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Welding — Grouping systems for materials — European materials

Soudage — Systèmes de groupement des matériaux — Matériaux européens

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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 10, *Quality management in the field of welding*, 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 third edition cancels and replaces the second edition (ISO 20172:2009), which has been technically revised.

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

— Tables 1 to 5 have been revised;

— new Table 6 has been added for nickel and nickel alloys.

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.

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Introduction

This document reflects the situation at the time of publication.

Lists of former designations can be found in the relevant European materials standards.

For the materials not listed in this document, ISO/TR 20173:2018 and ISO/TR 20174:2020 are applicable.

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Welding — Grouping systems for materials — European materials

1 Scope

This document establishes a European grouping system for materials for welding purposes, classified in accordance with the grouping system of ISO/TR 15608.

It is also applicable for other purposes such as heat treatment, forming and non-destructive testing.

This document covers grouping systems for the following standardized materials:

a) steel;

b) aluminium and its alloys;

c) copper and its alloys;

d) cast irons;

e) nickel and nickel alloys.

For materials that are not assigned to a group in this document, the criteria of ISO/TR 15608 apply.

2 Normative references

There are no normative references 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 International grouping system for European materials

4.1 Types of steel in accordance with the grouping system of ISO/TR 15608:2017, Table 1

See Table 1.

Materials grouped according to this document based on chemical composition and mechanical properties but with specific delivering conditions outside ISO/TR 15608:2017 are qualified separately.

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