

**NATIONAL ANNEX
TO
CYS EN 1998-3:2005 Eurocode 8: Design of structures for
earthquake resistance
Part3: Assessment and retrofitting of buildings**

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**

PUBLIC ENQUIRY DRAFT

National Annex to CYS EN 1998-3:2005 Eurocode 8: Design of Structures for Earthquake Resistance
Part 3: Assessment and retrofitting of buildings

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 1998-3:2005

This National Annex gives:

- (a) Nationally determined parameters for the following clauses of CYS EN 1998-3:2005 where National choice is allowed (see Section NA 2)
 - 1.1 (4)
 - 2.1 (2)P
 - 2.1 (3)P
 - 2.2.1 (7)P
 - 3.3.1 (4)
 - 3.4.4 (1)
 - 4.4.2 (1)P
 - 4.4.4.5 (2)P
- (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 1998-3:2005 (see Section NA 4).

NA 2 NATIONALLY DETERMINED PARAMETERS

NA 2.1 Clause 1.1 (4) Scope of CYS EN 1998-3:2005

Informative Annex A, Informative Annex B and Informative Annex C of CYS EN 1998-3:2005 may be used as Informative Annexes.

NA 2.2 Clause 2.1 Fundamental requirements

- (2)P Buildings of importance class IV (as defined in Table 4.3 of CYS EN 1998-1:2004) should be checked for all three Limit States defined in 2.1(1)P of CYS EN 1998-3:2005. For the other importance classes the number of limit states to be checked shall be agreed between the owner and the designer.
- (3)P The return periods specified for the various Limit States shall be agreed between the owner and the designer. The protection normally considered appropriate for ordinary new buildings is considered to be achieved by selecting the following values for the return periods: 2.475 years, corresponding to a probability of exceedance of 2% in 50 years for the LS of Near Collapse (NC), 475 years, corresponding to a probability of exceedance of 10% in 50 years for the LS of significant Damage (SD), and 225 years, corresponding to a probability of exceedance of 20% in 50 years for the LS of Damage Limitation (DL).

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NA 2.3 Clause 2.2.1 (7)P General

The values of the partial factors specified in clauses 5.2.4(3), 6.1.3(1), 7.1.3(1) and 9.6(3) of CYS EN1998-1:2004 and its national annex should be used in the calculation of strength capacities of brittle “primary seismic” elements.

NA 2.4 Clause 3.3.1 (4) Knowledge levels – Definition of knowledge levels

Table 3.1 (CYS) defines values for the symbols of Table 3.1 of CYS EN 1998-3:2005.

Table 3.2 (CYS): Recommended minimum requirements for different levels of inspection and testing

| Knowledge Level | Geometry | Details | Materials | Analysis | CF |
|-----------------|----------|--|--|----------|------|
| KL1 | | Simulated design in accordance with relevant practice and from limited in-situ inspection | Default values in accordance with standards of the time of construction and from limited in-situ testing | LF-MRS | 1,35 |
| KL2 | | From incomplete original detailed construction drawings with limited in-situ inspection or From extended in-situ inspection | From original design specifications with limited in-situ testing or from extended in-situ testing | ALL | 1,20 |
| KL3 | | From original detailed construction drawings with limited in-situ inspection or from comprehensive in-situ inspection | From original test reports with limited in-situ testing or from comprehensive in-situ testing | ALL | 1,00 |

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NA 2.5 Clause 3.4.4 (1) Definition of the levels of inspection and testing

Table 3.2 (CYS) provides the minimum values for the amount of inspection and testing to be used.

Table 3.2 (CYS): Recommended minimum requirements for different levels of inspection and testing

| Level of inspection and testing | Inspection (of details) | Testing (of materials) |
|---------------------------------|--|----------------------------|
| | For each type of primary element (beam, column, wall): | |
| | Percentage of elements that are checked for details | Material samples per floor |
| Limited | 20 | 1 |
| Extended | 50 | 2 |
| Comprehensive | 80 | 3 |

NA 2.6 Clause 4.4.2 (1)P Lateral force analysis

The value of the ratio ρ_{max}/ρ_{min} is specified as 2,5.

NA 2.7 Clause 4.4.4.5 (2)P Procedure for estimation of torsional and higher mode effects

No reference to complementary information is made

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

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