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BSI Standards Publication

Steel castings — General technical delivery requirements

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National foreword

This British Standard is the UK implementation of ISO 4990:2023. It supersedes BS ISO 4990:2015, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee ISE/111, Steel Castings and Forgings.

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

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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 document 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 17, *Steel*, Subcommittee SC 11, *Steel castings*.

This fourth edition cancels and replaces the third edition (ISO 4990:2015), which has been technically revised.

The main changes are as follows:

— Clause 2 has been updated;

— the term “examination” has been changed to “testing” throughout the document;

— the title for B.9.5 has been changed from "Visual inspection" to "Visual testing".

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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Steel castings — General technical delivery requirements

1 Scope

This document specifies the general technical delivery requirements for the supply of steel, nickel, and cobalt alloy castings, including the requirements for the selection and preparation of samples and test pieces.

When a material or product standard differ from this delivery specification, the material or product standard applies. In the case of investment castings, ISO 16468 applies.

This document also specifies a group of supplementary requirements which can be applied to steel, nickel, and cobalt alloy castings. These requirements are provided for use when additional testing or inspection is desired and apply only when individually specified by the purchaser.

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 148-1, *Metallic materials — Charpy pendulum impact test — Part 1: Test method*

ISO 404:2013, *Steel and steel products — General technical delivery requirements*

ISO 4948-1, *Steels — Classification — Part 1: Classification of steels into unalloyed and alloy steels based on chemical composition*

[ISO 6892-1, *Metallic materials — Tensile testing — Part 1: Method of test at room temperature*

ISO 6929, *Steel products — Vocabulary*

ISO 10474, *Steel and steel products — Inspection documents*

ISO 11970, *Specification and qualification of welding procedures for production welding of steel castings*

ISO 14284, *Steel and iron — Sampling and preparation of samples for the determination of chemical composition*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 404, ISO 4948-1, ISO 6929, ISO 11970 and the following apply.

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

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

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

3.1
cast (heat)
all the molten metal poured from a single furnace or all the molten metal from two or more furnaces poured into a single ladle or casting

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