

# **CYS National Annex to CYS EN 1996-1-2:2005**

## **Eurocode 6:**

### **Design of masonry structures**

#### **Part 1-2:**

#### **General rules- Structural fire design**

Prepared by

Eurocodes Committee, Scientific and Technical

Chamber of Cyprus under a Ministry of Interior's Programme



**NATIONAL ANNEX**

**TO**

**CYS EN 1996-1-2:2005 Eurocode 6: Design of masonry  
structures**

**Part1-2: General rules-Structural fire design**

**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 1996-1-1:2005

This National Annex gives:

- (a) Nationally determined parameters for the following clauses of CYS EN 1996-1-2:2005 where National choice is allowed (see Section NA 2)
  - 2.2 (2)
  - 2.3 (2)P
  - 2.4.2 (3)
  - 3.3.3.1 (1)
  - 3.3.3.2 (1)
  - 3.3.3.3 (1)
  - 4.5 (3)
  - Annex B
  - Annex C
- (b) Decisions on the use of the Informative Annexes A, C, D, and E (see Section NA 3)
- (c) References to non-contradictory complementary information to assist the user to apply CYS EN 1996-1-2:2005. In this National Annex such information is not provided (see Section NA 4).

## NA 2 NATIONALLY DETERMINED PARAMETERS

### NA 2.1 Clause 2.2 Actions

(2) The emissivity value,  $\epsilon_m$ , of a masonry surface depends on the material of the masonry and is given in CYS EN 1991-1-2.

### NA 2.2 Clause 2.3 Design values of material properties

(2)P The recommended value of  $\gamma_{M,fl}=1.0$  for both mechanical and thermal properties of masonry is adopted.

### NA 2.3 Clause 2.4.2 Member analysis

(3) The recommended values for partial reduction factors are given in EN 1990. The choice of load combinations (6.10) or (6.10)a and (6.10)b in EN 1990 is found in the corresponding National Annex.

### NA 2.4 Clause 3.3.3.1 Thermal elongation

(1) The thermal elongation of masonry should be determined from tests or from a database. The variation of thermal elongation with temperature for some materials is given in Annex D.

### NA 2.5 Clause 3.3.3.2 Specific heat capacity

(1) The specific heat capacity of masonry,  $c_a$ , should be determined from tests or from a database. The variation of specific heat capacity with temperature for some materials is given in Annex D.

### NA 2.6 Clause 3.3.3.3 Thermal conductivity

(1) The thermal conductivity,  $\lambda_a$ , of masonry should be determined from tests or from a database. The variation of thermal conductivity with temperature for some materials is given in Annex D.

### NA 2.7 Clause 4.5 Assessment by tabulated data

(3) The safety factor value for use in fire tests,  $\gamma_{G10}$  may be taken between 3 and 5.

### NA 2.8 Clause Annex B- Tabulated fire resistance of masonry

The recommended values of  $t_F$ ,  $l_F$  given in Tables N.B.1 to N.B.5 (pg 31-62) are adopted.

### NA 2.9 Clause Annex C- Simplified calculation model

The recommended values of constant  $c$  are given in Table 1 (CYS) below.

**Table 1 (CYS). Values of constant,  $c$ , and temperature  $\theta_1$  and  $\theta_2$  by masonry material**

Masonry units and mortar (surface unprotected) according to 1.1 (2)	Values of constant $c$	Temperature °C	
		$\theta_2$	$\theta_1$
Clay units with general purpose mortar	$c_{cl}$	600	100
Calcium silicate units with thin layer mortar	$c_{cs}$	500	100
Lightweight aggregate units (pumice) with general purpose mortar	$c_{la}$	400	100
Dense aggregate units with general purpose mortar	$c_{da}$	500	100
Autoclaved aerated units with thin layer mortar	$c_{aac}$	400	200

## NA 3 DECISION ON USE OF THE INFORMATIVE ANNEXES

### NA 3.1 Annex A

Annex A may be used

### NA 3.2 Annex C

Annex C may be used

### NA 3.3 Annex D

Annex D may be used

### NA 3.4 Annex E

Annex E may be used

## NA 4 REFERENCES TO NON-CONTRADICTIONARY COMPLEMENTARY INFORMATION

None



**CYPRUS ORGANISATION FOR STANDARDISATION**

Limassol Avenue and Kosta Anaxagora 30,  
2<sup>nd</sup> & 3<sup>rd</sup> 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](mailto:cystandards@cys.org.cy)

Website: [www.cys.org.cy](http://www.cys.org.cy)

---