

SLOVENSKI STANDARD oSIST prEN ISO 4063:2021

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Varjenje in sorodni postopki - Seznam postopkov in številčne oznake (ISO/DIS 4063:2020)

Welding, brazing, soldering, cutting, mechanical joining and adhesive bonding -Nomenclature of processes and reference numbers (ISO/DIS 4063:2020)

Schweißen, Hartlöten, Weichlöten, Schneiden, Mechanisches Fügen und Kleben - Liste der Prozesse und Ordnungsnummern (ISO/DIS 4063:2020)

Soudage, brasage, coupage, assemblage mécanique et collage - Nomenclature et numérotation des procédés (ISO/DIS 4063:2020)

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25.160.01	Varjenje, trdo in mehko spajkanje na splošno	Welding, brazing and soldering in general

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Welding, brazing, soldering, cutting, mechanical joining and adhesive bonding — Nomenclature of processes and reference numbers

ICS: 01.040.25; 25.160.01

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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 7, Representation and terms. https://standards.iteh.ai/catalog/standards/sist/ba2a09e7-daef-4c01-9dbb-

This fifth edition cancels and replaces the fourth edition (ISO44063:2009), which has been technically revised.

The main changes compared to the previous edition are as follows:

 addition of processes for welding (thermal joining) of plastics, for mechanical joining and for adhesive bonding,

Any feedback, question or request for official interpretation related to any aspect of this document should be directed to the Secretariat of ISO/TC 44/SC 7 via your national standards body. A complete listing of these bodies can be found at <u>www.iso.org/members.html</u>. Official interpretations, where they exist, are available from this page: <u>https://committee.iso.org/sites/tc44/home/interpretation.html</u>.

Introduction

In the previous editions of this document, the numbering system only covered processes for welding, weld brazing, brazing, soldering, cutting and gouging. This allowed the use of a three-digits numbering system, where one digit corresponds to a main process (e.g.: "1 Arc welding"), two digits to a sub-process (e.g.: "11 Metal arc welding without gas protection"), and three digits to a sub-sub-process (e.g.: "111 Manual metal arc welding").

The main change in this fifth edition is the incorporation of processes and reference numbers for welding (thermal joining) of plastics, for mechanical joining and for adhesive bonding.

Because of the intrinsic limits of the three-digits system, it became necessary to adopt a four-digits system, where the first digit corresponds to the main type of technology (i.e.: 1xxx for mechanical joining and 2xxx for adhesive bonding), and the three following digits to the main process, sub-processes and sub-sub-processes.

However, since any change of a given existing process and reference number can have a very strong and negative impact in the industry, it was decided to keep the three-digits numbering system for all the processes already covered in previous editions.

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DRAFT INTERNATIONAL STANDARD

Welding, brazing, soldering, cutting, mechanical joining and adhesive bonding — Nomenclature of processes and reference numbers

1 Scope

This International Standard establishes a nomenclature for

- welding;
- brazing, soldering and weld brazing;
- thermal cutting;
- mechanical joining;
- adhesive bonding;

with each process identified by a reference number. This document is applicable for all materials where the joining processes are appropriate.

NOTE In addition to terms in English and French, two of the three official ISO languages, this International Standard gives the equivalent terms in German; these are published under the responsibility of the member body for Germany (DIN). However, only the terms given in the official languages can be considered as ISO terms.

2 Normative referencess.iteh.ai/catalog/standards/sist/ba2a09e7-daef-4c01-9dbb-

c2c04745f8e3/osist-pren-iso-4063-2021 There are no normative references in this document.

There are no normative relefences in this document

3 Terms and definitions

No terms and definitions are listed in this document.

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/

4 **Designation**

4.1 General

Where a full designation is required for a joining process, it shall have the following structure: the number of this International Standard (i.e. "ISO 4063"), separated by a hyphen from the reference number of the process, as shown in these examples.

EXAMPLE 1 Process 48 "Cold pressure welding" is designated as:

ISO 4063 – 48

EXAMPLE 2 Process "Radio frequency welding" with reference number 62 is designated as:

ISO 4063 – 62

EXAMPLE 3 Process "Blind riveting" with reference number 1120 is designated as:

ISO 4063 - 1120

EXAMPLE 4 Process "Adhesive bonding with cold-curing 2C silicones" with reference number 2312 is designated as:

ISO 4063 – 2312

EXAMPLE 5 Process "Heated wedge welding with hot gas" with reference number 662-A is designated as:

ISO 4063 – 662-A

4.2 Hybrid joining

When multiple processes are used simultaneously in one process area, the processes shall be described using the designations for each process separated by the symbol "+".

EXAMPLE Process "Gas laser welding" (reference number 522) together with process "Plasma arc welding" (reference number 15) is designated as:

ISO 4063 – 522+15

4.3 Combined joining (Combination of joining processes)

When multiple processes are combined sequentially in one process area, the processes shall be described using the designations for each process separated by the symbol ">"...

EXAMPLE Process "Self-piercing riveting" (reference number 1110) followed by process "Resistance spot welding" (reference number 21) is designated as:

ISO 4063 - 1110>21 OSIST prEN ISO 4063:2021

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List of processes and reference numbers

5.1 General

5

The first term listed is the preferred term and any subsequent terms are synonyms. US terms are shown for information where there are differences.

<u>Annex A</u> provides supplementary options for process variants.

<u>Annex B</u> provides an overview for replaced and obsolete processes.

<u>Annex C</u> provides a list of commonly used acronyms and abbreviations for the welding processes in the USA included in this International Standard.

5.2 Welding¹)

1 Arc welding

11 Metal arc welding without gas protection

111 Manual metal arc welding

Shielded metal arc welding, USA

¹⁾ Due to historic reasons (see Introduction) the reference numbers for welding, thermal cutting, brazing, soldering and weld brazing do not have a first digit corresponding to the main type of technology, as "1xxx" for mechanical joining or "2xxx" for adhesive bonding.

- 112 Gravity welding Gravity arc welding with covered electrode Gravity feed welding, USA
- 114 Self-shielded tubular cored arc welding

12 Submerged arc welding

- 121 Submerged arc welding with solid wire electrode
- 122 Submerged arc welding with strip electrode
- 124 Submerged arc welding with metal powder addition
- 125 Submerged arc welding with tubular cored electrode
- 126 Submerged arc welding with cored strip electrode
- Gas-shielded metal arc welding
 Metal inert gas (MIG) welding/ Metal active gas (MAG) welding
 Gas metal arc welding (GMAW), USA
- 131 MIG welding with solid wire electrode GMAW using inert gas and solid wire electrode, USAREVIEW
- 132 MIG welding with flux cored **electroderds.iteh.ai**) Gas shielded flux cored arc welding, USA OSIST prEN ISO 4063:2021
- 133 MIG welding with metal cored electrodendards/sist/ba2a09e7-daef-4c01-9dbbc2c04745f8e3/osist-pren-iso-4063-2021 GMAW using inert gas and metal cored wire, USA
- 135 MAG welding with solid wire electrodeGMAW using active gas with solid wire electrode, USA
- 136 MAG welding with flux cored electrodeGMAW using active gas and flux cored electrode, USA
- 138 MAG welding with metal cored electrode GMAW using active gas and metal cored electrode, USA
- 14 Gas-shielded arc welding with non-consumable tungsten electrode Tungsten inert gas (TIG) welding/Tungsten active gas (TAG) welding Gas tungsten arc welding (GTAW), USA
- 141 TIG welding with solid filler materialGTAW using inert gas and solid filler material, USA
- 142 Autogenous TIG welding Autogenous gas tungsten arc welding using inert gas, USA
- 143 TIG welding with tubular cored filler material GTAW using inert gas and tubular cored filler material, USA