SLOVENSKI STANDARD
SIST EN 1990:2004/A1:2006/AC:2010

01-september-2010

Nadomešča:
SIST EN 1990:2004/A1:2006/AC:2009

Evrokod - Osnove projektiranja

Eurocode - Basis of structural design

Eurocode: Grundlagen der Tragwerksplanung

Eurocodes structuraux - Eurocodes: Bases de calcul des structures

Ta slovenski standard je istoveten z: **EN 1990:2002/A1:2005/AC:2010**

ICS:

91.010.30	Tehnični vidiki	Technical aspects

SIST EN 1990:2004/A1:2006/AC:2010   en,fr,de

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 1990:2002/A1:2005/AC

April 2010
Avril 2010
April 2010

ICS 91.010.30

English version
Version Française
Deutsche Fassung

Eurocode - Basis of structural design

Eurocodes structuraux - Eurocodes: Bases
de calcul des structures

Eurocode: Grundlagen der
Tragwerksplanung

This corrigendum becomes effective on 21 April 2010 for incorporation in the three official language versions of the EN.

Ce corrigendum prendra effet le 21 avril 2010 pour incorporation dans les trois versions linguistiques officielles de la EN.

Die Berichtigung tritt am 21.April 2010 zur Einarbeitung in die drei offiziellen Sprachfassungen der EN in Kraft.

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

Management Centre: Avenue Marnix 17, B-1000 Brussels

Ref. No.:EN 1990:2002/A1:2005/AC:2010 D/E/F

EN 1990:2002/A1:2005/AC:2010 (E)

Notice

The present corrigendum contains the modifications from the former corrigendum EN 1990:2002/A1:2005/AC:2008.

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1) Modification to the very beginning of the amendment

Very beginning of EN 1990:2002/A1:2005, just after the Foreword and before Annex A2, add the following pages containing the new modifications going from Modifications 1) [for Modifications to "Background of the Eurocode programme"] until Modifications 17) [for Modifications to A1.4.1]:

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1) Modifications to "Background of the Eurocode programme"

2nd paragraph, 3rd line, replace "national rules" *with* "national provisions"*.*

4th paragraph, 7th and 8th lines, replace "Council Directives 93/37/EEC, 92/50/EEC and 89/440/EEC" *with* "Council Directives 2004/17/EC and 2004/18/EC"*.*

2) Modifications to "Status and field of application of Eurocodes"

2nd paragraph, 5th and 6th lines, after "product standards"*, add* "and ETAGs"*.*

3rd paragraph, 2nd line, replace "component" *with* "parts of works and structural construction"*.*

3) Modifications to "Links between Eurocodes and harmonised technical specifications (ENs and ETAs) for products"

2nd line, replace "technical rules" *with* "technical provisions"*.*

3rd line, replace "refer to" *with* "use the"*.*

4) Modifications to "National annex for EN 1990"

2nd paragraph, replace:

"National choice is allowed in EN 1990 through :"

with:

"National choice is allowed in EN 1990 Annex A1 through;".

After A.1.4.2(2), add:

"National choice is allowed in EN 1990 Annex A2 through:

General clauses

Clause	Item
A2.1 (1) NOTE 3	Use of Table 2.1 : Design working life
A2.2.1(2) NOTE 1	Combinations involving actions which are outside the scope of EN 1991
A2.2.6(1) NOTE 1	Values of ψ factors
A2.3.1(1)	Alteration of design values of actions for ultimate limit states
A2.3.1(5)	Choice of Approach 1, 2 or 3
A2.3.1(7)	Definition of forces due to ice pressure
A2.3.1(8)	Values of γ_P factors for prestressing actions where not specified in the relevant design Eurocodes
A2.3.1 Table A2.4(A) NOTES 1 and 2	Values of γ factors
A2.3.1 Table A2.4(B)	- NOTE 1 : choice between 6.10 and 6.10a/b - NOTE 2 : Values of γ and ξ factors - NOTE 4 : Values of γ_{Sd}

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A2.3.1 Table A2.4(C)	Values of γ factors
A2.3.2(1)	Design values in Table A2.5 for accidental designs situations, design values of accompanying variable actions and seismic design situations
A2.3.2 Table A2.5 NOTE	Design values of actions
A2.4.1(1) NOTE 1 (Table A2.6) NOTE 2	Alternative γ values for traffic actions for the serviceability limit state Infrequent combination of actions
A2.4.1(2)	Serviceability requirements and criteria for the calculation of deformations

Clauses specific for road bridges

Clause	Item
A2.2.2 (1)	Reference to the infrequent combination of actions
A2.2.2(3)	Combination rules for special vehicles
A2.2.2(4)	Combination rules for snow loads and traffic loads
A2.2.2(6)	Combination rules for wind and thermal actions
A2.2.6(1) NOTE 2	Values of $\psi_{1,infq}$ factors
A2.2.6(1) NOTE 3	Values of water forces

Clauses specific for footbridges

Clause	Item
A2.2.3(2)	Combination rules for wind and thermal actions
A2.2.3(3)	Combination rules for snow loads and traffic loads
A2.2.3(4)	Combination rules for footbridges protected from bad weather
A2.4.3.2(1)	Comfort criteria for footbridges

Clauses specific for railway bridges

Clause	Item
A2.2.4(1)	Combination rules for snow loading on railway bridges
A2.2.4(4)	Maximum wind speed compatible with rail traffic
A2.4.4.1(1) NOTE 3	**Deformation and vibration requirements for temporary railway bridges**
A2.4.4.2.1(4)P	Peak values of deck acceleration for railway bridges and associated frequency range
A2.4.4.2.2 – Table A2.7 NOTE	Limiting values of deck twist for railway bridges

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A2.4.4.2.2(3)P	Limiting values of the total deck twist for railway bridges
A2.4.4.2.3(1)	Vertical deformation of ballasted and non ballasted railway bridges
A2.4.4.2.3(2)	Limitations on the rotations of non-ballasted bridge deck ends for railway bridges
A2.4.4.2.3(3)	Additional limits of angular rotations at the end of decks
A2.4.4.2.4(2) – Table A2.8 NOTE 3	Values of α_i and r_i factors
A2.4.4.2.4(3)	Minimum lateral frequency for railway bridges
A2.4.4.3.2(6)	Requirements for passenger comfort for temporary bridges

".

5) Modification to 1.3

Article (2), 3rd dash, replace this list entry with the following one:

"

− adequate supervision and quality control is provided during design and during execution of the work, i.e., factories, plants, and on site;

".

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6) Modification to 1.5.3.17 (standards.iteh.ai)

Add the following NOTE:

"NOTE For the frequent value of multi-component traffic actions see load groups in EN 1991-2.".

7) Modification to 1.5.6.10

Title, delete "(first or second order)".

8) Modification to 1.6

Replace the content of the entire subclause with:

"For the purposes of this European Standard, the following symbols apply.

NOTE The notation used is based on ISO 3898:1987.

Latin upper case letters

A	Accidental action
A_d	Design value of an accidental action
A_{Ed}	Design value of seismic action $A_{Ed} = \gamma_I A_{Ek}$
A_{Ek}	Characteristic value of seismic action
C_d	Nominal value, or a function of certain design properties of materials
E	Effect of actions
E_d	Design value of effect of actions
$E_{d,dst}$	Design value of effect of destabilising actions

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$E_{d,stb}$	Design value of effect of stabilising actions
F	Action
F_d	Design value of an action
F_k	Characteristic value of an action
F_{rep}	Representative value of an action
F_w	Wind force (general symbol)
F_{wk}	Characteristic value of the wind force
F_W^*	Wind force compatible with road traffic
F_W^{**}	Wind force compatible with railway traffic
G	Permanent action
G_d	Design value of a permanent action
$G_{d,inf}$	Lower design value of a permanent action
$G_{d,sup}$	Upper design value of a permanent action
G_k	Characteristic value of a permanent action
$G_{k,j}$	Characteristic value of permanent action j
$G_{k,j,sup}/$	Upper/lower characteristic value of permanent action j
$G_{k,j,inf}$	
G_{set}	Permanent action due to uneven settlements
P	Relevant representative value of a prestressing action (see EN 1992 to EN 1996 and EN 1998 to EN 1999)
P_d	Design value of a prestressing action
P_k	Characteristic value of a prestressing action
P_m	Mean value of a prestressing action
Q	Variable action
Q_d	Design value of a variable action
Q_k	Characteristic value of a single variable action
$Q_{k,1}$	Characteristic value of the leading variable action 1
$Q_{k,i}$	Characteristic value of the accompanying variable action i
Q_{Sn}	Characteristic value of snow load
R	Resistance
R_d	Design value of the resistance
R_k	Characteristic value of the resistance
T	Thermal climatic action (general symbol)
T_k	Characteristic value of the thermal climatic action
X	Material property
X_d	Design value of a material property
X_k	Characteristic value of a material property

Latin lower case letters

a_d	Design values of geometrical data
a_k	Characteristic values of geometrical data
a_{nom}	Nominal value of geometrical data
d_{set}	Difference in settlement of an individual foundation or part of a foundation compared to a reference level
u	Horizontal displacement of a structure or structural member

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w	Vertical deflection of a structural member

Greek upper case letters

Δa	Change made to nominal geometrical data for particular design purposes, *e.g.* assessment of effects of imperfections
Δd_{set}	Uncertainty attached to the assessment of the settlement of a foundation or part of a foundation

Greek lower case letters

γ	Partial factor (safety or serviceability)
γ_{bt}	Maximum peak value of bridge deck acceleration for ballasted track
γ_{df}	Maximum peak value of bridge deck acceleration for direct fastened track
γ_{Gset}	Partial factor for permanent actions due to settlements, also accounting for model uncertainties
γ_f	Partial factor for actions, which takes account of the possibility of unfavourable deviations of the action values from the representative values
γ_F	Partial factor for actions, also accounting for model uncertainties and dimensional variations
γ_g	Partial factor for permanent actions, which takes account of the possibility of unfavourable deviations of the action values from the representative values
γ_G	Partial factor for permanent actions, also accounting for model uncertainties and dimensional variations
$\gamma_{G,j}$	Partial factor for permanent action j
$\gamma_{G,j,sup}$ / $\gamma_{G,j,inf}$	Partial factor for permanent action j in calculating upper/lower design values
γ_I	Importance factor (see EN 1998)
γ_m	Partial factor for a material property
γ_M	Partial factor for a material property, also accounting for model uncertainties and dimensional variations
γ_P	Partial factor for prestressing actions (see EN 1992 to EN 1996 and EN 1998 to EN 1999)
γ_q	Partial factor for variable actions, which takes account of the possibility of unfavourable deviations of the action values from the representative values
γ_Q	Partial factor for variable actions, also accounting for model uncertainties and dimensional variations
$\gamma_{Q,i}$	Partial factor for variable action i
γ_{Rd}	Partial factor associated with the uncertainty of the resistance model
γ_{Sd}	Partial factor associated with the uncertainty of the action and/or action effect model
η	Conversion factor
ξ	Reduction factor

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ψ_0 Factor for combination value of a variable action

ψ_1 Factor for frequent value of a variable action

ψ_2 Factor for quasi-permanent value of a variable action"

".

9) Modification to 2.1

Article (1)P, 2nd dash, replace:

"- remain fit for the use for which it is required."

with the following bullet point including a new NOTE:

"- meet the specified serviceability requirements for a structure or a structural element.

NOTE See also 1.3, 2.1(7) and 2.4(1) P.".

10) Modification to 3.3

Article (4)P, replace the NOTE with:

"NOTE Different sets of partial factors are associated with the various ultimate limit states, see 6.4.1.".

11) Modifications to 4.1.3

Article (1)P, list entry (b), replace NOTE 2 with:

"NOTE 2 The infrequent value, represented as a product $\psi_{1,\text{infq}} Q_{k,1}$ may be used only for the verification of certain serviceability limit states specifically for concrete bridges. The infrequent value which is defined only for road traffic loads (see EN 1991-2) is based on a return period of one year.".

Article (1)P, list entry (b), add new NOTE 3 as follows:

"NOTE 3 For the frequent value of multi-component traffic actions see EN 1991-2.".

12) Modification to 4.1.5

Replace:

"(1) The characteristic and fatigue load models in EN 1991 include the effects of accelerations caused by the actions either implicitly in the characteristic loads or explicitly by applying dynamic enhancement factors to characteristic static loads."

with:

"(1) The load models defined by characteristic values, and fatigue load models, in EN 1991 may include the effects of accelerations caused by the actions either implicitly or explicitly by applying dynamic enhancement factors.".

12) Modifications to 6.4.1

Article (1)P, list entry a), 1st dash, replace this list entry with:

"