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Steel - Hardenability test by end quenching (Jominy test) (ISO 642:2024)

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 11/24

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN ISO 642

September 2024

ICS 77.040.99 Supersedes EN ISO 642:1999

English Version

Steel - Hardenability test by end quenching (Jominy test) (ISO 642:2024)

Acier - Essai de trempabilité par trempe en bout (essai Jominy) (ISO 642:2024)

Stahl - Stirnabschreckversuch (Jominy-Versuch) (ISO 642:2024)

This European Standard was approved by CEN on 31 August 2024.

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Ref. No. EN ISO 642:2024 E

Contents

Page

European foreword

This document (EN ISO 642:2024) has been prepared by Technical Committee ISO/TC 17 "Steel" in collaboration with Technical Committee CEN/TC 459/SC 1 “Test methods for steel (other than chemical analysis)” the secretariat of which is held by AFNOR.

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of an identical text or by endorsement, at the latest by March 2025, and conflicting national standards shall be withdrawn at the latest by March 2025.

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

This document supersedes EN ISO 642:1999.

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Endorsement notice

The text of ISO 642:2024 has been approved by CEN as EN ISO 642:2024 without any modification.

International Standard

ISO 642

Steel — Hardenability test by end quenching (Jominy test)

Acier — Essai de trempabilité par trempe en bout (essai Jominy)

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Contents

Page

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 7, *Methods of testing (other than mechanical tests and chemical analysis),* in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 459, *ECISS - European Committee for Iron and Steel Standardization,* in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This third edition cancels and replaces the second edition (ISO 642:1999), which has been technically revised.

The main changes are as follows:

— updated the normative references;

— added a new symbol, J*d*, in Table 1;

— minimum recommended reduction ratio of 5:1, see 6.1;

— revised the test piece dimensions, see 6.1, 6.2 and Figures 1 and 2;

— revised the heat treatment requirements, see 6.3;

— revised configuration of fixing and centring device, see 7.3 and Figure 3;

— revised text concerning water temperature, see 7.4;

— revised requirement for nitric acid solution concentration, see 9.2;

— revised codification of test result, see 10.4 and Figure 6;

— revised A.2 and Figures A.2 and A.3;

— revised Annex C and Bibliography;

— editorial clarifications;

— reduced the number of bibliographical references.

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.

International Standard **ISO 642:2024(en)**

Steel — Hardenability test by end quenching (Jominy test)

1 Scope

This document specifies a method for determining the hardenability of steel by end quenching (Jominy test) by using a test piece 25 mm in diameter and at least 100 mm long.

By agreement and for a defined field of application, the test described in this document can be replaced by the calculation of the Jominy curve according to an accepted mathematical model.

2 Normative references

There are no normative references in this document.