

***NATIONAL ANNEX
TO
CYS EN 1993-1-3:2006
(Including AC:2009)***

***Eurocode 3: Design of
steel structures***

***Part 1-3: General rules
- Supplementary rules
for coldformed
members and sheeting***



NATIONAL ANNEX

TO

CYS EN 1993-1-3:2006+AC:2009

Eurocode 3: Design of steel structures

**Part 1-3: General rules - Supplementary rules for
coldformed members and sheeting**

This National Annex has been approved by the Board of Directors of the
Cyprus Organisation for Standardisation (CYS) on 14.06.2019.

Note: Correction on 15.11.2019 - NA 2, NA 3 and NA 4

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INTRODUCTION

This National Annex has been prepared by the CYS TC 18 National Standardisation Technical Committee of the Cyprus Organisation for Standardisation. (CYS).

NA 1 SCOPE

This National Annex is to be used in conjunction with CYS EN 1993-1-3:2006+AC:2009. Any reference in the rest of this text to CYS EN 1993-1-3:2006 means the above document.

This National Annex gives:

- (a) Nationally Determined Parameters described in the following clauses of CYS EN 1993-1-3:2006 (see Section NA 2):
- 2 (3)P
 - 2 (5)
 - 3.1 (3) Note 1 and Note 2
 - 3.2.4 (1)
 - 5.3 (4)
 - 8.3 (5)
 - 8.3 (13), Table 8.1
 - 8.3 (13), Table 8.2
 - 8.3 (13), Table 8.3
 - 8.3 (13), Table 8.4
 - 8.4 (5)
 - 8.5.1 (4)
 - 9 (2)
 - 10.1.1 (1)
 - 10.1.4.2 (1)
 - A.1 (1), Note 2
 - A.1 (1), Note 3
 - A.6.4 (4)
 - E (1)
- (b) Decisions on the use of CYS EN 1993-1-3:2006 informative annexes (see Section NA 3)
- (c) References to non-contradictory complementary information to assist the user to apply CYS EN 1993-1-3:2006 (see Section NA 4)

NA 2 NATIONALLY DETERMINED PARAMETERS

NA 2.1 Clause 2 (3) P Basis of design

The values for the partial factors γ_{Mi} for buildings are:

$$\gamma_{M0} = 1,00;$$

$$\gamma_{M1} = 1,00;$$

$$\gamma_{M2} = 1,25.$$

NA 2.2 Clause 2 (5) Basis of design

The value of $\gamma_{M,ser}$ is 1,00.

NA 2.3 Clause 3.1 (3) Note 1 and Note 2 General

For steel strip less than 3 mm thick conforming to CYS EN 10025, if the width of the original strip is greater than or equal to 600 mm, the characteristic values shall be equal to 0,9 times those given in Table 3.1a (CYS).

Examples for other steel materials and products that may conform to the requirements of this standard are given in Table 3.1b (CYS).

Table 3.1a (CYS): Nominal values of basic yield strength f_{yb} and ultimate tensile strength f_u

Type of steel	Standard	Grade	f_{yb} N/mm ²	f_u N/mm ²
Hot rolled products of non-alloy structural steels. Part 2: Technical delivery conditions for non alloy structural steels	CYS EN 10025: Part 2	S 235	235	360
		S 275	275	430
		S 355	355	510
Hot-rolled products of structural steels. Part 3: Technical delivery conditions for normalized/normalized rolled weldable fine grain structural steels	CYS EN 10025: Part 3	S 275 N	275	370
		S 355 N	355	470
		S 420 N	420	520
		S 460 N	460	550
		S 275 NL	275	370
		S 355 NL	355	470
		S 420 NL	420	520
S 460 NL	460	550		
Hot-rolled products of structural steels. Part 4: Technical delivery conditions for thermomechanical rolled weldable fine grain structural steels	CYS EN 10025: Part 4	S 275 M	275	360
		S 355 M	355	450
		S 420 M	420	500
		S 460 M	460	530
		S 275 ML	275	360
		S 355 ML	355	450
		S 420 ML	420	500
		S 460 ML	460	530

Table 3.1b (CYS): Nominal values of basic yield strength f_{yb} and ultimate tensile strength f_u

Cold reduced steel sheet of structural quality	ISO 4997	CR 220	220	300
		CR 250	250	330
		CR 320	320	400
Continuous hot dip zinc coated carbon steel sheet of structural quality	CYS EN 10326	S220GD+Z	220	300
		S250GD+Z	250	330
		S280GD+Z	280	360
		S320GD+Z	320	390
		S350GD+Z	350	420
Hot-rolled flat products made of high yield strength steels for cold forming. Part 2: Delivery conditions for thermomechanically rolled steels	CYS EN 10149: Part 2	S 315 MC	315	390
		S 355 MC	355	430
		S 420 MC	420	480
		S 460 MC	460	520
		S 500 MC	500	550
		S 550 MC	550	600
		S 600 MC	600	650
		S 700 MC	700	750
	CYS EN 10149: Part 3	S 260 NC	260	370
		S 315 NC	315	430
		S 355 NC	355	470
		S 420 NC	420	530
Cold-rolled flat products made of high yield strength micro-alloyed steels for cold forming	CYS EN 10268	H240LA	240	340
		H280LA	280	370
		H320LA	320	400
		H360LA	360	430
		H400LA	400	460
Continuously hot-dip coated strip and sheet of steels with higher yield strength for cold forming	CYS EN 10292	H260LAD	240 2)	340 2)
		H300LAD	280 2)	370 2)
		H340LAD	320 2)	400 2)
		H380LAD	360 2)	430 2)
		H420LAD	400 2)	460 2)
Continuously hot-dipped zinc-aluminium (ZA) coated steel strip and sheet	CYS EN 10326	S220GD+ZA	220	300
		S250GD+ZA	250	330
		S280GD+ZA	280	360
		S320GD+ZA	320	390
		S350GD+ZA	350	420

Continuously hot-dipped aluminium-zinc (AZ) coated steel strip and sheet	CYS EN 10326	S220GD+AZ	220	300
		S250GD+AZ	250	330
		S280GD+AZ	280	360
		S320GD+AZ	320	390
		S350GD+AZ	350	420
Continuously hot-dipped zinc coated strip and sheet of mild steel for cold forming	CYS EN 10327	DX51D+Z	140 1)	270 1)
		DX52D+Z	140 1)	270 1)
		DX53D+Z	140 1)	270 1)

1) Minimum values of the yield strength and ultimate tensile strength are not given in the standard. For all steel grades a minimum value of 140 N/mm² for yield strength and 270 N/mm² for ultimate tensile strength may be assumed.

2) The yield strength values given in the names of the materials correspond to transversal tension. The values for longitudinal tension are given in the table.

NA 2.4 Clause 3.2.4 (1) Thickness and thickness tolerances

The following recommended ranges of core thickness t_{cor} shall be used:

- for sheeting and members: $0,45\text{mm} \leq t_{cor} \leq 15\text{ mm}$

- for connections: $0,45\text{mm} \leq t_{cor} \leq 4\text{ mm}$, see 8.1(2) of
CYS EN 1993-1-3:2006

NA 2.5 Clause 5.3 (4) Structural modeling for analysis

The recommended values $e_0/L = 1/600$ for elastic analysis and $e_0/L = 1/500$ for plastic analysis shall be used for sections assigned to LTB buckling curve a taken from 6.3.2.2 of CYS EN 1993-1-1:2005/A1:2014/AC:2009.

NA 2.6 Clause 8.3 (5) Connections with mechanical fasteners

The value of γ_{M2} is 1,25.

NA 2.7 Clause 8.3 (13), Table 8.1 Connections with mechanical fasteners

No further information is provided in this National Annex.

NA 2.8 Clause 8.3 (13), Table 8.2 Connections with mechanical fasteners

No further information is provided in this National Annex.

NA 2.9 Clause 8.3 (13), Table 8.3 Connections with mechanical fasteners

No further information is provided in this National Annex.

NA 2.10 Clause 8.3 (13), Table 8.4 Connections with mechanical fasteners

No further information is provided in this National Annex.

NA 2.11 Clause 8.4 (5) Spot welds

The value of γ_{M2} is 1,25.

NA 2.12 Clause 8.5.1 (4) General

The value of γ_{M2} is 1,25.

NA 2.13 Clause 9 (2) Design assisted by testing

No further information is provided in this National Annex.

NA 2.14 Clause 10.1.1 (1) General

No further information is provided in this National Annex.

NA 2.16 Clause 10.1.4.2 (1) Buckling resistance of free flange

The value of the reduction factor χ_{LT} shall be determined from 6.3.2.3 of CYS EN 1993-1-1:2005/A1:2014/AC:2009 using buckling curve b ($\alpha_{LT}=0,34$; $\bar{\lambda}_{LT,0} = 0,4$; $\beta=0,75$) for the relative slenderness $\bar{\lambda}_{fz}$ given in 10.1.4.2 (2) of CYS EN 1993-1-3:2006.

NA 2.17 Clause A.1 (1), Note 2 General

No further information is provided in this National Annex.

NA 2.18 Clause A.1 (1), Note 3 General

No further information is provided in this National Annex.

NA 2.19 Clause A.6.4 (4) Design values

The values for the partial factors γ_{Mi} shall be those chosen in the design by calculation given in section 2 or section 8 of CYS EN 1993-1-3:2006, unless other values result from the use of Annex D of CYS EN 1990:2002/A1:2005/AC:2010.

NA 2.20 Clause E (1) Simplified design for purlins

No further information is provided in this National Annex.

NA 3. DECISION ON THE USE OF INFORMATIVE ANNEXES

NA 3.1 Annex B

Annex B may be used

NA 3.2 Annex C

Annex C may be used

NA 3.3 Annex D

Annex D may be used

NA 3.4 Annex E

Annex E may be used

NA 4 REFERENCES TO NON-CONTRADICTORY COMPLEMENTARY INFORMATION

None

**NA to
CYS EN
1993-1-3:2006
(Including
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