NATIONAL ANNEX

TO

CYS EN 1993-4-2:2007 Eurocode 3: Design of steel structures

Part 4-2: Tanks

Public Enquiry Draft

Period of Enquiry

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Readers are advised that this is a draft document and subject to change

Prepared by: Eurocodes Committee
Ministry of Interior / Technical Chamber of Cyprus

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 1993-4-2:2007

This National Annex gives:

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

- 2.2 (1)
- 2.2 (3)
- 2.9.2.1 (1)P
- 2.9.2.1 (2)P
- 2.9.2.1 (3)P
- 2.9.2.2 (3)P
- 2.9.3 (2)
- 3.3 (3)
- 4.1.4 (3)
- 4.3.1 (6)
- 4.3.1 (8)

(b) References to non-contradictory complementary information to assist the user to apply CYS EN 1993-4-2:2007. In this National Annex such information is provided for the following clauses in CYS EN 1993-4-2:2007 (see Section NA 3)

- None

NA 2 NATIONALLY DETERMINED PARAMETERS

NA 2.1 Clause 2.2 (1) Reliability differentiation

No consequence classes for tanks are defined.

NA 2.2 Clause 2.2 (3) Reliability differentiation

No information on the consequence classes is provided. The following classification is adopted:

– **Consequence Class 3**: Tanks storing liquids or liquefied gases with toxic or explosive potential and large size tanks with flammable or water-polluting liquids in urban areas. Emergency loadings should be taken into account for these structures where necessary, see annex A.2.14 of EN 1993-4-2:2007.

– **Consequence Class 2**: Medium size tanks with flammable or water-polluting liquids in urban areas.

– **Consequence Class 1**: Agricultural tanks or tanks containing water

NA 2.3 Clause 2.9.2.1 (1)P Partial factors for actions on tanks

Table 2.1 (CYS) provides the partial safety factors γ_F.

NA 2.4 Clause 2.9.2.1 (2)P Partial factors for actions on tanks

Table 2.1 (CYS) provides the partial safety factors γ_F.

NA 2.5 Clause 2.9.2.1 (3)P Partial factors for actions on tanks

Table 2.1 (CYS) provides the partial safety factors γ_F.

Table 2.1 (CYS): Values for the partial factors for actions on tanks for persistent and transient design situations and for accidental design situation

design situation	liquid type	recommended values for γ_F in case of variable actions from liquids	recommended values for γ_F in case of permanent actions
liquid induced loads during operation	toxic, explosive or dangerous liquids	1,40	1,35
	flammable liquids	1,30	1,35
	other liquids	1,20	1,35
liquid induced loads during test	all liquids	1,00	1,35
accidental actions	all liquids	1,00	

NA 2.6 Clause 2.9.2.2 (3)P Partial factors for resistances

Table 2.2 (CYS) provides the numerical values of partial factors γ_{Mi} for tanks.

Table 2.2 (CYS): Numerical values for the partial factors for resistance

γ_{M0} = 1,00	γ_{M1} = 1,10	γ_{M2} = 1,25
γ_{M4} = 1,00	γ_{M5} = 1,25	γ_{M6} = 1,10

NA 2.7 Clause 2.9.3 (2) Serviceability limit states

The value for the partial factor for serviceability γ_{Mser} is specified as γ_{Mser}= 1.

NA 2.8 Clause 3.3 (3) Steels for pressure purposes

No further information is provided.

NA 2.9 Clause 4.1.4 (3) Fatigue

The value for the number N_f of cycles is specified as N_f= 10000.

NA 2.10 Clause 4.3.1 (6) Modelling of the structural box

The value of n_S is specified as n_S= 40.

NA 2.11 Clause 4.3.1 (8) Modelling of the structural box

The value of n_{ew} is specified as n_{ew}= 15.

NA 3 REFERENCES TO NON-CONTRADICTORY COMPLEMENTARY INFORMATION

None