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Eurocode 8: Design of structures for earthquake resistance – Part 1: General rules, seismic actions and rules for buildings; English version EN 1998-1:2004/A1:2013, English translation of DIN EN 1998-1/A1:2013-05

Eurocode 8: Auslegung von Bauwerken gegen Erdbeben –
Teil 1: Grundlagen, Erdbebeneinwirkungen und Regeln für Hochbauten;
Englische Fassung EN 1998-1:2004/A1:2013,
Englische Übersetzung von DIN EN 1998-1/A1:2013-05

Eurocode 8: Calcul des structures pour leur résistance aux séismes –
Partie 1: Règles générales, actions sismiques et règles pour les bâtiments;
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A comma is used as the decimal marker.

National foreword

The responsible German body involved in the preparation of this standard was the *Normenausschuss Bauwesen* (Building and Civil Engineering Standards Committee), Working Committee NA 005-51-06 AA *Erdbeben; Sonderfragen (SpA zu CEN/TC 250/SC 8).*

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 1998-1:2004/A1

February 2013

ICS 91.010.30; 91.120.25

English Version

Eurocode 8: Design of structures for earthquake resistance - Part 1: General rules, seismic actions and rules for buildings

Eurocode 8: Calcul des structures pour leur résistance aux séismes - Partie 1: Règles générales, actions sismiques et règles pour les bâtiments

Eurocode 8: Auslegung von Bauwerken gegen Erdbeben - Teil 1: Grundlagen, Erdbebeneinwirkungen und Regeln für Hochbauten

This amendment A1 modifies the European Standard EN 1998-1:2004; it was approved by CEN on 9 July 2012.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for inclusion of this amendment into the relevant national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This amendment exists 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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Management Centre: Avenue Marnix 17, B-1000 Brussels

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Foreword

This document (EN 1998-1:2004/A1:2013) has been prepared by Technical Committee CEN/TC 250 “Structural Eurocodes”, the secretariat of which is held by BSI.

This European Standard Amendment shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by February 2014, and conflicting national standards shall be withdrawn at the latest by February 2014.

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.

According to the CEN/CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard Amendment: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

1 Modification to 4.4.1, General

Add a new Paragraph (3):

"

(3) For low-dissipative structures (see **2.2.2(2)**), the ductility, capacity design and overstrength requirements of 4.4.2 do not need to be applied.

".

2 Modification to 5.4.1.2.2, Columns

Replace Paragraph (1) with:

"

(1) The minimum cross-sectional dimension of primary seismic columns shall be not less than 200 mm.

(2) Unless $\theta \leq 0{,}1$ (see **4.4.2.2(2)**), the cross-sectional dimensions of primary seismic columns should not be smaller than:

- one twentieth of the larger distance between the point of contraflexure of the deflected shape and the ends of the column, for bending within a plane parallel to the column dimension considered;
- 250 mm.

".

3 Modification to 5.11.2.1.2, Overdesigned connections

Replace Paragraph (1) with:

"

(1) The design action-effects of overdesigned connections should be derived on the basis of the capacity design rules of **5.4.2.2** for beams and **5.4.2.3** for columns, on the basis of overstrength flexural resistances at the end sections of critical regions equal to $\gamma_{Rd}.M_{Rd}$, with the factor γ_{Rd} taken as being equal to 1,20 for DCM and to 1,35 for DCH.

".

4 Modification to 5.11.3.2, Columns

Replace Paragraph (3) with:

"

(3) For precast frame systems with hinged column-to-beam connections, the columns should be fully fixed against translation and rotation at the base in foundations designed in accordance with **5.11.2.1.2**.

".

5 Modification to 5.11.3.5, Diaphragms

Replace Paragraph (6) with:

"

(6) In-plane acting shear forces along slab-to-slab or slab-to-beam connections should be computed in accordance with **4.4.2.5**. The design resistance should be computed as in **5.11.2.2**.

".