SLOVENSKI STANDARD
SIST EN 1995-1-1:2005/A2:2014

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Evrokod 5: Projektiranje lesenih konstrukcij - 1-1. del: Splošna pravila in pravila za stavbe

Eurocode 5: Design of timber structures - Part 1-1: General - Common rules and rules for buildings

Eurocode 5: Bemessung und Konstruktion von Holzbauten - Teil 1-1: Allgemeines - Allgemeine Regeln und Regeln für den Holzbau

Eurocode 5: Conception et calcul des structures en bois - Partie 1-1 : Généralités - Règles communes et règles pour les bâtiments

Ta slovenski standard je istoveten z: **EN 1995-1-1:2004/A2:2014**

ICS:

91.010.30	Tehnični vidiki	Technical aspects
91.080.20	Lesene konstrukcije	Timber structures

SIST EN 1995-1-1:2005/A2:2014 **en,fr,de**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 1995-1-1:2004/A2

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ICS 91.010.30; 91.080.20

English Version

Eurocode 5: Design of timber structures - Part 1-1: General - Common rules and rules for buildings

Eurocode 5: Conception et calcul des structures en bois - Partie 1-1 : Généralités - Règles communes et règles pour les bâtiments

Eurocode 5: Bemessung und Konstruktion von Holzbauten - Teil 1-1: Allgemeines - Allgemeine Regeln und Regeln für den Hochbau

This amendment A2 modifies the European Standard EN 1995-1-1:2004; it was approved by CEN on 18 February 2014.

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

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

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Foreword

This document (EN 1995-1-1:2004/A2:2014) 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 1995-1-1:2004 shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by May 2015, and conflicting national standards shall be withdrawn at the latest by May 2015.

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1 Modifications to 1.2, Normative references

Delete:

"

EN 10147, *Specification for continuously hot-dip zinc coated structural steel sheet and strip – Technical delivery conditions*".

Add:

"

EN 10346, *Continuously hot-dip coated steel flat products – Technical delivery conditions*".

Add:

"

EN ISO 1461, *Hot dip galvanized coatings on fabricated iron and steel articles – Specifications and test methods (ISO 1461)*".

2 Modification to 1.6, Symbols used in EN 1995-1-1

In the list of Latin lower case letters, remove the two entries about Symbols "h_{rl}" (Distance from lower edge of hole to bottom of member) and "h_{ru}" (Distance from upper edge of hole to top of member).

3 Modifications to 2.2.3, Serviceability limit states

Replace Paragraph (3) with the following:

"

(3) The final deformation u_{fin}, see e.g. w_{fin} in Figure 7.1, should be calculated by superimposing the creep deformation u_{creep} calculated using the quasi-permanent combination of actions, see EN 1990:2002, 6.5.3(2)(c), on the instantaneous deformation u_{inst} calculated from 2.2.3(2). The creep deformation should be calculated using mean values of the appropriate moduli of elasticity, shear moduli and slip moduli and the relevant values of k_{def} given in Table 3.2.".

Replace Paragraph (4) with the following:

"

(4) If the structure consists of members or components having different creep behaviour, the long-term deformation due to the quasi-permanent combination of actions should be calculated using the final mean values of the appropriate moduli of elasticity, shear moduli and slip moduli according to 2.3.2.2 (1). The final deformation u_{fin} is then calculated by superimposing the instantaneous deformation, due to the difference between the characteristic and the quasi-permanent combination of actions on the long-term deformation.".

4 Modification to 2.3.2.2, Load-duration and moisture influences on deformations

Replace Paragraph (1) with the following:

"

(1) For serviceability limit states, if the structure consists of members or components having different time-dependent properties, the final mean value of modulus of elasticity $E_{mean,fin}$, shear modulus $G_{mean,fin}$ and slip modulus $K_{ser,fin}$ which are used to calculate the long-term deformation due to the quasi-permanent combination of actions (see EN 1990:2002, 6.5.3(2)(c)) should be taken from the following expressions:".

5 Modification to 4.2, Resistance to corrosion

Replace Footnote [a] *in Table 4.1 with the following*:

"

[a] If hot dip zinc coating is used on steel plates, Fe/Zn 12C shall be replaced by Z275 and Fe/Zn 25C by Z350 in accordance with EN 10346. If hot dip coating is used on dowel type fasteners, Fe/Zn 12C shall be replaced by a layer of zinc of minimum 39 µm and Fe/Zn 25C by a layer of zinc of minimum 49 µm in accordance with EN ISO 1461.".

6 Modification to 6.1.5, Compression perpendicular to the grain

NOTE This clause is completely rewritten in the Amendment EN 1995–1-1:2004/A1:2008.

Replace the existing paragraph (4) with the following:

"

(4) For members on discrete supports loaded by distributed loads and/or by concentrated loads further away from the support than $\ell_1 = 2h$, see Figure 6.2(b), the value of $k_{c,90}$ should be taken as:

- $k_{c,90}$ = 1,5 for solid softwood timber
- $k_{c,90}$ = 1,75 for glued laminated softwood timber provided that $\ell \leq 400$ mm

where

h is the depth of the member and ℓ is the contact length.

A series of point loads acting at close centres (e.g. joists or rafters at centres < 610 mm) may be regarded as a distributed load.".

7 Modification to 6.1.8, Torsion

Replace Formula (6.15) with:

"

$$k_{shape} = \begin{cases} 1,2 & \text{for a circular cross-section} \\ \min\left\{ 1+0,05\cdot\frac{h}{b} \\ 1,3 \right. & \text{for a rectangular cross-section} \end{cases} \qquad (6.15)".$$

8 Modification to 6.2.3, Combined bending and axial tension

Replace Paragraph (2) with the following:

"

(2) The values of k_m given in 6.1.6 apply.

NOTE: To check the instability condition, the method given in 6.3 can be used with $\sigma_{t,0,d}$ = 0.".

9 Modification to 6.5.2, Beams with a notch at the support

Replace the existing Formula (6.60) with the following:

"

$$\tau_d = \frac{1{,}5\,V_d}{b_{ef}\,h_{ef}} \le k_v f_{v,d} \qquad (6.60)$$

b_{ef} is defined in Formula (6.13a).".

10 Modification to 8.3.2, Axially loaded nails

Replace the definition of "t_{pen}" in Paragraph (4) with the following:

"

t_{pen} is the pointside penetration length or the length of the threaded part, excluding the point length, in the point side member".

11 Modifications to 8.4, Stapled connections

Replace Formula (8.29) with the following:

"

$$M_{y,Rk} = 150\,d^3 \qquad (8.29)".$$

Replace Paragraph (7) with the following:

"

(7) For a row of *n* staples parallel to the grain, the load-carrying capacity in that direction should be calculated using the effective number of fasteners $n_{ef} = n$.".

12 Modification to 8.6, Dowelled connections

Replace the existing Table 8.5 with the following:

"

Table 8.5 — Minimum spacings and edge and end distances for dowels

Spacing and edge/end distances (see Figure 8.7)	Angle to grain	Minimum spacings and edge/end distances
a_1 (parallel to grain)	$0° \le \alpha \le 360°$	$\left(3+2\left\|\cos\alpha\right\|\right)d$
a_2 (perpendicular to grain)	$0° \le \alpha \le 360°$	$3\,d$
$a_{3,t}$ (loaded end)	$-90° \le \alpha \le 90°$	max (7 d; 80 mm)
$a_{3,c}$ (unloaded end)	$90° \le \alpha \le 150°$	$a_{3t}\left\|\sin\alpha\right\|$
	$150° \le \alpha \le 210°$	max(3,5 d; 40 mm)
	$210° \le \alpha \le 270°$	$a_{3t}\left\|\sin\alpha\right\|$
$a_{4,t}$ (loaded edge)	$0° \le \alpha \le 180°$	$\max\left(\left(2+2\sin\alpha\right)d;3d\right)$
$a_{4,c}$ (unloaded edge)	$180° \le \alpha \le 360°$	$3\,d$

".

13 Modifications to 8.7.1, Laterally loaded screws

Replace Paragraph (1)P with the following:

"

(1)P The effect of the threaded part of the screw shall be taken into account in determining the load carrying capacity by using an effective diameter d_{ef} when determining the yield moment capacity and the embedment strength of the threaded part. The outer thread diameter d shall be used to determine spacing, edge and end distances and the effective number of screws.".

Replace Paragraph (4) with the following:

"

(4) For screws with a diameter d_{ef} > 6 mm, the rules in 8.5.1 apply.".

Replace the existing paragraph (5) with the following:

"

(5) For screws with a diameter d_{ef} ≤ 6 mm, the rules of 8.3.1 apply.".

14 Modification to 8.7.2, Axially loaded screws

NOTE This clause is completely rewritten in the Amendment EN 1995–1-1:2004/A1:2008.

Replace the 1st line in Paragraph (4) with the following:

"

For connections in softwood timber with screws in accordance with EN 14592 with:".