

SVENSK STANDARD

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Eurokod 2: Dimensionering av betongkonstruktioner – Del 1-1: Allmänna regler och regler för byggnader

Eurocode 2: Design of concrete structures – Part 1-1: General rules and rules for buildings

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EUROPEAN STANDARD

EN 1992-1-1:2004/A1

NORME EUROPÉENNE

EUROPÄISCHE NORM

December 2014

ICS 91.010.30; 91.080.40

English Version

Eurocode 2: Design of concrete structures - Part 1-1: General rules and rules for buildings

Eurocode 2: Calcul des structures en béton - Partie 1-1:
Règles générales et règles pour les bâtiments

Eurocode 2: Bemessung und Konstruktion von Stahlbeton-
und Spannbetontragwerken - Teil 1-1: Allgemeine
Bemessungsregeln und Regeln für den Hochbau

This amendment A1 modifies the European Standard EN 1992-1-1:2004; it was approved by CEN on 8 November 2014.

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

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Foreword

This document (EN 1992-1-1:2004/A1:2014) has been prepared by Technical Committee CEN/TC 250 "Structural Eurocodes", the secretariat of which is held by BSI.

This Amendment to the European Standard EN 1992-1-1:2004 shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by December 2015, and conflicting national standards shall be withdrawn at the latest by December 2015.

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1 Modification to the Foreword

In the section "National annex for EN 1992-1-1", between "6.4.4 (1)" and "6.4.5 (3)", add "6.4.5 (1)".

2 Modification to 3.3.2, Properties

In Paragraph (2)P, replace "strength to proof strength ($f_{pk} / f_{p0,1k}$)" with "strength to proof strength ($f_p / f_{p0,1}$)".

3 Modification to 3.3.4, Ductility characteristics

In Paragraph (5), replace " $f_{pk} / f_{p0,1k} \geq k$ " with " $(f_p / f_{p0,1})_k \geq k$ ".

4 Modification to 6.4.5, Punching shear resistance of slabs and column bases with shear reinforcement

In Paragraph (1), replace:

"(1) Where shear reinforcement is required it should be calculated in accordance with Expression (6.52):

$$V_{Rd,cs} = 0,75 v_{Rd,c} + 1,5 (d/s_r) A_{sw} f_{ywd,ef} (1/(u_1 d)) \sin \alpha \quad (6.52)$$

where

A_{sw} is the area of one perimeter of shear reinforcement around the column [mm²]

s_r is the radial spacing of perimeters of shear reinforcement [mm]

$f_{ywd,ef}$ is the effective design strength of the punching shear reinforcement, according to $f_{ywd,ef} = 250 + 0,25 d \leq f_{ywd}$ [MPa]

d is the mean of the effective depths in the orthogonal directions [mm]

α is the angle between the shear reinforcement and the plane of the slab

If a single line of bent-down bars is provided, then the ratio d / s_r in Expression (6.52) may be given the value 0,67."

with the following text:

"(1) Where shear reinforcement is required it should be calculated in accordance with Expression (6.52):

$$V_{Rd,cs} = 0,75 v_{Rd,c} + 1,5 (d / s_r) A_{sw} f_{ywd,ef} [1 / (u_1 d)] \sin \alpha \leq k_{max} \cdot v_{Rd,c} \quad (6.52)$$

where

A_{sw} is the area of one perimeter of shear reinforcement around the column [mm²];

s_r is the radial spacing of perimeters of shear reinforcement [mm];

$f_{ywd,ef}$ is the effective design strength of the punching shear reinforcement according to $f_{ywd,ef} = 250 + 0,25 d \leq f_{ywd}$ [MPa];

d is the mean of the effective depths in the orthogonal directions [mm];

α is the angle between the shear reinforcement and the plane of the slab;

$v_{Rd,c}$ according to 6.4.4;

k_{max} is the factor, limiting the maximum capacity that can be achieved by application of shear reinforcement.

NOTE The value of k_{max} for use in a country may be found in its National Annex. The recommended value is 1,5.