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

GB/T 25301-2021

**Resistance welding equipment - Transformers - General
specifications applicable to all transformers**

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for Standardization Work Part 1. Structure and Drafting Rules of Standardization Documents" Drafting.

This document replaces GB/T 25301-2010 "General Technical Conditions for Resistance Welding Equipment Applicable to All Transformers", and is in line with GB/T 25301-2010 Compared with.2010, in addition to structural adjustments and editorial changes, the main technical changes are as follows.

- The scope of application of the standard is expanded from transformers for resistance welding machines without rectifiers to transformers with rectifiers (see Chapter 1);
- Adjusted the normative reference documents (see Chapter 2, Chapter 2 of the.2010 edition);
- Added terms and definitions other than those defined by ISO 669 (see Chapter 3);
- Added input current and other symbols (see Chapter 4);
- Added a chapter on structure and additional equipment (see Chapter 5);
- Increase the dielectric strength test voltage value and test method (see 8.2);
- Added the calibration requirements for the output current induction coil (see 8.3);
- Insulation requirements for class II transformers have been added (see 8.6);
- Added the thermal performance test conditions of various transformers (see 9.3);
- Added no-load current requirements (see Chapter 11);
- Increased the output current requirements under load conditions (see Chapter 13).

The translation method used in this document is equivalent to ISO 5826.2014 "General technology for resistance welding equipment transformers applicable to all transformers" Technical Conditions.

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

- GB/T 4208-2017 enclosure protection class (IP code) (IEC 60529.2013, IDT);
- GB/T 8366-2021 Mechanical and electrical requirements for resistance welding resistance welding equipment (ISO 669.2016, IDT);

---GB/T 11021-2014 Electrical insulation heat resistance and representation method (IEC 60085.2007, IDT);

---GB/T 17045-2020 Electric shock protection devices and general parts of equipment (IEC 61140.2016, IDT);

---GB/T 32514.3-2016 Measurement of resistance welding welding current Part 3.Current induction coil (ISO 17657-3.

2005, IDT);

---GB/T 32514.4-2016 Measurement of resistance welding welding current Part 4.Calibration system (ISO 17657-4.2005, IDT).

1 Scope

This document specifies the technical conditions for the following types of transformers applicable to resistance welding equipment.

---Single-phase transformer for AC welding, usually working at 50Hz or 60Hz;

---Single-phase transformer connected to rectifier for DC welding, usually working at 50Hz or 60Hz;

---Single-phase inverter transformer connected to rectifier for DC welding, usually working at 400Hz~2kHz;

---Three-phase transformer connected to rectifier used for DC welding, usually working at 50Hz or 60Hz.

For the purposes of this document, the term transformer can refer to a transformer alone or connected to a rectifier (transformer-rectifier unit).

This document is applicable to Type I or Type II protective transformers that comply with IEC 61140.

Note. The requirements of this document can be supplemented by other resistance welding transformer standards, such as ISO 22829 and ISO 10656.

2 Normative references

The contents of the following documents constitute the indispensable clauses of this document through normative references in the text. Among them, dated quotations

Only the version corresponding to that date is applicable to this document; for undated reference documents, the latest version (including all amendments) is applicable to

This document.