

Execution of concrete structures

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EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 13670:2010 sisaldab Euroopa standardi EN 13670:2009 ingliskeelset teksti.

Standard on kinnitatud Eesti Standardikeskuse 31.01.2010 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.

Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 02.12.2009.

Standard on kättesaadav Eesti standardiorganisatsioonist.

This Estonian standard EVS-EN 13670:2010 consists of the English text of the European standard EN 13670:2009.

This standard is ratified with the order of Estonian Centre for Standardisation dated 31.01.2010 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.

Date of Availability of the European standard text 02.12.2009.

The standard is available from Estonian standardisation organisation.

ICS 91.080.40

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English Version

Execution of concrete structures

Exécution des structures en béton

Ausführung von Tragwerken aus Beton

This European Standard was approved by CEN on 17 September 2009.

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Foreword

This document (EN 13670:2009) has been prepared by Technical Committee CEN/TC 104 "Concrete and related products", 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of an identical text or by endorsement, at the latest by June 2010, and conflicting national standards shall be withdrawn at the latest by June 2010.

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 ENV 13670-1:2000.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EC Directive(s).

Because of the close connection between design rules and rules for execution, CEN/TC 104/SC 2 has developed this standard in liaison with CEN/TC 250/SC 2, and CEN TC 229

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, 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

This European Standard applies to the execution of concrete structures to achieve the intended level of safety and serviceability during its service life, as given by EN 1990, *Eurocode – Basis of structural design*, EN 1992, *Eurocode 2 – Design of concrete structures* and EN 1994, *Eurocode 4 – Design of composite steel and concrete structures*, with the Nationally Determined Parameters (NDPs) applicable in the place of use.

This European Standard has three functions:

- to transfer the requirements set during design to the constructor i.e. to be a link between design and execution;
- to give a set of standardized technical requirements for the execution when ordering a concrete structure;
- to serve as a check list for the designer to ensure that he provides the constructor with all relevant technical information for the execution of the structure (see Annex A).

In order to achieve these objectives, the design shall result in a set of documents and drawings giving all information required for the execution of the work in accordance with the plans. This set of documents is, in this European Standard, referred to as the "execution specification". This standard leaves a number of items open to be decided in the execution specification.

In areas where national provisions shall apply these should be referred to in the execution specification.

It is recognised in this European Standard that areas such as detailed requirements for competence of personnel, and details related to the Quality Management are within the competence of the Member States.

If the national CEN member publishes a National Annex to this standard, it may refer to national standards approved and published by the CEN member or national provisions, which supplement this standard, alternatively the supplementing rules can be given directly in the National Annex

A detailed overview of the system of European Standards related to concrete works is shown in Figure 1.

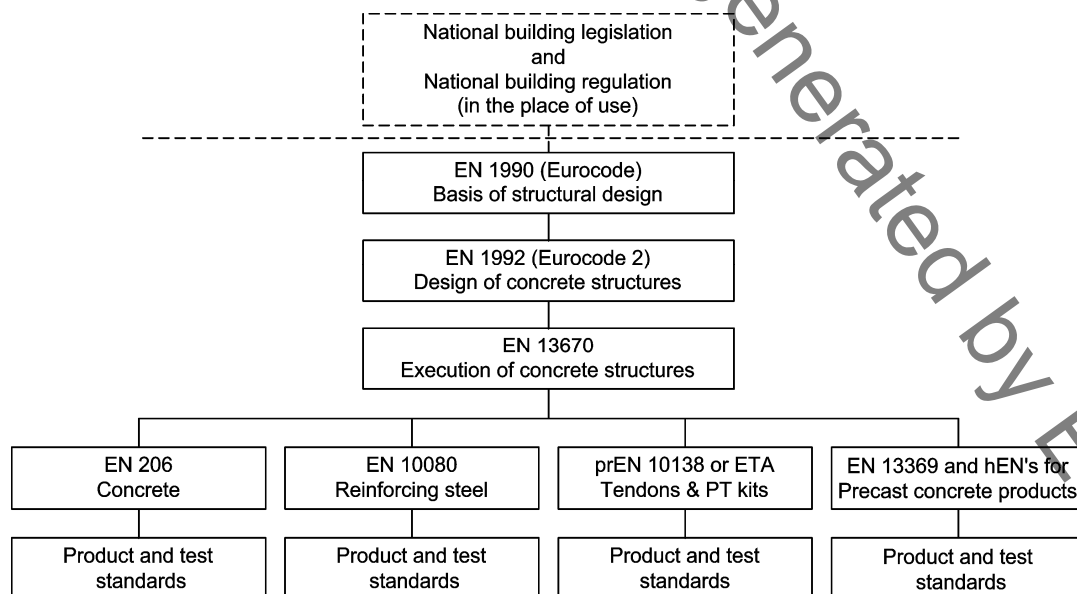


Figure 1 — System of European Standards as basis for design, execution and materials selection for concrete works (only main modules)

1 Scope

- (1) This European Standard gives common requirements for execution of concrete structures, it applies to both in-situ works and construction using prefabricated concrete elements.
- (2) This standard expects the execution specification to state all the specific requirements relevant to the particular structure.
- (3) This standard is applicable to permanent as well as temporary concrete structures.
- (4) Additional or different requirements should be considered and, if required, given in the execution specification when using:
 - a) lightweight aggregate concrete;
 - b) other materials (e.g. fibres) or constituent materials;
 - c) special technologies/innovative designs.
- (5) This standard does not apply to concrete members used only as equipment or construction aids for the execution.
- (6) This standard does not cover the specification, production and conformity of concrete.
- (7) This standard is not applicable to the production of precast concrete elements made in accordance with product standards.
- (8) This standard does not cover safety and health aspects of execution, or third party safety requirements.
- (9) This standard does not cover contractual issues or responsibilities for the identified actions.

NOTE It is within the concept of this standard that supplementing requirements can be given for the individual project in the execution specification, on a national level in a national annex, or on a general basis in European standards for special applications e.g. standards for special geotechnical works.

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 206-1, *Concrete — Part 1: Specification, performance, production and conformity*

EN 446, *Grout for prestressing tendons — Grouting procedures*

EN 447, *Grout for prestressing tendons — Basic requirements*

EN 523, *Steel strip sheaths for prestressing tendons — Terminology, requirements, quality control*

EN 10080, *Steel for the reinforcement of concrete — Weldable reinforcing steel — General*

EN ISO 17660-1, *Welding — Welding of reinforcing steel — Part 1: Load-bearing welded joints (ISO 17660-1:2006)*

EN ISO 17660-2, *Welding — Welding of reinforcing steel — Part 2: Non load-bearing welded joints (ISO 17660-2:2006)*

ETAG 013, *Guideline for European Technical Approval of Post-tensioning kits for prestressing of structures*
*These are commonly called post-tensioning systems*¹⁾

3 Terms and definitions

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

**3.1
backpropping**
propping installed at levels below the slab that supports the falsework in order to distribute the load to suitable support

**3.2
chair for reinforcement**
device used to secure the position between reinforcement layers e.g. supporting top reinforcement in a slab

**3.3
construction works**
everything that is constructed or results from construction operations

[EN 1990]

NOTE The term covers both building and civil engineering works. It refers to the complete construction works comprising structural and non-structural and geotechnical elements.

**3.4
constructor**
organization executing the works

**3.5
erection specification**
documents covering all drawings, technical data and requirements required for the safe erection of precast elements

**3.6
execution**
all activities carried out for the physical completion of the work, i.e. procurement, scaffolding, formwork, reinforcing, concreting, curing, erection of precast elements etc., and the inspection and documentation thereof

**3.7
execution class**
classified set of requirements specified for the execution of the works as a whole or an individual component

**3.8
execution specification**
documents covering all drawings, technical data and requirements necessary for the execution of a particular project

NOTE The execution specification is not one document but signifies the total sum of documents required for the execution of the work as provided by the designer to the constructor. It includes the project specification prepared to supplement and qualify the requirements of this European Standard, as well as referring to the national provisions relevant in the place of use.

1) Available free online at www.eota.be