



SLOVENSKI STANDARD

SIST EN 10360:2015

01-oktober-2015

Vroči, topli ali hladni izkovki - Pogoji za popravilo pred dostavo

Hot, warm or cold forgings - Repair conditions prior to delivery

Warm-, Halbwarm- oder Kaltschmiedeteile - Nacharbeit vor Lieferung

Pièces forgées à chaud, à mi-chaud ou à froid - Conditions de réparation avant livraison

Ta slovenski standard je istoveten z: **EN 10360:2015**

[SIST EN 10360:2015](https://standards.iteh.ai/catalog/standards/sist/b7eee0bc-c75e-43b5-b222-58d5d46c416a/sist-en-10360-2015)

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ICS:

77.140.85	Železni in jekleni kovani izdelki	Iron and steel forgings
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en,fr,de

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EUROPEAN STANDARD

EN 10360

NORME EUROPÉENNE

EUROPÄISCHE NORM

July 2015

ICS 77.140.85

English Version

Hot, warm or cold forging - Repair conditions prior to delivery

Pièces forgées à chaud, à mi-chaud ou à froid - Conditions
de réparation avant livraison

Warm-, Halbwarm- oder Kaltschmiedeteile - Nacharbeit vor
Lieferung

This European Standard was approved by CEN on 6 June 2015.

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This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.

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

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Foreword

This document (EN 10360:2015) has been prepared by Technical Committee ECISS/TC 111 "Steels castings and forgings", 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 January 2016 and conflicting national standards shall be withdrawn at the latest by January 2016.

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

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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Introduction

Visual inspection or other non-destructive tests carried out on steel forgings can identify surface discontinuities. Before delivery and where applicable, these discontinuities can be removed by grinding or by any other process, without affecting the workpiece/component functionality (see Clause 5).

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1 Scope

This European Standard defines the forged components surface repair conditions and control to preserve their functionality.

2 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

2.1

functionality of forging

set of properties and characteristics of a workpiece/component that provides it with the capability of complying with the specified requirements

2.2

repair

set of operations carried out in order to remove detected surface defects

2.3

prohibited repair area

area of a workpiece/component where the repair is not permitted

2.4

surface imperfection

discontinuity identified as not affecting the function of the workpiece/component, which may be left without repair [1]

2.5

surface defect

discontinuity identified as affecting the workpiece/component function which shall be repaired [1]

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3 Prohibited repair areas

The prohibited repair areas shall be specified by the purchaser, at time of enquiry and order.

Supplementary prohibited areas, which can be defined as consequence of the manufacturing process, shall be agreed between manufacturer and purchaser at time of enquiry and order.

4 Removal of surface imperfections

Surface imperfections shall be removed only by request of the purchaser. In case of agreement, the removal procedure shall be the same as for surface defects.

5 Removal of surface defects

5.1 Surface defects removal method

Surface defects shall be removed by grinding, scraping, polishing, chipping, machining or by any other process that preserves the workpiece/component functionality.

Surface defects shall be removed by welding or powder metallurgy only with the agreement of the purchaser.

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The equipment used to remove the surface defects shall be suitable for the grade of the material, the location, the surface defect form and the workpiece/component geometry.

The manufacturer shall develop the method to avoid masking the imperfections and increasing the repairs.

If applicable, the processing should be carried out by successive passes perpendicular to surface defect direction.

Following agreement between the purchaser and the manufacturer, the repaired area of the workpiece/component can be retested by the original non-destructive testing (NDT) method

5.2 Surface condition of the repaired area

In the repaired area, the surface shall not be altered by an excessive temperature rise and by the presence of sharp edges, chatter marks or grooves. Pits may remain after repair; their surface should remain in the continuity of the vicinity surface of the workpiece.

5.3 Operations carried out after the surface defects removal

Upon agreement between the purchaser and the manufacturer, an operation which ensures the surface properties similar to those preceding repair can be carried out on the repaired area of the workpiece/component (e.g. shot-blasting, etc.)

If, at time of enquiry and order, no agreement has been made between manufacturer and purchaser, the operation is left at the discretion of manufacturer.

5.4 Acceptance rules for the repair process

After repair, the surface of the workpiece/forged component shall fulfil the specified tolerances.

Surface tolerances shall be agreed at time of enquiry and in accordance with published standards, e.g. for the hot closed die steel forgings with EN 10243-1 or EN 10243-2, unless otherwise specified.

If the repaired workpiece/component does not fulfil the specified tolerances, a new agreement may be done between the purchaser and manufacturer.

6 Operator training

The manufacturer shall take any necessary measures to train, qualify and follow up the operators entitled to perform the repair operation.