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Mechanical joining of sheet materials — Destructive testing of joints — Specimen dimensions and procedure for mechanized peel testing of single joints

Assemblage mécanique de tôles — Essais destructifs des assemblages — Dimensions des échantillons et procédure pour l'essai de pelage mécanisé des assemblages simples

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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).

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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*.

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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Mechanical joining of sheet materials — Destructive testing of joints — Specimen dimensions and procedure for mechanized peel testing of single joints

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1 Scope

This document specifies the geometry of test specimens and the testing procedure for mechanized peel testing of single mechanical joints on single-lap test specimens up to a single sheet thickness of 4,5 mm.

The term “sheet”, as used in this document, includes extrusions and cast materials.

The purpose of the mechanized peel tests is to determine the mechanical characteristics and the failure modes of the joints made with different joining methods.

This document does not apply to civil engineering applications such as metal buildings and steel constructions which are covered by other application standards.

NOTE For mechanized peel testing of resistance spot, seam and embossed projection welds, see 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 7500-1, *Metallic materials — Calibration and verification of static uniaxial testing machines — Part 1: Tension/compression testing machines — Calibration and verification of the force-measuring system*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

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

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

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

3.1
mechanized peel strength
MPS
F_{max}
maximum *peel force* (3.2) obtained from mechanized peel testing

3.2
peel force
F
force/load which is applied to the test specimen during mechanized peel testing

3.3
slippage force
F_{sl}
peel force (3.2)/load at which slippage occurs if the phenomenon is observed during testing

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