



BSI Standards Publication

Thermal cutting — Classification of thermal cuts — Geometrical product specification and quality tolerances

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National foreword

This British Standard is the UK implementation of EN ISO 9013:2017+A1:2024. It is identical to ISO 9013:2017, incorporating amendment 1:2024. It supersedes BS EN ISO 9013:2017, which is withdrawn.

The start and finish of text introduced or altered by amendment is indicated in the text by tags. Tags indicating changes to ISO text carry the number of the ISO amendment. For example, text altered by ISO amendment 1 is indicated by A1 A1.

The UK participation in its preparation was entrusted to Technical Committee WEE/18, Gas welding and cutting appliances.

A list of organizations represented on this committee can be obtained on request to its committee manager.

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EUROPÄISCHE NORM

September 2024

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English Version

Thermal cutting - Classification of thermal cuts - Geometrical product specification and quality tolerances (ISO 9013:2017)

Coupage thermique - Classification des coupes
thermiques - Spécification géométrique des produits et
tolérances relatives à la qualité (ISO 9013:2017)

Thermisches Schneiden - Einteilung thermischer
Schnitte - Geometrische Produktspezifikation und
Qualität (ISO 9013:2017)

This European Standard was approved by CEN on 1 January 2017.

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CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

European foreword

This document (EN ISO 9013:2017) 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of an identical text or by endorsement, at the latest by August 2017, and conflicting national standards shall be withdrawn at the latest by August 2017.

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This document supersedes EN ISO 9013:2002.

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Endorsement notice

The text of ISO 9013:2017 has been approved by CEN as EN ISO 9013:2017 without any modification.

European foreword to Amendment 1

This document (EN ISO 9013:2017/A1:2024) 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 AFNOR.

This Amendment to the European Standard EN ISO 9013:2017 shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by March 2025, and conflicting national standards shall be withdrawn at the latest by March 2025.

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Endorsement notice

The text of ISO 9013:2017/Amd 1:2024 has been approved by CEN as EN ISO 9013:2017/A1:2024 without any modification.

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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 on 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.

The committee responsible for this document is ISO/TC 44, *Welding and allied processes*, Subcommittee SC 8, *Equipment for gas welding, cutting and allied processes*.

This third edition cancels and replaces the second edition (ISO 9013:2002), 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 8 via your national standards body. A complete listing of these bodies can be found at www.iso.org.

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Thermal cutting — Classification of thermal cuts — Geometrical product specification and quality tolerances

1 Scope

This document presents geometrical product specifications and quality tolerances for the classification of thermal cuts in materials suitable for oxyfuel flame cutting, plasma cutting and laser cutting. It is applicable to flame cuts from 3 mm to 300 mm, plasma cuts from 0,5 mm to 150 mm and laser cuts from 0,5 mm to 32 mm.

The geometrical product specifications are applicable if reference to this document is made in drawings or pertinent documents, e.g. delivery conditions. If this document were also to apply, by way of exception, to parts produced by other cutting processes, this would have to be agreed upon separately.

Flatness defects are not addressed as such in this document. The references are to the current standards for the materials used.

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.

A1 Text deleted. **A1**

ISO 3274, *Geometrical Product Specifications (GPS) — Surface texture: Profile method — Nominal characteristics of contact (stylus) instruments*

A1 ISO 21920-3, *Geometrical product specifications (GPS) – Surface texture: Profile – Part 3: Specification operators* **A1**

ISO 8015, *Geometrical product specifications (GPS) — Fundamentals — Concepts, principles and rules*

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:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

3.1 General

3.1.1 cutting

operation of cutting the work piece

3.1.2 cut

result of the cutting operation