December 2010

DIN EN 1994-1-1

DIN

ICS 91.010.30; 91.080.10; 91.080.40

Supersedes: see below

Eurocode 4: Design of composite steel and concrete structures – Part 1-1: General rules and rules for buildings (includes Corrigendum AC:2009) English translation of DIN EN 1994-1-1:2010-12

Eurocode 4: Bemessung und Konstruktion von Verbundtragwerken aus Stahl und Beton – Teil 1-1: Allgemeine Bemessungsregeln und Anwendungsregeln für den Hochbau (enthält Berichtigung AC:2009)
Englische Übersetzung von DIN EN 1994-1-1:2010-12

Eurocode 4: Calcul des structures mixtes acier-béton – Partie 1-1: Règles générales et règles pour les bâtiments (Corrigendum AC:2009 inclus)
Traduction anglaise de DIN EN 1994-1-1:2010-12

Supersedes DIN EN 1994-1-1:2006-07;
together with DIN EN 1994-1-1/NA:2010-12, supersedes DIN 18800-5:2007-03;
supersedes DIN EN 1994-1-1 Corrigendum 1:2009-12

Document comprises 120 pages

Translation by DIN-Sprachendienst.
In case of doubt, the German-language original shall be considered authoritative.

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A comma is used as the decimal marker.

National foreword

This standard has been prepared by Technical Committee CEN/TC 250 “Structural Eurocodes” (Secretariat: BSI, United Kingdom).

The responsible German body involved in its preparation was the *Normenausschuss Bauwesen* (Building and Civil Engineering Standards Committee), Working Committee NA 005-08-13 AA *Verbundkonstruktionen im Hochbau (Sp CEN/TC 250/SC 4)*.

This European Standard is part of a series of standards dealing with structural design (Eurocodes) which are intended to be used as a “package”. In Guidance Paper L on the application and use of Eurocodes, issued by the EU Commission, reference is made to transitional periods for the introduction of the Eurocodes in the Member states. The transitional periods are given in the Foreword of this standard.

In Germany, this standard is to be applied in conjunction with the National Annex.

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

The start and finish of text introduced or altered by amendment is indicated in the text by tags ▌AC〉 〈AC▐.

Amendments

This standard differs from DIN V ENV 1994-1-1:1994-02 as follows:

a) the comments received from the national member bodies of CEN have been incorporated;

b) the standard has been completely revised;

c) the prestandard status has been changed to that of a full standard.

Compared with DIN EN 1994-1-1:2006-07, DIN EN 1994-1-1 Corrigendum 1:2009-12 and DIN 18800-5:2007-03, the following corrections have been made:

a) the standard has been based on European design rules;

b) superseding notes have been corrected;

c) this standard is the consolidated version of the previous 2004 edition with Corrigendum 1:2009-12;

d) the standard has been editorially revised.

Previous editions

DIN 18800-5: 2007-03
DIN V 18800-5: 2004-11
DIN 18806: 1984-03
DIN V ENV 1994-1-1: 1994-02
DIN EN 1994-1-1: 2006-07
DIN EN 1994-1-1 Corrigendum 1: 2009-12

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 1994-1-1

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April 2009

ICS 91.010.30; 91.080.10; 91.080.40

Supersedes ENV 1994-1-1:1992

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 pour les bâtiments

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

EN 1994-1-1:2004 was approved by CEN on 2004-05-27 and Amendment AC:2009 on 2009-04-15.

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

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Foreword

This document (EN 1994-1-1:2004 + AC:2009) has been prepared by Technical Committee CEN/TC 250 "Structural Eurocodes", the secretariat of which is held by BSI.

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 2005, and conflicting national standards shall be withdrawn at the latest by March 2010.

This document supersedes ENV 1994-1-1:1992.

CEN/TC 250 is responsible for all Structural Eurocodes.

According to the CEN-CENELEC Internal Regulations, the National Standard Organisations 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 United Kingdom.

Background of the Eurocode programme

In 1975, the Commission of the European Community decided on an action programme in the field of construction, based on article 95 of the Treaty. The objective of the programme was the elimination of technical obstacles to trade and the harmonisation of technical specifications.

Within this action programme, the Commission took the initiative to establish a set of harmonised technical rules for the design of construction works which, in a first stage, would serve as an alternative to the national rules in force in the Member States and, ultimately, would replace them.

For fifteen years, the Commission, with the help of a Steering Committee with Representatives of Member States, conducted the development of the Eurocodes programme, which led to the first generation of European codes in the 1980s.

In 1989, the Commission and the Member States of the EU and EFTA decided, on the basis of an agreement[1] between the Commission and CEN, to transfer the preparation and the publication of the Eurocodes to CEN through a series of Mandates, in order to provide them with a future status of European Standard (EN). This links *de facto* the Eurocodes with the provisions of all the Council's Directives and/or Commission's Decisions dealing with European standards (*e.g.* the Council Directive 89/106/EEC on construction products - CPD - and Council Directives 93/37/EEC, 92/50/EEC and 89/440/EEC on public works and services and equivalent EFTA Directives initiated in pursuit of setting up the internal market).

The Structural Eurocode programme comprises the following standards generally consisting of a number of Parts:

[1] Agreement between the Commission of the European Communities and the European Committee for Standardisation (CEN) concerning the work on EUROCODES for the design of building and civil engineering works (BC/CEN/03/89).