SLOVENSKI STANDARD
SIST EN 1992-1-1:2005/oprA1:2013

01-december-2013

Evrokod 2: Projektiranje betonskih konstrukcij - 1-1. del: Splošna pravila in pravila za stavbe

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

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

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

Ta slovenski standard je istoveten z: **EN 1992-1-1:2004/prA1**

ICS:

91.010.30	Tehnični vidiki	Technical aspects
91.080.40	Betonske konstrukcije	Concrete structures

SIST EN 1992-1-1:2005/oprA1:2013 **en,fr,de**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

DRAFT
EN 1992-1-1:2004

prA1

September 2013

ICS 91.080.40; 91.010.30

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

This draft amendment A1, if approved, will modify the European Standard EN 1992-1-1:2004. If this draft becomes an amendment, 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.

This draft amendment 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.

CEN members are the national standards bodies of 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 United Kingdom.

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

Management Centre: Avenue Marnix 17, B-1000 Brussels

Contents

Page

Foreword

This document (EN 1992-1-1:2004/prA1:2013) 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 the CEN Enquiry.

1 Amendment to Foreword

Add to the Foreword, Sub-Heading "National Annex for EN 1992-1-1" between "6.4.4 (1)" and "6.4.5 (3)":

"6.4.5 (1)".

2 Amendment to 3.3.4 Ductility characteristics

Replace in 3.3.4 (5)

"$f_{pk} / f_{p0.1k}$"

with

"$(f_p / f_{p0.1})_k$".

3 Amendment to 6.4.5 Punching shear resistance of slabs and column bases with shear reinforcement

Replace in 6.4.5 (1),

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

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

where

A_{sw} is the area of one perimeter of shear reinforcement around the column [mm^2]

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 $f_{ywd,ef} = 250 + 0{,}25\, d \le f_{ywd}$ [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:

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

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

where

A_{sw} is the area of one perimeter of shear reinforcement around the column [mm^2]

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 $f_{ywd,ef} = 250 + 0{,}25\ d \le f_{ywd}$ [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

$\boldsymbol{k_{max}}$ **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.

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."

4 Amendment to 11.6.4.2 Punching shear resistance of slabs or column bases with shear reinforcement

Replace in 11.6.4.2 (1), Equation (11.6.52)

"$v_{lRd,cs} = 0{,}75\ v_{Rd,c} + 1{,}5\ (d / s_r)\ A_{sw} f_{ywd,eff}\ [1 / (u_1 d)] \sin\alpha$ (11.6.52)"

with the following:

"$v_{lRd,cs} = 0{,}75\ v_{Rd,c} + 1{,}5\ (d / s_r)\ A_{sw} f_{ywd,eff}\ [1 / (u_1 d)] \sin\alpha \le \boldsymbol{k_{max} \cdot v_{lRd,c}}$ (11.6.52)"

5 Amendment to 12.6.5.2 Simplified design method for walls and columns

Replace in 12.6.5.2 (1), Equation (12.11)

"$\Phi = (1{,}14 \times (1 - 2\ e_{tot} / h_w) - 0{,}02 \times l_o / h_w \le (1 - 2\ e_{tot} / h_w)$ (12.11)"

with the following

"$\Phi = \mathbf{0{,}71} \times (1 - 2\ e_{tot} / h_w) - \mathbf{0{,}013} \times l_o / h_w \le (1 - 2\ e_{tot} / h_w)$ (12.11)"

6 Amendment to 12.6.5.2 Simplified design method for walls and columns

Add to 12.6.5.2 (1) to the explanation of "e_o" as new last sentence:

"In determination of e_o an equivalent first order end moment M_{0e} can be used, see 5.8.8.2(2)."

7 Amendment to 12.6.5.2 Simplified design method for walls and columns

Add to 12.6.5.2 (1) the following Note to 12.6.5.2:

"NOTE In some cases, depending on slenderness, the end moment(s) can be more critical for the structure than the equivalent first order end moment M_{0e}. In such cases expression (12.2) should be used."