

**Metallivalu. Tehnilised tarnetingimused. Osa 3:  
Lisanõuded terasvalandite kohta**

Founding - Technical conditions of delivery - Part 3:  
Additional requirements for iron castings

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 1559-3:2011 sisaldab Euroopa standardi EN 1559-3:2011 ingliskeelset teksti.

Standard on kinnitatud Eesti Standardikeskuse 31.10.2011 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.

Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 19.10.2011.

Standard on kättesaadav Eesti standardiorganisatsioonist.

This Estonian standard EVS-EN 1559-3:2011 consists of the English text of the European standard EN 1559-3:2011.

This standard is ratified with the order of Estonian Centre for Standardisation dated 31.10.2011 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.

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The standard is available from Estonian standardisation organisation.

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Inglisekeelsed võtmesõnad: cast iron, castings, definitions, designation, foundry engineering, inspection, manufacturing, marking, packing, specifications, tests, user supplier relations,

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English Version

**Founding - Technical conditions of delivery - Part 3: Additional  
requirements for iron castings**

Fonderie - Conditions techniques de fourniture - Partie 3:  
Spécifications complémentaires pour les pièces moulées  
en fonte

Gießereiwesen - Technische Lieferbedingungen - Teil 3:  
Zusätzliche Anforderungen an Eisengussstücke

This European Standard was approved by CEN on 17 September 2011.

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## Foreword

This document (EN 1559-3:2011) has been prepared by Technical Committee CEN/TC 190 "Foundry technology", the secretariat of which is held by DIN.

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of an identical text or by endorsement, at the latest by April 2012, and conflicting national standards shall be withdrawn at the latest by April 2012.

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.

This document supersedes EN 1559-3:1997.

Within its programme of work, Technical Committee CEN/TC 190 requested CEN/TC 190/WG 1 "Technical conditions of delivery and cast iron designation" to revise the following standard:

EN 1559-3, *Founding — Technical conditions of delivery — Part 3: Additional requirements for iron castings*

Annex C provides details of significant technical changes between this European Standard and the previous edition.

This standard is one of a series of European Standards for technical delivery conditions for castings. The other standards in this series are:

EN 1559-1, *Founding — Technical conditions of delivery — Part 1: General*

EN 1559-2, *Founding — Technical conditions of delivery — Part 2: Additional requirements for steel castings*

EN 1559-4, *Founding — Technical conditions of delivery — Part 4: Additional requirements for aluminium alloy castings*

EN 1559-5, *Founding — Technical conditions of delivery — Part 5: Additional requirements for magnesium alloy castings*

EN 1559-6, *Founding — Technical conditions of delivery — Part 6: Additional requirements for zinc alloy castings*

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, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

## Introduction

CEN/TC 190 "Foundry Technology" has prepared a series of material standards covering the following cast irons:

- grey cast irons [1];
- malleable cast irons [2];
- spheroidal graphite cast irons [3];
- ausferritic spheroidal graphite cast irons [4];
- abrasion resistant cast irons [5];
- austenitic cast irons [7];
- compacted (vermicular) graphite cast irons [8];
- low alloyed ferritic spheroidal graphite cast irons for elevated temperature applications [9].

In order to assist manufacturers and purchasers to prepare proper contractual arrangements and prevent misunderstanding, CEN/TC 190 approved the preparation of a series of standards covering technical delivery conditions. These have been prepared as separate parts.

This European Standard covers the additional technical delivery conditions for all the cast iron materials, e.g. optional information, manufacturing process, welding operation, additional requirements regarding the condition of the casting, test methods.

This European Standard cannot be used alone for compiling a specification for ordering and supplying iron castings, but as a complement to EN 1559-1.

The symbol ● against the clause reference indicates that the requirements of that clause of EN 1559-1 have to be met.

## 1 Scope

This European Standard specifies the additional technical delivery conditions for castings made from all cast iron materials.

This European Standard applies to iron castings produced in sand or permanent moulds or by centrifugal casting, continuous casting or investment casting.

## 2 Normative references

The following referenced documents are indispensable for the application 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.

EN 287-6, *Qualification test of welders — Fusion Welding — Part 6: Cast iron*

EN 444, *Non-destructive testing — General principles for radiographic examination of metallic materials by X- and gamma-rays*

EN 571-1, *Non destructive testing — Penetrant testing — Part 1: General principles*

EN 583-1, *Non-destructive testing — Ultrasonic examination — Part 1: General principles*

EN 1011-8, *Welding — Recommendations for welding of metallic materials — Part 8: Welding of cast irons*

prEN 1369, *Founding — Magnetic particle testing*

EN 1370, *Founding — Examination of surface condition*

EN 1371-1, *Founding — Liquid penetrant testing — Part 1: Sand, gravity die and low pressure die castings*

EN 1559-1, *Founding — Technical conditions of delivery — Part 1: General*

EN 1560, *Founding — Designation system for cast iron — Material symbols and material numbers*

EN 12680-3, *Founding — Ultrasonic testing — Part 3: Spheroidal graphite cast iron castings*

EN 12681, *Founding — Radiographic examination*

EN 14784-1, *Non-destructive testing — Industrial computed radiography with storage phosphor imaging plates — Part 1: Classification of systems*

EN 14784-2, *Non-destructive testing — Industrial computed radiography with storage phosphor imaging plates — Part 2: General principles for testing of metallic materials using X-rays and gamma rays*

EN ISO 9934-1, *Non-destructive testing — Magnetic particle testing — Part 1: General principles (ISO 9934-1:2001)*

EN ISO 15614-3, *Specification and qualification of welding procedures for metallic materials — Welding procedure test — Part 3: Fusion welding of non-alloyed and low-alloyed cast irons (ISO 15614-3:2008)*

## 3 • Terms and definitions

For the purposes of this document, the terms and definitions given in EN 1559-1 and of the applicable material standard apply.