

SVENSK STANDARD

SS-EN 1993-1-1:2005/AC:2009

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Eurokod 3: Dimensionering av stålkonstruktioner – Del 1-1: Allmänna regler och regler för byggnader

Eurocode 3: Design of steel structures – Part 1-1: General rules and rules for buildings



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Europastandarden EN 1993-1-1:2005/AC:2009 gäller som svensk standard. Detta dokument innehåller den engelska versionen av EN 1993-1-1:2005/AC:2009.

The European Standard EN 1993-1-1:2005/AC:2009 has the status of a Swedish Standard. This document contains the official English version of EN 1993-1-1:2005/AC:2009.

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SIS Förlag AB, SE 118 80 Stockholm, Sweden. Tel: +46 8 555 523 10. Fax: +46 8 555 523 11.
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EUROPEAN STANDARD

EN 1993-1-1:2005/AC

NORME EUROPÉENNE

EUROPÄISCHE NORM

April 2009

ICS 91.010.30; 91.080.10

English version

Eurocode 3: Design of steel structures - Part 1-1: General rules and rules
for buildings

Eurocode 3: Calcul des structures en acier
- Partie 1-1: Règles générales et règles
pour les bâtiments

Eurocode 3: Bemessung und Konstruktion
von Stahlbauten - Teil 1-1: Allgemeine
Bemessungsregeln und Regeln für den
Hochbau

This corrigendum becomes effective on 15 April 2009 for incorporation in the three official language versions of the EN.



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

Management Centre: Avenue Marnix 17, B-1000 Brussels

SS-EN 1993-1-1:2005/AC:2009 (E)

Modifications due to EN 1993-1-1:2005/AC:2006

1) Modifications to Clauses 2, 3, 4, 5 and 6

The corrections are to add a "P" after the clause number and change "should" to "shall" where appropriate. The corrections are underlined as shown.

a) "2.1.1 Basic requirements"

"

(1)P The design of steel structures shall be in accordance with the general rules given in EN 1990.

"

b) "2.1.3.1 General"

"

(1)P Depending upon the type of action affecting durability and the design working life (see EN 1990) steel structures shall be

"

c) "2.1.3.2 Design working life for buildings"

"

(1)P,B The design working life shall be taken as the period for which a building structure is expected to be used for its intended purpose.

"

d) "2.1.3.3 Durability for buildings"

"

(1)P,B To ensure durability, buildings and their components shall either be designed for environmental actions and fatigue if relevant or else protected from them.

"

"

(2)P,B The effects of deterioration of material, corrosion or fatigue where relevant shall be taken into account by appropriate choice of material, see EN 1993-1-4 and EN 1993-1-10, and details, see EN 1993-1-9, or by structural redundancy and by the choice of an appropriate corrosion protection system.

"

e) "2.4.1 Design values of material properties"

"

(1)P For the design of steel structures characteristic values X_k or nominal values X_n of material properties shall be used as indicated in this Eurocode.

"

f) **"3.2.3 Fracture toughness"**

"

(1)P The material shall have sufficient fracture toughness to avoid brittle fracture of tension elements at the lowest service temperature expected to occur within the intended design life of the structure.

"

g) **"4 Durability"**

"

(2)P The means of executing the protective treatment undertaken off-site and on-site shall be in accordance with EN 1090.

"

"

(5)P For elements that cannot be inspected an appropriate corrosion allowance shall be included.

"

h) **"5.1.1 Structural modelling and basic assumptions"**

"

(1)P Analysis shall be based upon calculation models of the structure that are appropriate for the limit state under consideration.

"

"

(3)P The method used for the analysis shall be consistent with the design assumptions.

"

i) **"6.2.1 General"**

"

(1)P The design value of an action effect in each cross section shall not exceed the corresponding design resistance and if several action effects act simultaneously the combined effect shall not exceed the resistance for that combination.

"

j) **"6.2.3 Tension"**

"

(1)P The design value of the tension force N_{Ed} at each cross section shall satisfy:

"

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k) "6.2.4 Compression"

"

(1)P The design value of the compression force N_{Ed} at each cross-section shall satisfy:

"

l) "6.2.5 Bending moment"

"

(1)P The design value of the bending moment M_{Ed} at each cross-section shall satisfy:

"

m) "6.2.6 Shear"

"

(1)P The design value of the shear force V_{Ed} at each cross section shall satisfy:

"

n) "6.2.9.1 Class 1 and 2 cross-sections"

"

(2)P For class 1 and 2 cross sections, the following criterion shall be satisfied:

"

o) "6.2.9.2 Class 3 cross-sections"

"

(1)P In the absence of shear force, for Class 3 cross-sections the maximum longitudinal stress shall satisfy the criterion:

"

p) "6.2.9.3 Class 4 cross-sections"

"

(1)P In the absence of shear force, for Class 4 cross-sections the maximum longitudinal stress $\sigma_{x,Ed}$ calculated using the effective cross sections (see 5.2.2(2)) shall satisfy the criterion

"

Modifications due to EN 1993-1-1:2005/AC:2009

2) Modification to "National Annex for EN 1993-1-1"

1st paragraph, 3rd line, change "of steel structures to be constructed" into: "of steel structures and civil engineering works to be constructed".

3) Modification to 1.1.1

Paragraph "(6)", change title of part EN 1993-1-3 "Cold-formed thin gauge members and sheeting" into: "Cold-formed members and sheeting".

4) Modification to 1.1.2

Paragraph "(1)", "NOTE", change "For cold formed thin gauge members and plate thicknesses $t < 3\text{mm}$ see EN 1993-1-3" into: "For cold formed members and sheeting, see EN 1993-1-3".

5) Modification to 1.2.1

Change "EN 1461" into: "EN ISO 1461".

6) Modification to 1.5.6

Change "buckling resistance" into: "critical buckling load".

7) Modifications to 1.6

a) Paragraph "(2)", "Section 2", page 13, change " X_K " into: " X_k ".

b) Paragraph "(2)", "Section 3", page 13, change " R_{eh} " into: " R_{eH} ".

c) Paragraph "(2)", "Section 5", page 13, change:

"

H_{Ed} design value of the horizontal reaction at the bottom of the storey to the horizontal loads and fictitious horizontal loads

"

into:

"

H_{Ed} total design horizontal load, including equivalent forces transferred by the storey (storey shear)

".

d) Paragraph "(2)", "Section 5", page 13, change:

"

V_{Ed} total design vertical load on the structure on the bottom of the storey

"

into:

"

V_{Ed} total design vertical load on the frame transferred by the storey (storey thrust)

".

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e) *Paragraph "(2)", "Section 5", page 14, change:*

"

$\alpha_{ult,k}$ minimum force amplifier to reach the characteristic resistance without taking buckling into account

"

into:

"

$\alpha_{ult,k}$ minimum load amplifier of the design loads to reach the characteristic resistance of the most critical cross section of the structural component considering its in plane behaviour without taking lateral or lateral torsional buckling into account however accounting for all effects due to in plane geometrical deformation and imperfections, global and local, where relevant

"

f) *Paragraph "(2)", "Section 5", page 14, definition for " α_{cr} ", change "elastic critical buckling" into: "elastic critical buckling load".*

g) *Paragraph "(2)", "Section 5", page 14, change:*

"

ε coefficient depending...

"

into:

"

ε factor depending...

"

h) *Paragraph "(2)", "Section 5", page 14, change:*

"

k_{σ} plate buckling coefficient

"

into:

"

k_{σ} plate buckling factor

"

i) *Paragraph "(2)", "Section 6", page 15, change:*

"

$V_{pl,Rd}$ plastic design shear resistance

"

into:

"

$V_{pl,Rd}$ design plastic shear resistance

"

j) *Paragraph "(2)", "Section 6", page 15, add between "I" and "A_w":*

"

A cross-sectional area

"

k) *Paragraph "(2)", "Section 6", page 15, change:*

"

$T_{t,Ed}$ design value of internal St. Venant torsion

"

into:

"

$T_{t,Ed}$ design value of internal St. Venant torsional moment

"

l) *Paragraph "(2)", "Section 6", page 15, change:*

"

$T_{w,Ed}$ design value of internal warping torsion

"

into:

"

$T_{w,Ed}$ design value of internal warping torsional moment

"

m) *Paragraph "(2)", "Section 6", page 15, change:*

"