

Founding - Patterns, pattern equipment and coreboxes for the production of sand moulds and sand cores

Founding - Patterns, pattern equipment and coreboxes for the production of sand moulds and sand cores

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 12890:2000 sisaldab Euroopa standardi EN 12890:2000 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 08.08.2000 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 12890:2000 consists of the English text of the European standard EN 12890:2000.</p> <p>This document is endorsed on 08.08.2000 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
--	---

<p>Käsitlusala:</p> <p>This standard specifies the requirements for patterns, pattern equipment and coreboxes for producing sand moulds and/or sand cores. This standard does not specify equipment for producing lost patterns, permanent moulds and die casting dies. This standard does not specify the requirements for ancillary items used in the manufacture of pattern equipment (such as screws, dowels etc.)</p>	<p>Scope:</p> <p>This standard specifies the requirements for patterns, pattern equipment and coreboxes for producing sand moulds and/or sand cores. This standard does not specify equipment for producing lost patterns, permanent moulds and die casting dies. This standard does not specify the requirements for ancillary items used in the manufacture of pattern equipment (such as screws, dowels etc.)</p>
---	---

ICS 77.180

Võtmesõnad:

English version

Founding

**Patterns, pattern equipment and core boxes for the
production of sand moulds and sand cores**

Fonderie – Modèles, outillages et
boîtes à noyaux pour la production
des moules et noyaux au sable

Gießereiwesen – Modelle, Modellein-
richtungen und Kernkästen zur
Herstellung von Sandformen und
Sandkernen

This European Standard was approved by CEN on 1999-12-25.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

The European Standards exist 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 Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom.

CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

Central Secretariat: rue de Stassart 36, B-1050 Brussels

Contents

	Page		Page
Foreword	3	Table 2: Quality classes – patterns, pattern equipment and coreboxes made of wood	11
Introduction	4	Table 3: Quality classes – patterns, pattern equipment and coreboxes made of metal	15
1 Scope	4	Table 4: Quality classes – patterns, pattern equipment and coreboxes made of plastic	16
2 Normative references	4	Table 5: Characteristics of patterns and pattern equipment	18
3 Terms and definitions	4	Table 6: Characteristics of coreboxes	20
4 Order information and delivery conditions	6	Table 7: Tapers	22
4.1 General	6	Table 8: Surface coatings (painting and colour-coding) of patterns, pattern equipment and coreboxes	23
4.2 Points to be agreed	6	Figure 1: Examples of clearances of core prints (vertical core)	24
4.3 Mandatory information	7	Figure 2: Example of clearances of core prints (horizontal core)	25
5 Classification	8	Figure 3: Values for clearances of core prints (for moulding with horizontal joint surface)	26
6 Specifications	8	Annex A (informative) Guidelines on the use of the tables in this standard	27
6.1 General	8	Annex B (informative) Reference values for linear casting contractions	28
6.2 Designation	8	Bibliography	29
7 Manufacturing requirements	8		
7.1 Materials	8		
7.2 Manufacture	8		
7.3 Contractions	8		
7.4 Tapers	9		
7.5 Clearances	9		
7.6 Required machining allowances (RMA) ..	9		
7.7 Dimensional tolerances	9		
7.8 Surface coating	9		
8 Quality control	9		
9 Usage	10		
9.1 General	10		
9.2 Identification	10		
9.3 Modifications	10		
9.4 Repair and refurbishment	10		
9.5 Protection and packaging for transportation and storage	10		
Table 1: Quality classes for patterns, pattern equipment and coreboxes	11		

Foreword

This European Standard 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 August 2000, and conflicting national standards shall be withdrawn at the latest by August 2000.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

Within its programme of work, Technical Committee CEN/TC 190 requested CEN/TC 190/WG 1.30 "Production equipment, tools, foundry auxiliaries (e. g. patterns, permanent moulds, moulding materials)" to prepare the following standard:

EN 12890

Founding – Patterns, pattern equipment and coreboxes for the production of sand moulds and sand cores

This is one of three of European Standards for foundry patterns and tools. The other standards are:

prEN 12883

Founding – Equipment for the production of lost patterns for the lost wax casting process

EN 12892

Founding – Equipment for the production of lost patterns for the lost foam casting process

Introduction

This standard is intended for purchasers, manufacturers (patternmakers) and founders. It is also intended to ensure the correct interpretation of casting and tooling drawings/numerical data and to ensure that pattern equipment will produce sand moulds and/or sand cores, suitable for use, and to assist in determining the usually undefined limits of good workmanship. This standard stresses the need for consultation between the purchaser, manufacturer (patternmaker) and founder before work commences.

The manufacture of a casting by a sand mould and/or a sand core manufacturing process requires the construction of pattern equipment.

The CEN members had a variety of national standards and specifications relating to pattern equipment. This standard brings together all the important features of these former documents.

This standard enables the parties concerned to deal more easily with the complex problems associated with the design and manufacture of pattern equipment.

This standard not only specifies the usual features of design, construction, materials, tolerances, contractions and required machining allowances but also specifies other features such as usage, classification, quality control, marking, packaging and storage.

1 Scope

This standard specifies the requirements for patterns, pattern equipment and coreboxes for the production of sand moulds and/or sand cores.

This standard does not specify equipment for the production of lost patterns, permanent moulds and die casting dies.

This standard does not specify the requirements for ancillary items used in the manufacture of pattern equipment (such as screws, dowels etc.).

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

EN 1559-1
Founding – Technical conditions of delivery – Part 1: General

EN 20286-1
ISO system of limits and fits – Part 1: Bases of tolerances, deviations and fits (ISO 286-1:1988)

ISO 1302
Technical drawings – Method of indicating surface texture

NOTE: Informative references to documents used in the preparation of this standard, and cited at the appropriate places in the text, are listed in a bibliography.

3 Terms and definitions

For the purposes of this standard, the following terms and definitions apply:

3.1 purchaser

Person or body responsible for the ordering of the patterns, pattern equipment and coreboxes.

3.2 manufacturer (patternmaker)

Person or body responsible for the production of the patterns, pattern equipment and coreboxes.