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Resistance welding equipment — Transformers — Integrated transformer-rectifier units for welding guns operating at 1 000 Hz

Équipement de soudage par résistance — Transformateurs — Transformateurs-redresseurs pour pinces de soudage à transformateur incorporé alimentés sous une fréquence de 1000 Hz

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 44, *Welding and allied processes*, Subcommittee SC 6, *Resistance welding and allied mechanical joining*.

This second edition cancels and replaces the first edition (ISO 22829:2007), which has been technically revised.

Requests for official interpretations of any aspect of this document should be directed to the Secretariat of ISO/TC 44/SC 6 via your national standards body. A complete listing of these bodies can be found at www.iso.org.

Resistance welding equipment — Transformers — Integrated transformer-rectifier units for welding guns operating at 1 000 Hz

1 Scope

This document specifies additional requirements to those given in ISO 5826 for single-phase inverter transformers with connected rectifier for DC welding. This document applies to transformers, primarily used in welding guns, operating at 1 000 Hz with a rated input voltage of 500 V or more.

The requirements of ISO 5826 shall be followed unless amended by this document.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 669, *Resistance welding — Resistance welding equipment — Mechanical and electrical requirements*

ISO 5826, *Resistance welding equipment — Transformers — General specifications applicable to all transformers*

ISO 17677-1, *Resistance welding — Vocabulary — Part 1: Spot, projection and seam welding*

IEC 60417:2002, *Graphical symbols for use on equipment*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 669, ISO 5826 and ISO 17677-1 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at http://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

3.1
output DC current
I_{2d}
root-mean-square (RMS) value of the direct current at the output terminals of the transformer-rectifier unit

3.2
on time
t_s
time during which the current is applied

4 Power supply to the transformer-rectifier unit

The rated voltage supply shall be delivered by an inverter. This inverter shall deliver the rated voltage at a frequency of 1 000 Hz in a waveform to suit the transformer-rectifier unit characteristics.