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Resistance welding — Testing of welds — Peel and chisel testing of resistance spot and projection welds

Soudage par résistance — Essais des soudures — Essais de pelage et de déboutonnage au burin appliqués aux soudures par résistance par points et par bossages

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Contents

Page

Foreword ..... **iv**
1 Scope **1**
2 Normative references **1**
3 Terms and definitions **1**
4 Test specimens **1**
5 Test procedure **1**
5.1 Chisel test 1
5.2 Peel test 4
5.3 Measurement of weld size and recording failure modes 6
6 Test report **7**
Bibliography **8**

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Foreword

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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).

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For an explanation of 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 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*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 121, *Welding and allied processes*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This fourth edition cancels and replaces the third edition (ISO 10447:2015), which has been technically revised.

The main changes are as follows:

— the terms and definition given in ISO 17677-1 apply.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html. Official interpretations of ISO/TC 44 documents, where they exist, are available from this page: https://committee.iso.org/sites/tc44/home/interpretation.html.

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Resistance welding — Testing of welds — Peel and chisel testing of resistance spot and projection welds

1 Scope

This document specifies the procedures and recommended tooling to be used for peel and chisel testing of resistance spot and embossed projection welds. This document applies to welds made in two or more sheets in the thickness range of 0,5 mm to 3,0 mm.

The aim of these tests is to determine:

— weld size and failure mode when welds are destructively tested;

— verification of welds by non-destructive chisel tests.

NOTE The preferred method of peel testing seam welds (mechanized peel testing) is covered in ISO 14270.

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

3 Terms and definitions

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

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

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

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

4 Test specimens

When used for quality control in production, tests shall be conducted on actual components or specimens taken from actual components.

When used for setting welding parameters, where it is not practical to use actual components, separate welded test pieces may be used. The test pieces shall be produced from the same material used for the component and welded under conditions adapted to produce the same required weld quality. The effects of different shunt or impedance conditions should be taken into account when producing the test pieces by inserting sufficient material in the throat of the machine to approximate the magnetic effect of the workpiece under production conditions.

5 Test procedure

5.1 Chisel test

A chisel shall be used to separate the sheets adjacent to the weld under test. There are two types of chisel test.

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