calibrated.

No sense of shunt non-inductive shunt with a very low inductance, with high accuracy and low resistance of the shunt.

Analog-to-digital converter;

Means for converting the analog input signal into a digital signal.