
**Eurocode 3: Projektiranje jeklenih konstrukcij - Del 1-3: Splošna pravila -
Dodatna pravila za hladno oblikovane tankostenske profile in pločevine
(prevzet ENV 1993-1-3:1996 in popravek ENV 1993-1-3:1996/AC:1997 z
metodo platnice)**

Eurocode 3: Design of steel structures - Part 1-3: General rules - Supplementary
rules for cold formed thin gauge members and sheeting

Eurocode 3: Calcul des structures en acier - Partie 1-3: Règles générales -
Règles supplémentaires pour les éléments minces formés à froid - produits
longs et produits plats

[SIST ENV 1993-1-3:2001](http://www.sist.si/standards/sist-env-1993-1-3-2001)

Eurocode 3: Bemessung und Konstruktion von Stahlbauten - Teil 1-3:
Allgemeine Regeln - Ergänzende Regeln für kaltgeformte dünnwandige Bauteile
und Bleche

Deskriptorji: jeklene konstrukcije, konstrukcijska jekla, hladno oblikovanje, pločevine,
računanje, pravila dimenzioniranja, mehanska trdnost

ICS 91.040.00; 91.080.10

Referenčna številka
SIST ENV 1993-1-3:2001 ((sl),en)

Nadaljevanje na straneh od II do V in od 1 do 128

NACIONALNI UVOD

Predstandard SIST ENV 1993-1-3 ((sl),en), Eurocode 3: Projektiranje jeklenih konstrukcij - Del 1-3: Splošna pravila - Dodatna pravila za hladno oblikovane tankostenske profile in pločevine, prva izdaja, 2001, ima status slovenskega predstandarda in je z metodo platnice prevzet evropski predstandard ENV 1993-1-3 (en), Eurocode 3: Design of steel structures - Part 1-3: General rules - Supplementary rules for cold formed thin gauge members and sheeting, April 1996, skupaj s popravkom AC:1997.

NACIONALNI PREDGOVOR

Evropski predstandard ENV 1993-1-3:1996 in popravek AC:1997 je pripravil tehnični odbor Evropskega komiteja za standardizacijo CEN/TC 250 Konstrukcijski evrokodi.

Pripravo tega predstandarda sta CEN poverila Evropska komisija in Evropsko združenje za prosto trgovino.

Odločitev za prevzem tega predstandarda po metodi platnice je sprejela delovna skupina USM/TC KON/WG 3 Jeklene konstrukcije, ki je pripravila tudi nacionalni dokument za uporabo v Sloveniji, potrdil pa tehnični odbor USM/TC KON Konstrukcije.

Ta slovenski predstandard se lahko uporablja samo v skladu z nacionalnim dokumentom, ki je sestavni del SIST ENV 1993-1-3:2001.

Ta slovenski predstandard je dne 2000-12-04 odobril direktor USM.

Rok veljavnosti tega predstandarda je do izdaje evropskega standarda EN 1993-1-3.

ZVEZE S STANDARDI

S prevzemom tega evropskega predstandarda veljajo za omejeni namen referenčnih standardov vsi standardi, navedeni v izvorniku, razen tistih, ki so že sprejeti kot nacionalni standardi:

SIST ENV 1991-1-1:1998	((sl),en)	SIST ENV 1993-1-3:2001 Eurocode 1: Osnove projektiranja in vplivi na konstrukcije - 1. del: Osnove projektiranja
SIST ENV 1991-2-1:1998	((sl),en)	Eurocode 1: Osnove projektiranja in vplivi na konstrukcije - Del 2-1: Vplivi na konstrukcije - Gostote, lastna teža in koristne obtežbe
SIST ENV 1991-2-3:1998	((sl),en)	Eurocode 1: Osnove projektiranja in vplivi na konstrukcije - Del 2-3: Vplivi na konstrukcije - Obtežbe snega
SIST ENV 1991-2-4:1998	((sl),en)	Eurocode 1: Osnove projektiranja in vplivi na konstrukcije - Del 2-4: Vplivi na konstrukcije - Vplivi vetra
SIST ENV 1993-1-1:1996	((sl),en)	Eurocode 3: Projektiranje jeklenih konstrukcij - Del 1-1: Splošna pravila in pravila za stavbe
SIST ENV 1993-1-1:1996/A1:1996	((sl),en)	Projektiranje jeklenih konstrukcij - Del 1-1: Splošna pravila in pravila za stavbe - Dodatka D in K
SIST ENV 1993-1-1:1996/A2:2001	((sl),en)	Projektiranje jeklenih konstrukcij - Del 1-1: Splošna pravila in pravila za stavbe - Dodatki G, H, J, N in Z
SIST ENV 1993-1-2:1999	((sl),en)	Projektiranje jeklenih konstrukcij - Del 1-2: Splošna pravila - Projektiranje požarnovarnih konstrukcij
SIST ENV 1993-1-4:2001	((sl),en)	Projektiranje jeklenih konstrukcij - Del 1-4: Splošna pravila - Dodatna pravila za nerjavna jekla

SIST ENV 1993-1-5:2001	((sl),en)	Projektiranje jeklenih konstrukcij - Del 1-5: Splošna pravila - Dodatna pravila za ravninske pločevinaste konstrukcije (ortotropne plošče) brez prečne obremenitve
SIST ENV 1993-1-6:2001	((sl),en)	Projektiranje jeklenih konstrukcij - Del 1-6: Splošna pravila - Dodatna pravila za lupinaste konstrukcije
SIST ENV 1993-1-7:2001	((sl),en)	Projektiranje jeklenih konstrukcij - Del 1-7: Splošna pravila - Dodatna pravila za ravninske pločevinaste konstrukcije (ortotropne plošče), obremenjene s prečno obtežbo
SIST ENV 1993-2:2001	((sl),en)	Projektiranje jeklenih konstrukcij – 2. del: Jekleni mostovi
SIST ENV 1993-3-1:2001	((sl),en)	Projektiranje jeklenih konstrukcij – Del 3-1: Stolpi, jambori in dimniki - Stolpi in jambori
SIST ENV 1993-3-2:2001	((sl),en)	Projektiranje jeklenih konstrukcij – Del 3-2: Stolpi, jambori in dimniki - Dimniki
SIST ENV 1993-4-1:2001	((sl),en)	Projektiranje jeklenih konstrukcij - Del 4-1: Silosi, rezervoarji in cevovodi - Silosi
SIST ENV 1993-4-2:2001	((sl),en)	Projektiranje jeklenih konstrukcij - Del 4-2: Silosi, rezervoarji in cevovodi - Rezervoarji
SIST ENV 1993-4-3:2001	((sl),en)	Projektiranje jeklenih konstrukcij - Del 4-3: Silosi, rezervoarji in cevovodi - Cevovodi
SIST ENV 1993-5:2001	((sl),en)	Projektiranje jeklenih konstrukcij – 5. del: Piloti in zagatne stene
SIST ENV 1993-6:2001	((sl),en)	Projektiranje jeklenih konstrukcij – 6. del: Žerjavne proge

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OPOMBI

- Povsod, kjer se v besedilu predstandarda uporablja izraz “evropski predstandard”, v SIST ENV 1993-1-3:2001 to pomeni “slovenski predstandard”.
- Nacionalni uvod in nacionalni predgovor nista sestavni del predstandarda.

VSEBINA	Stran
Nacionalni dokument za uporabo v Sloveniji	IV
ENV 1993-1-3:1996	1
ENV 1993-1-3:1996/AC:1997	*

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[SIST ENV 1993-1-3:2001](https://standards.iteh.ai/catalog/standards/sist/740add0e-1e14-4926-821a-d47a29e1a38b/sist-env-1993-1-3-2001)

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* Popravek vsebuje 6 strani, ki so dodane na koncu predstandarda.

Nacionalni dokument za uporabo v Sloveniji

Za vrednosti parametrov, podanih v okvirju (večinoma delni varnostni faktorji odpornosti ali zunanjih vplivov), se v SIST ENV 1993-1-3:2001 privzamejo priporočene vrednosti, podane v ENV 1993-1-3:1996.

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English version
Version Française
Deutsche Fassung

Eurocode 3: Design of steel structures - Part 1-3: General rules -
Supplementary rules for cold formed thin gauge members and sheeting

Eurocode 3: Calcul des structures en acier
- Partie 1-3: Règles générales - Règles
supplémentaires pour les éléments minces
formés à froid - Produits longs et produits
plats

Eurocode 3: Bemessung und Konstruktion
von Stahlbauten - Teil 1-3: Allgemeine
Regeln - Ergänzende Regeln für
kaltgeformte dünnwandige Bauteile und
Bleche

This corrigendum becomes effective on 2 October 1997 for incorporation in the official English
version of the ENV.

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Ce corrigendum prendra effet le 2 octobre 1997 pour incorporation dans la version anglaise officielle
de la ENV.

SIST ENV 1993-1-3:2001

<https://standards.iteh.ai/catalog/standards/sist/740add0e-1e14-4926-821a-222789541333>

Die Berichtigung tritt am 2. Oktober 1997 in Kraft zur Einarbeitung der offiziellen Englischen Fassung
der ENV einzufügen.



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

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

The following editorial corrections should be made to ENV 1993-1-3.

Page 24, clause 3.5, below 3.5(1) and above table 3.3, insert paragraph (2) reading:

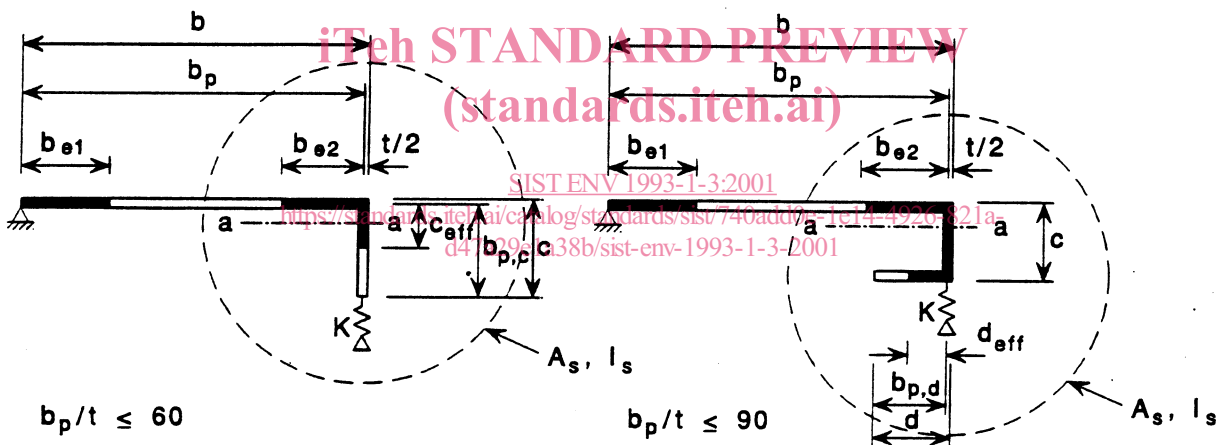
- (2) The mutual influence of multiple stiffeners should be taken into account.

Page 27, table 4.2, row 4, column 4, replace 1 by -1.

Page 27, table 4.2, row 5, last column should read:

$$0,57 - 0,21\psi + 0,07\psi^2$$

Page 30, figure 4.2 should be replaced by:



a) single edge fold

b) double edge fold

Figure 4.2: Edge stiffeners

Page 31, paragraph 4.3.2.2(4), expression (4.10c) should read:

$$k_{\sigma} = 0,5 + 0,83 \times \sqrt[3]{(b_{p,c}/b_p - 0,35)^2} \quad \dots (4.10c)$$

Page 33, paragraph 4.3.2.3(2), line 4 should read:

ρ should be obtained from 4.2(5) with $\sigma_{\text{com.Ed}}$ equal to χ_{f_y}/γ_{M1} , so that:

Page 33, paragraph 4.3.2.2(10), replace expression (4.14) by two lines reading:

$$A_{s,red} = \chi A_s \left[\frac{f_{yb}/\gamma_{M1}}{\sigma_{com,Ed}} \right] \quad \text{but} \quad A_{s,red} \leq A_s \quad \dots (4.14)$$

in which $\sigma_{com,Ed}$ is the calculated stress at the centreline of the stiffener.

Page 33, paragraph 4.3.2.2(11), modify line 2 to read:

by using a reduced thickness $t_{red} = t A_{s,red} / A_s$ for all the elements included in A_s .

Page 33, paragraph 4.3.2.3(4), replace expression (4.19) by two lines reading:

$$A_{s,red} = \chi A_s \left[\frac{f_{yb}/\gamma_{M1}}{\sigma_{com,Ed}} \right] \quad \text{but} \quad A_{s,red} \leq A_s \quad \dots (4.19)$$

in which $\sigma_{com,Ed}$ is the calculated stress at the centreline of the stiffener.

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Page 33, paragraph 4.3.2.3(5), modify line 2 to read:

by using a reduced thickness $t_{red} = t A_{s,red} / A_s$ for all the elements included in A_s .

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Page 35, paragraph 4.3.3.2(9), replace expression (4.23) by two lines reading:

$$A_{s,red} = \chi A_s \left[\frac{f_{yb}/\gamma_{M1}}{\sigma_{com,Ed}} \right] \quad \text{but} \quad A_{s,red} \leq A_s \quad \dots (4.23)$$

in which $\sigma_{com,Ed}$ is the calculated stress at the centreline of the stiffener.

Page 35, paragraph 4.3.3.2(10), modify line 2 to read:

by using a reduced thickness $t_{red} = t A_{s,red} / A_s$ for all the elements included in A_s .

Page 35, paragraph 4.3.3.3(3), line 1 should start:

The effective widths $b_{1,e2}$ and $b_{2,e1}$ should

and line 3 should read:

to $\chi f_{yb} / \gamma_{M1}$, so that:

Page 37, paragraph 4.3.3.3(5), replace expression (4.28) by two lines reading:

$$A_{s,red} = \chi A_s \left[\frac{f_{yb} / \gamma_{M1}}{\sigma_{com,Ed}} \right] \quad \text{but} \quad A_{s,red} \leq A_s \quad \dots (4.28)$$

in which $\sigma_{com,Ed}$ is the calculated stress at the centreline of the stiffener.

Page 37, paragraph 4.3.3.3(6), modify line 2 to read:

by using a reduced thickness $t_{red} = t A_{s,red} / A_s$ for all the elements included in A_s .

Page 45, paragraph 5.4.1(1)P, expression (5.3b) should read:

$$M_{c,Rd} = f_{ya} W_{ef} / \gamma_{M0} \quad \dots (5.3b)$$

Page 53, paragraph 5.8(6)P, expression (5.15a) should read:

$$\bar{\lambda}_w = \sqrt{\frac{f_{yb} / \sqrt{3}}{\tau_{cr}}} \equiv \frac{s_w}{t} \sqrt{\frac{12(1 - \nu^2) f_{yb}}{\sqrt{3} \pi^2 E k_r}} \quad \dots (5.15a)$$

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Page 57, paragraph 5.9.3(2), delete line 6 reading:

s_s is the actual length of stiff bearing;

Page 58, paragraph 5.9.3(4), insert after line 8:

where:

s_s is the actual length of stiff bearing;

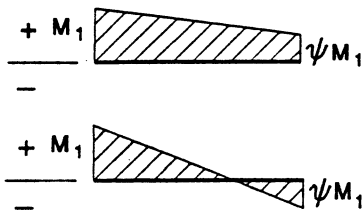
Page 60, paragraph 5.9.4(2), expression (5.24) should read:

$$\kappa_{a,s} = 1,45 - 0,05 e_{max} / t \quad \text{but} \quad \kappa_{a,s} \leq 0,95 + 35\,000 t^2 e_{min} / (b_d^2 s_p) \quad \dots (5.24)$$

Page 68, paragraph 6.3(1)P, line 4 should read:

in which χ_{LT} is obtained from the following:

Page 71, table 6.4, column 1, row 2, replace the second and third sketches by:



Page 77, figure 8.2 should be replaced by:

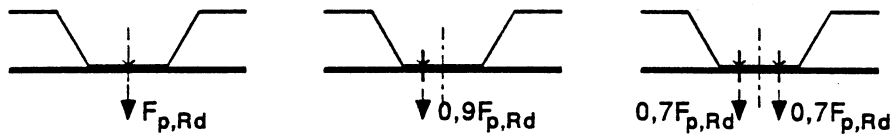


Figure 8.2: Reduction of tension resistance due to the position of fasteners

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Page 81, table 8.4, row 2, line 2 should read:

$$F_{b,Rd} = 2,5 dt f_u / \gamma_{M2} \quad \text{but} \quad F_{b,Rd} \leq (e/t/1,2) (f_u / \gamma_{M2})$$

Page 82, table 8.5, row 2, lines 3 to 5 should read:

$$F_{tb,Rd} = 2,7 \sqrt{t} d_s f_u / \gamma_{M2} \quad [\text{with } t \text{ in mm}]$$

- if $t_1 > 2,5t$:

$$F_{tb,Rd} = 2,7 \sqrt{t} d_s f_u / \gamma_{M2} \quad \text{but} \quad F_{tb,Rd} \leq 0,7 d_s^2 f_u / \gamma_{M2} \quad \text{and} \quad F_{tb,Rd} \leq 3,1 t d_s f_u / \gamma_{M2}$$

Page 84, paragraph 8.6.3(3)P should read:

Arc spot welds shall have an interface diameter d_s of not less than 10 mm.

Page 101, paragraph 10.1.5.2(10), expression (10.18) should read:

$$C_{D,A} = \frac{h^2}{(1/K_A + 1/K_B) - 4(1 - \nu^2) h^2 (h_d + e) / (Et^3)} \quad \dots (10.18)$$

Page 105, paragraph 10.2.2.2(1), in step 2 the last line should read:

I_a is the second moment of area of the wide flange, about its own centroid, see figure 10.8.

Page 105, paragraph 10.2.2.2(2), the first sentence should read:

The effects of shear lag need not be considered if $L/b_{u,eff} \geq 20$.

Page 109, paragraph 10.3.5(4), lines 2 to 4 should read:

$$T_{v,Rd} = 6E \sqrt[4]{I_a (t/b_u)^9} \quad \dots (10.22)$$

where:

I_a is the second moment of area of the wide flange, about its own centroid, see figure 10.8;

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EUROPEAN PRESTANDARD

ENV 1993-1-3

PRÉNORME EUROPÉENNE

EUROPÄISCHE VORNORM

April 1996

ICS 91.040.00; 91.080.10

Descriptors: steel construction, structural steels, cold-working, flat bars, computation, rules of calculation, mechanical strength

English version

**Eurocode 3: Design of steel structures - Part 1-3:
General rules - Supplementary rules for cold
formed thin gauge members and sheeting**

Eurocode 3: Calcul des structures en acier -
Partie 1-3: Règles générales - Règles
supplémentaires pour les éléments minces formés
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Eurocode 3: Bemessung und Konstruktion von
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Ergänzende Regeln für kaltgeformte dünnwandige
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This European Prestandard (ENV) was approved by CEN on 1993-06-04 as a prospective standard for provisional application. The period of validity of this ENV is limited initially to three years. After two years the members of CEN will be requested to submit their comments, particularly on the question whether the ENV can be converted into an European Standard (EN).

CEN members are required to announce the existence of this ENV in the same way as for an EN and to make the ENV available promptly at national level in an appropriate form. It is permissible to keep conflicting national standards in force (in parallel to the ENV) until the final decision about the possible conversion of the ENV into an EN is reached.

CEN members are the national standards bodies of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

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