

***NATIONAL ANNEX
TO
CYS EN 1994-1-2: 2005
(Including Amendment
A1:2014 and
Corrigendum AC:2008)***

***Eurocode 4: Design of
Composite steel and
concrete structures***

***Part 1-2: General rules
– Structural fire design***

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TO
CYS EN 1994-1-2: 2005 (Including **A1:2014 and **AC:2008**)**
Eurocode 4: Design of Composite steel and concrete
structures
Part 1-2: General rules – Structural fire design

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 1 SCOPE

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INTRODUCTION

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

NA 1 SCOPE

This National Annex is to be used together with **CYS EN 1994-1-2:2005+AC:2008+A1:2014**.

Any reference in the rest of text to **CYS EN 1994-1-2:2005** means the above document.

This National Annex gives:

- (a) Nationally determined parameters for the following clauses of **CYS EN 1994-1-2:2005** where National choice is allowed (see Section NA 2):
- 1.1 (16)
 - 2.1.3 (2)
 - 2.3 (1) P
 - 2.3 (2) P
 - 2.4.2 (3)
 - 3.3.2 (9)
 - 4.1 (1) P
 - 4.3.5.1 (10)
- (b) Decisions on the use of the Informative Annex A, B, C, D, E, F, G, H and I (see section NA3).
- (c) References to non-contradictory complementary information to assist the user to apply CYS EN **1994-1-2:2005** (see Section NA 4).

NA 2 NATIONALLY DETERMINED PARAMETERS

NA 2.1 Clause 1.1(16) General scope:

No further information concerning the decision to use of Concrete Strength Class higher than C50/60 is provided.

NA 2.2 Clause 2.1.3 (2): Parametric fire exposure.

The values defined for symbol $\Delta\theta_1$ and $\Delta\theta_2$ are $\Delta\theta_1$ is set to 200K and $\Delta\theta_2$ is set to 240K.

NA 2.3 Clause 2.3.1 (P): Design values of materials or material properties.

The value defined for mechanical of steel and concrete of the partial factor for the fire situation are $\gamma_{M,fi,a}$, $\gamma_{M,fi,s}$, $\gamma_{M,fi,c}$ and $\gamma_{M,fi,v}$ is set to 1.0.

NA 2.4 Clause 2.3.2 (P): Design values of thermal properties material.

The value defined for thermal properties of steel and concrete for the fire situation symbol $\gamma_{M,fi}$ is set to 1.0.

NA 2.5 Clause 2.4.2.3 Member Analysis

The value defined for symbol γ_G is set to 1.35 and the recommended value for γ_Q is set to 1.5. As a simplification the value defined of symbol η_{fi} is set to 0.65 except for imposed loads where the recommended value is set to 0.7.

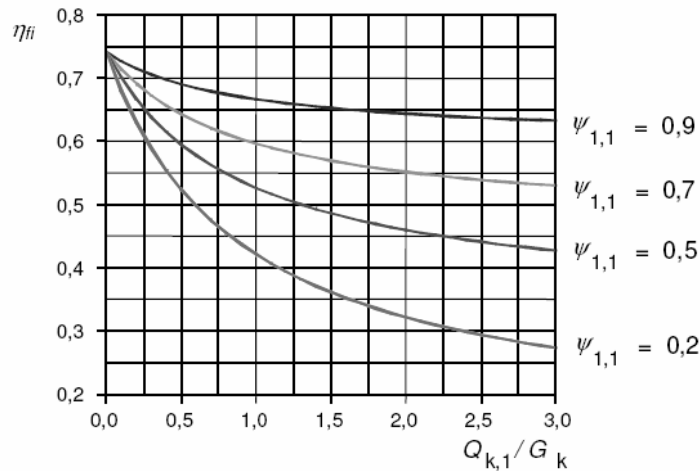


Figure 2.1 (CYS): Variation of the reduction factor η_s with the load ratio $Q_{k,1}/G_k$

NA 2.6 Clause 3.3.2(9) Normal Weight Concrete

The use of the upper limit of λ_c , thermal conductivity of normal weight concrete is recommended.

NA 2.7 Clause 4.1(1) P Design procedures.

No further information concerning the decision to use advanced calculation model is provided.

NA 2.8 Clause 4.3.5.1 (10) Composite column, structural behaviour.

The defined values for symbols L_{ei} and L_{et} are L_{ei} is set to 0.5 times the system length L and L_{et} is set to 0.7 times the system length L .

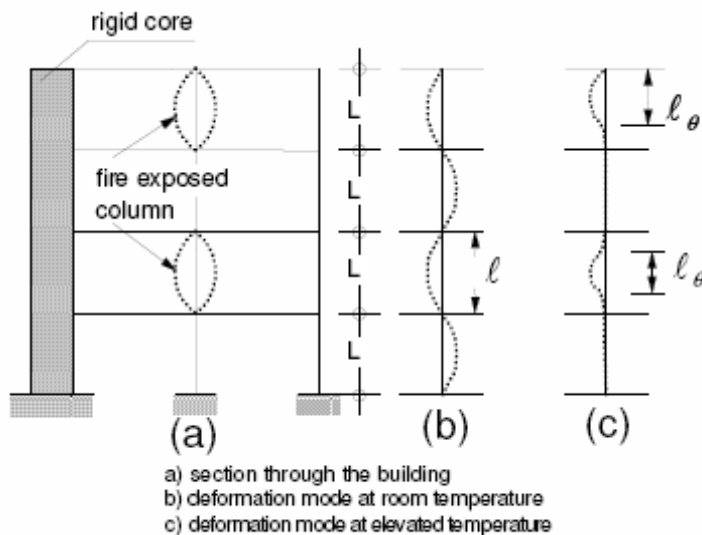


Figure 4.6 (CYS): Structural behaviour of columns in braced frames

NA 3 Guidance on using Informative Annexes A, B, C, D, E, F G, H and I.

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 3.4 Annex D

Annex D may be used.

NA 3.5 Annex E

Annex E may be used.

NA 3.6 Annex F

Annex F may be used.

NA 3.7 NA 4 Annex G

Annex G may be used.

NA 3.8 Annex H

Annex H may be used.

NA 3.9 Annex I

Annex I may be used.

NA 4 References to Non-Contradictory Complementary Information

None.

**NA to
CYS EN
1994-1-2:2004
(Including
A1:2014 and
AC:2008)**

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