SLOVENSKI STANDARD
oSIST prEN 1994-1-1:2024

01-junij-2024

Nadomešča:
SIST EN 1994-1-1:2005

Evrokod 4 - Projektiranje sovprežnih konstrukcij iz jekla in betona - 1-1. del: Splošna pravila in pravila za stavbe

Eurocode 4 - Design of composite steel and concrete structures - Part 1-1: General rules and rules for buildings

Eurocode 4 - Bemessung und Konstruktion von Verbundtragwerken aus Stahl und Beton - Teil 1-1: Allgemeine Bemessungsregeln und Regeln für den Hochbau

Eurocode 4: Calcul des structures mixtes acier-béton - Partie 1-1: Règles générales et règles pour les bâtiments

Ta slovenski standard je istoveten z: **prEN 1994-1-1**

ICS:

91.010.30	Tehnični vidiki	Technical aspects
91.080.13	Jeklene konstrukcije	Steel structures
91.080.40	Betonske konstrukcije	Concrete structures

oSIST prEN 1994-1-1:2024 **en,fr,de**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

DRAFT prEN 1994-1-1

March 2024

ICS 91.010.30; 91.080.13; 91.080.40

Will supersede EN 1994-1-1:2004

English Version

Eurocode 4 - Design of composite steel and concrete structures - Part 1-1: General rules and rules for buildings

Eurocode 4: Calcul des structures mixtes acier-béton - Partie 1-1: Règles générales et règles our les bâtiments

Eurocode 4 - Bemessung und Konstruktion von Verbundtragwerken aus Stahl und Beton - Teil 1-1: Allgemeine Bemessungsregeln und Anwendungsregeln für den Hochbau

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 250.

If this draft becomes a European Standard, 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.

This draft European Standard was established by CEN 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.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

Warning : This document is not a European Standard. It is distributed for review and comments. It is subject to change without notice and shall not be referred to as a European Standard.

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

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Ref. No. prEN 1994-1-1:2024 E

Contents

European foreword

This document (prEN 1994-1-1:2024) has been prepared by Technical Committee CEN/TC 250 “Structural Eurocodes”, the secretariat of which is held by BSI.

This document is currently submitted to CEN Enquiry.

This document will supersede EN 1994-1-1:2004.

The first generation of EN Eurocodes was published between 2002 and 2007. This document forms part of the second generation of the Eurocodes, which have been prepared under Mandate M/515 is-sued to CEN by the European Commission and the European Free Trade Association.

The Eurocodes have been drafted to be used in conjunction with relevant execution, material, product and test standards, and to identify requirements for execution, materials, products and testing that are relied upon by the Eurocodes.

The Eurocodes recognize the responsibility of each Member State and have safeguarded their right to determine values related to regulatory safety matters at national level through the use of National Annexes.

0 Introduction

0.1 Introduction to the Eurocodes

The Structural Eurocodes comprise the following standards generally consisting of a number of Parts:

- EN 1990, *Eurocode — Basis of structural and geotechnical design*
- EN 1991, *Eurocode 1 — Actions on structures*
- EN 1992, *Eurocode 2 — Design of concrete structures*
- EN 1993, *Eurocode 3 — Design of steel structures*
- EN 1994, *Eurocode 4 — Design of composite steel and concrete structures*
- EN 1995, *Eurocode 5 — Design of timber structures*
- EN 1996, *Eurocode 6 — Design of masonry structures*
- EN 1997, *Eurocode 7 — Geotechnical design*
- EN 1998, *Eurocode 8 — Design of structures for earthquake resistance*
- EN 1999, *Eurocode 9 — Design of aluminium structures*
- New parts are under development, e.g. Eurocode for design of structural glass

The Eurocodes are intended for use by designers, clients, manufacturers, constructors, relevant authorities (in exercising their duties in accordance with National or International regulations), educators, software developers, and committees drafting standards for related products, testing and execution standards.

NOTE Some aspects of design are most appropriately specified by relevant authorities or, where not specified, can be agreed on a project-specific basis between relevant parties such as designers and clients. The Eurocodes identify such aspects, making explicit reference to relevant authorities and relevant parties.

0.2 Introduction to EN 1994 (all parts)

EN 1994 applies to the design of steel and concrete composite structures and those who undertake building and civil engineering works. It complies with the principles and requirements for the safety and serviceability of structures, the basis of their design and verification given in EN 1990, *Eurocode — Basis of structural and geotechnical design*.

EN 1994 is concerned only with requirements for resistance, serviceability, durability and fire resistance of steel and concrete composite structures. Other requirements, e.g. concerning thermal or sound insulation, are not considered.

EN 1994 is subdivided in various parts:

EN 1994-1-1, *Eurocode 4 — Design of composite steel and concrete structures — Part 1 1: General rules and rules for buildings*;

EN 1994-1-2, *Eurocode 4 —Design of composite steel and concrete structures — Part 1 2: Structural fire design*;

EN 1994-2, *Eurocode 4 — Design of composite steel and concrete structures — Part 2: Bridges.*

0.3 Introduction to EN 1994–1–1

EN 1994–1–1 gives basic rules for the design of steel and concrete composite structures and supplementary provisions specific for buildings.

0.4 Verbal forms used in the Eurocodes

The verb “shall" expresses a requirement strictly to be followed and from which no deviation is permitted in order to comply with the Eurocodes.

The verb “should” expresses a highly recommended choice or course of action. Subject to national regulation and/or any relevant contractual provisions, alternative approaches could be used/adopted where technically justified.

The verb “may" expresses a course of action permissible within the limits of the Eurocodes.

The verb “can" expresses possibility and capability; it is used for statements of fact and clarification of concepts.

0.5 National Annex for EN 1994–1–1

National choice is allowed in this document where explicitly stated within notes. National choice includes the selection of values for Nationally Determined Parameters (NDPs).

The national standard implementing EN 1994–1–1 can have a National Annex containing all national choices to be used for the design of buildings and civil engineering works relevant to each country.

When no national choice is given, the default choice given in this document is to be used.

When no national choice is made and no default is given in this document, the choice can be specified by a relevant authority or, where not specified, agreed for a specific project by appropriate parties.

National choice is allowed in EN 1994–1–1 through notes to the following clauses:

4.4.1.2(2)	4.4.1.2(4)	4.4.1.2(5)	4.4.1.2(6)
5.1(3)	5.1(7)	5.4.2.1(5)	8.2.2.5(1)
8.6.8.1(1)	8.6.9.1(3)	8.8.2(9)	10.6(2)
10.7.5(7)	B.2.2.3(3)	D.4.1.3(5)	H.2(2)
H.2(3)	H.2(4)		

National choice is allowed in EN 1994-1-1 on the application of the following informative annexes:

Annex A	Annex C	Annex E	Annex G
Annex J			

The National Annex can contain, directly or by reference, non-contradictory complementary information for ease of implementation, provided it does not alter any provisions of the Eurocodes.

1 Scope

1.1 Scope of EN 1994-1-1

(1) EN 1994–1–1 gives basic rules for the design of steel and concrete composite structures and supplementary provisions specific for buildings.

NOTE Specific rules for bridges are given in EN 1994–2.

1.2 Assumptions

(1) The assumptions of EN 1990 apply to EN 1994-1-1.

(2) In addition to the general assumptions of EN 1990, the assumptions given in EN 1992–1–1, EN 1992—1-2, and EN 1993–1–1 apply to this document.

(3) EN 1994–1–1 is intended to be used in conjunction with EN 1990, EN 1991 (all parts), EN 1992-1-1, EN 1993 (all parts), EN 1997 (all parts), EN 1998 (all parts when steel and concrete composite structures are built in seismic regions), EN 1090-1, EN 1090-2, EN 1090-4, EN 13670 and ENs for construction products relevant to steel and concrete composite structures.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

NOTE See the Bibliography for a list of other documents cited that are not normative references, including those referenced as recommendations (i.e. in 'should' clauses), permissions ('may' clauses), possibilities ('can' clauses), and in notes.

EN 1990:2023[1], Eurocode — *Basis of structural and geotechnical design*

EN 1991 (all parts), *Eurocode 1 — Actions on structures*

EN 1991-1-5, *Eurocode 1 — Actions on structures – Part 1-5: Thermal Actions*

EN 1992-1-1:2023, *Eurocode 2 — Design of concrete structures – Part 1-1: General rules and rules for buildings*

EN 1993-1-1:2022, *Eurocode 3 — Design of steel structures – Part 1-1: General rules and rules for buildings*

FprEN 1993-1-8:2023, *Eurocode 3 — Design of steel structures — Part 1-8: Joints*

prEN 1993-1-14:2023, *Eurocode 3 — Design of steel structures — Part 1-14: Design assisted by finite element analysis*

3 Terms, definitions and symbols

3.1 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 1990, EN 1992-1-1 and EN 1993-1-1 and the following apply.

[1] As impacted by EN 1990:2023/prA1:2024.