

NATIONAL ANNEX

TO STANDARD

**SFS-EN 1993-1-3 EUROCODE 3: DESIGN OF STEEL STRUCTURES.
Part 1-3: General Rules. Supplementary rules for cold-formed members and sheeting**

Preface

This national annex is used together with Standard SFS - EN 1993-1-3:2006.

This national annex sets out:

- a) The national parameters for the following clauses in Standard SFS-EN 1993-1-3 where national selection is permitted:

- 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) Guidance for the use of Annexes A, B, C, D and E.

2 Basis of Design

2(3)P

The recommended values should be used.

The rules for sheeting given in the National Annex for standard SFS-EN 1990 may be used only in the cases, where the production of the sheeting is under the control of third party.

2(5)

The recommended value should be used.

3.1 General

3.1 (3), Note 1

Recommended value should be used if it can not be shown, that the values given in the table 3.1a are reached in the rolling direction and perpendicular to the rolling direction.

3.1(3), Note 2

Steels according to table 3.1b may be used. If higher values than given in the table 3.1b are used for steels according to standard SFS-EN 10327, fulfilment of the strength values should be verified by material certificates, which are valid for the material used.

The rules according to standard SFS-EN 1993-1-3 may be applied for steels according to standard SFS-EN 10025-5. The rules according to standard SFS-EN 1993-1-3 may be applied to steel according to standard SFS-EN 10025-6, if the limitations given in standards SFS-EN 1993-1-3 and SFS-EN 1993-1-12 are taken into account.

Other steel grades may be used according to valid product approval.

3.2.4 Thickness and thickness tolerances

3.2.4(1)

The recommended values should be used.

5.3 Structural modeling for analysis

5.3(4)

The recommended values should be used.

7.1 General

7.1(1)

Explanation:

Guidance given in the National Annex of standard SFS-EN 1993-1-1 should be applied. For crane supporting structures, see National Annex of standard SFS-EN 1993-6.

8.3 Connections made with mechanical fasteners

8.3(5), Table 8.1

The recommended value should be used.

The values given in the table 8.1a may be used provided, that valid product approval is available for the product. In this case the design tensile resistance for the rivet should be calculated as follows:

$$F_{t,Rd} = F_{v,Rd} = F_{v,Rk} / \gamma_{M2} \quad (8.1 \text{ FI})$$

Table 8.1a (FI) Characteristic shear strengths for blind rivet $F_{v,Rk}$ (N/rivet)

Diameter of the shank (mm)	Material of the rivet ¹⁾			
	Steel	Stainless steel	Monel-metal ²⁾	Aluminium
4,0	1600	2800	2400	800
4,8	2400	4200	3500	1100
5,0	2600	4600	-	-
6,4	4400	-	6200	2000

1) According to the applied standard or according to certified product declaration.
2) Nickel-copper alloy containing two parts nickel and one part copper.

Greater values than given in the table 8.1a may be given in the valid product approval, if they are based on testing and the tests results are analysed according to Annex D of SFS-EN 1990 taking National Annex for SFS-EN 1990 into account. In addition rules given in Annex A of SFS-EN 1993-1-3 should be taken into account, if appropriate.

8.3(5), Table 8.2

The values given in the table 8.2a may be used provided, that the valid product approval is available for the product. In this case the design tensile resistance for the screw should be calculated as follows:

$$F_{t,Rd} = 1,2F_{v,Rd} = 1,2F_{v,Rk} / \gamma_{M2} \quad (8.2 \text{ FI})$$

Table 8.2a (FI) Characteristic shear strengths for shear forming self-tapping screws and for self-drilling self-tapping screws $F_{v,Rk}$ (N/screw)

The outer diameter of the thread (mm)	Material of the screw ¹⁾	
	Hardened steel	Stainless steel
4,8	5200	4600
5,5	7200	6500
6,3	9800	8500
8,0	16300	14300

1) According to the applied standard or according to certified product declaration.

Greater values than given in the table 8.2a (FI) may be given in the valid product approval, if they are based on testing and the tests results are analysed according to Annex D of SFS-EN 1990 taking National Annex for SFS-EN 1990 into account. In addition rules given in Annex A of SFS-EN 1993-1-3 should be taken into account, if appropriate.

8.3(5), Table 8.3

Values for shear resistance, put-out resistance and tension resistance of the cartridge fired pins given in the product approval may be used.

8.3(5), Table 8.4

The recommended value should be used. Additional information on pull-through resistance of bolts loaded in tension is not given.

8.4(5), Table 8.5

The recommended value should be used.

8.5 Lab welds

8.5.1(4)

The recommended value should be used.

9. Design assisted by testing

9(2), Note 1

Further information on testing is not given in the National Annex.

10.1 Beams restrained by sheeting

10.1.1(1)

Rules for testing are not given in the National Annex. The guidance given in the Annex A should also be followed.

10.1.4.2 Buckling resistance of free flange

10.1.4.2(1)

The recommended values should be used.

Annex A

Testing procedures

A.1(1), Note 2

Additional information is not given.

A.1(1), Note 3

Conversion factors are not given.

A.6.4(4)

Partial factor should be determined based on testing according to Annex D of SFS-EN 1990. In addition the rules given in Annex A of SFS-EN 1993-1-3 should be used, if applicable. If only the characteristic value without design formula is determined based on testing, then the recommended values for γ_M should be used.

Annex B**Durability of fasteners**

Annex B may be used.

Annex C**Cross-section constants for thin-walled cross-sections**

Annex C may be used.

Annex D**Mixed effective width/effective thickness method for outstand elements**

Annex D may be used.

Annex E**Simplified design for purlins****E(1)**

The method in Annex E shall not be used.