NA to
CYS EN
1993-4-3:2007
(Including
AC:2009)

NATIONAL ANNEX TO CYS EN 1993-4-3:2007 (Including AC:2009)

Eurocode 3: Design of steel structures

Part 4-3: Pipelines

CYPRUS ORGANISATION FOR STANDARDISATION

NATIONAL ANNEX

TO

CYS EN 1993-4-3:2007+AC:2009

Eurocode 3: Design of steel structures

Part 4-3: Pipelines

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

INTRODUCTION

This National Annex has been prepared by the CYS TC18 National Standardisation Technical Committee of the Cyprus Organisation for Standardisation. (CYS)

NA 1 SCOPE

This National Annex is to be used together with CYS EN 1993-4-3:2007+AC:2009. Any reference in the rest of this text to CYS EN 1993-4-3:2007 means the above document.

This National Annex gives:

(a) Nationally determined parameters for the following clauses of CYS EN 1993-4-3:2007 where National choice is allowed (see Section NA 2)

- 2.3 (2)
- 3.2 (1)P, (2)P, (3),(4)
- 3.3 (2), (3), (4)
- 3.4 (3)
- 4.2 (1)P
- 5.1.1 (2), (3), (4), (5), (6), (9), (10), (11), (12), (13)
- 5.2.3 (2)
- 5.2.4 (1)

(b) Decisions on the use of the Informative Annexes A, B and C (see Section NA 3)

(c) References to non-contradictory complementary information to assist the user to apply CYS EN 1993-4-3:2007. In this National Annex such information is provided for the following clauses in CYS EN 1993-4-3:2007 (see Section NA 4)

- None

NA 2 NATIONALLY DETERMINED PARAMETERS

NA 2.1 Clause 2.3 (2) Reliability differentiation

No minimum level of reliability for different types of pipelines is provided.

NA 2.2 Clause 3.2 (1)P Mechanical properties of pipeline steels

The value of γ_M is specified as : $\gamma_M = 1{,}00$

NA 2.3 Clause 3.2 (2)P Mechanical properties of pipeline steels

The value Δf is specified as $\Delta f = 50$ Mpa.

NA 2.4 Clause 3.2 (3) Mechanical properties of pipeline steels

The value $f_{u,min}/f_{y,min}$ is specified as $f_{u,min}/f_{y,min} = 1{,}1$.

NA 2.5 Clause 3.2 (4) Mechanical properties of pipeline steels

The value $\varepsilon_{u,min}$ is specified as $\varepsilon_{u,min} = 20$ %.

NA 2.6 Clause 3.3 (2) Mechanical properties of welds

The value x is specified as $x = 15$ %.

NA 2.7 Clause 3.3 (3) Mechanical properties of welds

The value ε is specified as ε= 2 %.

NA 2.8 Clause 3.3 (4) Mechanical properties of welds

The value y is specified as y= 15 %.

NA 2.9 Clause 3.4 (3) Toughness requirements of plate materials and welds

The value z is specified as z= 0,5 %.

NA 2.10 Clause 4.2 (1)P Partial factors for actions

No partial safety factors are provided.

NA 2.11 Clause 5.1.1 (2) Simplified calculation method for ultimate limit state design

The numerical values of γ_F are specified as follows: γ_{F1}= 1,39; γ_{F2}= 1,50; γ_{F3}= 1,82.

NA 2.12 Clause 5.1.1 (3) Simplified calculation method for ultimate limit state design

The values of D_e / t_{min} are specified as follows: val240= 70; val360= 80; val415= 92; val480= 106.

NA 2.13 Clause 5.1.1 (4) Simplified calculation method for ultimate limit state design

The values of D_{cover} and G_{eff} are specified as follows: D_{cover}= 2,5 m and G_{eff}= 65 kN/m^2.

NA 2.14 Clause 5.1.1 (5) Simplified calculation method for ultimate limit state design

The value of $t_{spec,min}$ is specified as $t_{spec,min}$= 4,8 mm.

NA 2.15 Clause 5.1.1 (6) Simplified calculation method for ultimate limit state design

The values of d_s and ℓ are specified as follows: d_s= 100 mm and ℓ= 20 m.

NA 2.16 Clause 5.1.1 (9) Simplified calculation method for ultimate limit state design

The value of x is specified as x= 20.

NA 2.17 Clause 5.1.1 (10) Simplified calculation method for ultimate limit state design

The value of T is specified as T= 35º C.

NA 2.18 Clause 5.1.1 (11) Simplified calculation method for ultimate limit state design

The values of T_1 and T_2 are specified as follows: T_1= - 40º C and T_2= + 60º C.

NA 2.19 Clause 5.1.1 (12) Simplified calculation method for ultimate limit state design

The values of y, T_3, D_1, D_2 and l are specified as follows: y= 20; T_3= 20º C; D_1= 300 mm; D_2= 450 mm and ℓ= 2,0 m.

NA 2.20 Clause 5.1.1 (13) Simplified calculation method for ultimate limit state design

The values of z, γ_F, D_2 and D_e / t_{min} are specified as follows: z= 20; γ_F= 1,82; D_2= 450 mm; val240= 57; val360= 61; val415= 70; val480= 81.

NA 2.21 Clause 5.2.3 (2) LS3: Deformation

The value of x is specified as x= 0,05.

NA 2.22 Clause 5.2.4 (1) LS4: Fatigue

No other standards for fatigue loading are provided.

NA 3 DECISION ON USE OF THE INFORMATIVE ANNEXES

NA 3.1 Annex A

Annex A may be used

NA 3.2 Annex B

Annex B may be used

NA 3.3 Annex C

Annex C may be used

NA 4 REFERENCES TO NON-CONTRADICTORY COMPLEMENTARY INFORMATION

None

blank

NA to CYS EN 1993-4-3:2007 (Including AC:2009)

CYPRUS ORGANISATION FOR STANDARDISATION

Limassol Avenue and Kosta Anaxagora 30,
2nd & 3rd Floor, 2014 Strovolos, 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