NATIONAL ANNEX

TO

CYS EN 1991-1-3:2003 (Including A1:2015 and AC:2009)

Eurocode 1: Actions on Structures

Part 1-3: General Actions – Snow Loads

CYPRUS ORGANISATION FOR STANDARDISATION

NATIONAL ANNEX

TO

CYS EN 1991-1-3:2003
(Including A1:2015 and AC:2009)

Eurocode 1: Actions on Structures
Part 1-3: General Actions – Snow Loads

This National Annex has been approved by the Board of Directors of the Cyprus Organisation for Standardisation (CYS) on 24.01.2020.

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INTRODUCTION

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

NA 1.1 SCOPE

This National Annex is to be used together with CYS EN 1991-1-3:2003. Any reference in the rest of this text to CYS EN 1991-1-3:2002 means the above document.

This National Annex gives:

(a) National determined parameters for the following clauses of CYS EN 1991-1-3:2003 where national choices is allowed (see Section NA2)

- 1.1(2)
- 1.1 (3)
- 1.1(4)
- 2(3)
- 2(4)
- 3.3(1)
- 3.3(2)
- 3.3(3)
- 4.1(1)
- 4.1(2)
- 4.2(1)
- 4.3(1)
- 5.2(2)
- 5.2(5)
- 5.2(6)
- 5.2(7)
- 5.2(8),
- 5.3.1(1),
- Note to Table 5.2,
- 5.3.2(2)
- 5.3.3(4)
- 5.3.4(3)
- 5.3.4(4)
- 5.3.5(1)
- 5.3.5(3)
- 5.3.6(1)
- 5.3.6(3)
- 6.2(2)
- 6.3(1)
- 6.3(2)
- A(1) (through Table A1)

(b) Guidance on use of the informative Annexes, C, D and E (see Section NA 3)

(c) References to non-contradictory complementary information applicable to buildings and civil engineering works (see Section NA 4).

NA 2 NATIONALLY DETERMINED PARAMETERS

NA 2.1 Clause 1.1(2) General. Treatment of snow load for altitudes above 1500 m

For altitudes above 1500m a special study must be carried out regarding the snow load. Data regarding snow depth, snow drift and exceptional snow load must be obtained from responsible authority.

NA 2.2 Clause 1.1(3) General.

Annex A shall be used.

NA 2.3 Clause 1.1(4) General. Use of Annex B

Annex B shall be used

NA 2.4 Clause 2(3) Classification of actions. Exceptional snow loads

Exceptional snow loads may be treated as accidental load for locations with altitude above 1000 m.

NA 2.5 Clause 2(4) Classification of actions. Exceptional snowdrift

Exceptional snow drifts may be treated as accidental load for locations with altitude above 1000 m

NA 2.6 Clause 3.3(1) Exceptional Conditions-For Locations where exceptional snow falls may occur but not exceptional snow drifts

The design situations to be considered are persistent/transient.

NA 2.7 Clause 3.3(2) Exceptional Conditions-For Locations where exceptional snow falls are unlikely to occur but exceptional snow drifts may occur

Annex B shall be used

NA 2.8 Clause 3.3(3) Define which design situation to apply for a particular local effect

The design situations to be considered are persistent / transient.

NA 2.9 Clause 4.1(1) Snow load on the ground-Characteristic values.

The characteristic value of snow load (s_k) must be obtained from the formula of Annex C Table C.1 for Mediterranean Region. The zone number all over the island must be taken equal Z=1

$$s_k=0.289*\approx 1+(A/452)^2 \ldots$$

Where:

s_k is the characteristic snow load on the ground (KN/m^2)
A is the site attitude above sea level (m)

NA 2.10 Clause 4.1(2) Snow load on the ground- Characteristic values.

No further guidance is available

NA 2.11 Clause 4.2(1) Snow load on the ground. Other representative values

Table 4.1 of CYS EN 1991-1-3 should be used

NA 2.12 Clause 4.3(1) Snow load on the ground. Treatment of exceptional snow load on the ground

The value of the coefficient and location of its application for exceptional snow loads C_{esl} = 2.0

NA 2.13 Clause 5.2(2) Snow load on the roof. Load Arrangement

Annex B shall be used.

NA 2.14 Clause 5.2(5) Snow load on the roof. Load Arrangement

The snow loads must be arranges in such a way so the strength values to be ultimate.

NA 2.15 Clause 5.2(6) Snow load on the roof. Load Arrangement

No further guidance available.

NA 2.16 Clause 5.2(7) Snow load on the roof. Load Arrangement

The values of C_e should be taken from table 5.1 of CYS EN 1991-1-3.

NA 2.17 Clause 5.2(8) Thermal Coefficient

The thermal coefficient is C_t= 1,0

NA 2.18 Clause 5.3. 1(1) Roof shape Coefficients-General

Annex B shall be used.

NA 2.19 Note to Table 5.2

The value of the coefficient μ_1 (0°) is = 0.8

NA 2.20 Clause 5.3.2 (2) Monopitch Roofs

No further guidance available

NA 2.21 Clause 5.3.3(4) Roof shape coefficients. Drifted load arrangement

No further guidance available.

NA 2.22 Clause 5.3.4(3) Roof shape coefficients. Multi span roof

The Annex B should be used to determine the load case due to drifting.

NA 2.23 Clause 5.3.4(4) Multi Span Roofs

No further guidance available.

NA 2.24 Clause 5.3.5(1) Roof shape coefficients. Cylindrical roofs

The upper value for μ_4 is 2,0.

NA 2.25 Clause 5.3.5(3) Roof shape coefficients. Cylindrical roofs

No further guidance available.

NA 2.26 Clause 5.3.6(1) Roof shapes coefficients. Roof abutting and close to taller construction works

The range for μ_w should be $0.8 < \mu_w < 4$.

NA 2.27 Clause 5.3.6(3) Roof shape coefficients. The drifted load arrangement

Annex B shall be used to determine the load case due to drifting.

NA 2.28 Clause 6.2(2) Local effects. Drifting at protection and obstructions

Annex B shall be used to determine the load case due to drifting.

NA 2.29 Clause 6.3(1) Local effects. Snow overhanging the edge of the roof.

The load of snow overhanging the edge of the roof should be considered for sites above 800 meters above the sea level.

NA 2.30 Clause 6.3(2) Local effects. Snow overhanging the edge of the roof

The value of k is calculated as follows:

$k=3/d$ but $k<d*\gamma$.

Where d is the depth of the snow layer on the roof, in meters, and γ is the weight density of snow and can be taken as 3 KN/m^2 (see Fiqure 6.2 of CYS EN 1991-1-3).

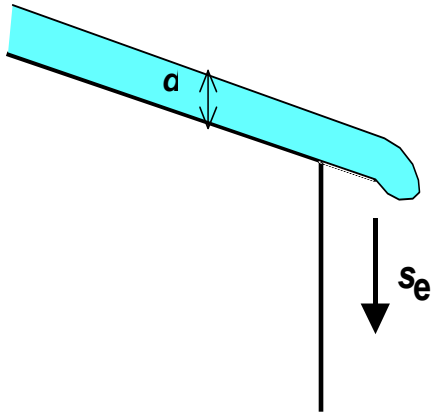

Figure 6.2 Snow Overhanging the edge of a roof

NA 2.31 Annex A Design situation and load arrangements to be used for different locations. (through Table A1)

Note 1. For exceptional conditions see paragraphs NA2.4 and NA2.5 above

Note 2. For cases B1 and B3 no defined design situations defined to be applied for the particular local effects described in section.

NA 3 DECISION ON USE OF THE INFORMATIVE ANNEXES C, D AND E

NA 3.1 Annex C

Annex C may be used

NA 3.2 Annex D

Annex D may be used

NA 3.3 Annex E

Annex E may be used

NA 4 REFERENCES TO NON-CONTRADICTORY COMPLEMENTARY INFORMATION

None

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NA to CYS EN 1991-1-3:2003 (Including A1:2015 and AC:2009)

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