SLOVENSKI STANDARD
SIST EN ISO 18278-1:2015

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Uporovno varjenje - Varivost - 1. del: Ocenjevanje varivosti pri uporovnem točkovnem, kolutnem in bradavičnem varjenju kovinskih materialov (ISO 18278-1:2015)

Resistance welding - Weldability - Part 1: Assessment of weldability for resistance spot, seam and projection welding of metallic materials (ISO 18278-1:2015)

Widerstandsschweißen - Schweißeignung - Teil 1: Allgemeine Anforderungen an die Bewertung der Schweißeignung von Widerstandspunkt , Rollennaht- und Buckelschweißungen von metallischen Werkstoffen (ISO 18278-1:2015)

Soudage par résistance - Soudabilité - Partie 1: Évaluation de la soudabilité pour le soudage par résistance par points, à la molette et par bossages des matériaux métalliques (ISO 18278-1:2015)

Ta slovenski standard je istoveten z: **EN ISO 18278-1:2015**

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English Version

Resistance welding - Weldability - Part 1: General requirements for the evaluation of weldability for resistance spot, seam and projection welding of metallic materials (ISO 18278-1:2015)

Soudage par résistance - Soudabilité - Partie 1: Exigences générales pour l'évaluation de la soudabilité pour le soudage par résistance par points, à la molette et par bossages des matériaux métalliques (ISO 18278-1:2015)

Widerstandsschweißen - Schweißeignung - Teil 1: Bewerten der Schweißeignung zum Widerstandspunkt-, Rollennaht- und Buckelschweißen von metallischen Werkstoffen (ISO 18278-1:2015)

This European Standard was approved by CEN on 17 January 2015.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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Foreword

This document (EN ISO 18278-1:2015) has been prepared by Technical Committee ISO/TC 44 “Welding and allied processes” in collaboration with Technical Committee CEN/TC 121 “Welding and allied processes” the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by October 2015, and conflicting national standards shall be withdrawn at the latest by October 2015.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN ISO 18278-1:2004.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Endorsement notice

The text of ISO 18278-1:2015 has been approved by CEN as EN ISO 18278-1:2015 without any modification.

INTERNATIONAL STANDARD

ISO 18278-1

Second edition
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Resistance welding — Weldability —

Part 1: General requirements for the evaluation of weldability for resistance spot, seam and projection welding of metallic materials

Soudage par résistance — Soudabilité —
Partie 1: Exigences générales pour l'évaluation de la soudabilité pour le soudage par résistance par points, à la molette et par bossages des matériaux métalliques

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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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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 meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT), see the following URL: Foreword — Supplementary Information.

The committee responsible for this document is 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 18278-1:2004), which has been technically revised.

ISO 18278 consists of the following parts, under the general title *Resistance welding — Weldability*:

— *Part 1: General requirements for the evaluation of weldability for resistance spot, seam and projection welding of metallic materials*

— *Part 2: Evaluation procedures for weldability in spot welding*

Resistance welding — Weldability —

Part 1:
General requirements for the evaluation of weldability for resistance spot, seam and projection welding of metallic materials

1 Scope

This part of ISO 18278 specifies procedures for assessing the generic weldability for resistance welding of uncoated and coated metals.

It is assumed for this and other linked standards that their application is entrusted to appropriately trained, skilled, and experienced personnel.

For the quality of welded structures, the relevant part of ISO 14554 is applicable. The specification of procedures is to follow guidelines as in ISO 15609-5.

The purpose of the tests are to

a) compare the metallurgical weldability of different metals,

b) assess the weldability of differing component designs, e.g. dimensional configuration, stack-up, projection geometry, etc.,

c) investigate the effect of changes in welding parameters such as welding current, weld time, electrode force or complex welding schedules including pulse welding, current stepping etc. on weldability, and/or

d) compare the performance of resistance welding equipment.

Precise details of the test procedure to be used will depend on which aspect of items a) to d) will be evaluated relative to the welding result obtained.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. 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 693, *Dimensions of seam welding wheel blanks*

ISO 5182, *Resistance welding — Materials for electrodes and ancillary equipment*

ISO 5821, *Resistance welding — Spot welding electrode caps*

ISO 8167, *Projections for resistance welding*

ISO 10447, *Resistance welding — Peel and chisel testing of resistance spot and projection welds*

ISO 14270, *Resistance welding — Destructive testing of welds — Specimen dimensions and procedure for mechanized peel testing resistance spot, seam and embossed projection welds*