

CYS National Annex to CYS EN 1993-1-11:2006

Eurocode 3: Design of steel structures

Part 1-11: Design of structures with tension components

·

·

DfYdUFYXVmi

9i fcWXYg'7ca a]hHYZGMVbh]ZWUbXHWb]WU'

7\ Ua VYf'cZ7ndfi gi bXYf UA]b]gfmcZ=blmf]cfig'Dfc[fUa a Y



NATIONAL ANNEX

TO

**CYS EN 1993-1-11: 2006 Eurocode 3: Design of steel
structures**

Part 1-11: Design of structures with tension components

**This National Annex has been approved by the Board of Governors of the Cyprus
Organisation for Standardisation on 11/06/2010.**

INTRODUCTION

This National Annex has been prepared by the Eurocodes Committee of the Technical Chamber of Cyprus which was commissioned by the Ministry of Interior of the Republic of Cyprus.

NA 1 SCOPE

This National Annex is to be used together with CYS EN 1993-1-11: 2006.

This National Annex gives:

- (a) Nationally determined parameters for the following clauses of CYS EN 1993-1-11: 2006 where National choice is allowed (see Section NA 2):
- 2.3.6(1)
 - 2.3.6(2)
 - 2.4.1(1)
 - 3.1(1)
 - 4.4(2)
 - 4.5(4)
 - 5.2(3)
 - 5.3(2)
 - 6.2(2)
 - 6.3.2(1)
 - 6.3.4(1)
 - 6.4.1(1)P
 - 7.2(2)
 - A.4.5.1(1)
 - A.4.5.2(1)
 - B(6)
- (b) Decisions on the use of informative Annexes A, B and C to CYS EN 1993-1-11: 2006 (see Section NA 3).
- (c) References to non-contradictory complementary information to assist the user to apply CYS EN 1993-1-11: 2006 (see Section NA 4).

NA 2 NATIONALLY DETERMINED PARAMETERS

NA 2.1 Clause 2.3.6(1) Replacement and loss of tension components

No further information is given on defining transient loading conditions and partial factors for replacement of at least one tension component.

NA 2.2 Clause 2.3.6(2) Replacement and loss of tension components

No further information is given where an accidental design situation of the loss of any tension component should apply or of any protection requirements and loading conditions.

NA 2.11 Clause 6.3.4(1) Design of saddles

The recommended value of $k = 1,10$ shall be used.

NA 2.12 Clause 6.4.1(1)P Slipping of clamps

The recommended partial factor value of $\gamma_{M,fr} = 1,65$ shall be used.

NA 2.13 Clause 7.2(2) Stress Limits

The recommended stress limits f_{const} in Table 2.2 (CYS) for the construction phase and the recommended stress limits f_{SLS} in Table 2.3 (CYS) of CYS EN 1993-1-11: 2006 for service conditions shall be used.

Table 2.2 (CYS): Stress limits f_{const} for the construction phase

Stage of installation	$f_{const.}$
First tension components for only a few hours	$0,60 \sigma_{uk}$
After installment of other tension components	$0,55 \sigma_{uk}$

The stress limits follow from

$$f_{const} = \frac{\sigma_{uk}}{1,50 \gamma_R \gamma_F} = \frac{0,66 \sigma_{uk}}{\gamma_R \gamma_F} \quad (2.1)$$

With $\gamma_R \times \gamma_F = 1,0 \times 1,10 = 1,10$ for short term situations

$\gamma_R \times \gamma_F = 1,0 \times 1,20 = 1,20$ for long term situations

Table 2.3 (CYS): Stress limits f_{SLS} for service conditions

Loading conditions	f_{SLS}
Fatigue design including bending stresses *)	$0,50 \sigma_{uk}$
Fatigue design without bending stresses	$0,45 \sigma_{uk}$
*) Bending stresses may be reduced by detailing measures, see 7.1 Error! Reference source not found. (4).	

The stress limits follow from

$$f_{SLS} = \frac{\sigma_{uk}}{1,50 \gamma_R \gamma_F} = \frac{0,66 \sigma_{uk}}{\gamma_R \gamma_F} \quad (2.2)$$

with $\gamma_R \times \gamma_F = 0,9 \times 1,48 = 1,33$ with bending stresses

$\gamma_R \times \gamma_F = 1,0 \times 1,48 = 1,48$ without bending stresses

where $\gamma_F \approx \gamma_Q = 1,50 \approx 1,48$

The stress limit $f_{SLS} = 0,45 \sigma_{uk}$ is used for testing, see Annex A of CYS EN 1993-1-11: 2006.

NA 2.14 Clause A.4.5.1(1) Waterproofing

No further details are given for tests.

NA 2.15 Clause A.4.5.2(1) Corrosion protection of barriers

No further details are given for tests.

NA 2.16 Clause B(6) Transport, storage, handling

No further guidance is given on monitoring and inspections.

NA 3 DECISION ON THE USE OF INFORMATIVE ANNEXES A, B AND C

NA 3.1 Annex A

Informative Annex A may be used.

NA 3.2 Annex B

Informative Annex B may be used.

NA 3.3 Annex C

Informative Annex C may be used.

NA 4 REFERENCES TO NON-CONTRADICTORY COMPLEMENTARY INFORMATION

None

CYPRUS ORGANISATION FOR STANDARDISATION

Limassol Avenue and Kosta Anaxagora 30,

2nd & 3rd Floor, 2014 Nicosia, Cyprus

P.O.BOX.16197, 2086 Nicosia, Cyprus

Tel: +357 22 411411 Fax: +357 22 411511

E-Mail: cystandards@cys.org.cy

Website: www.cys.org.cy
