

SVENSK STANDARD

SS-EN 1991-1-4:2005/AC:2010

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Eurokod 1: Laster på bärverk – Del 1-4: Allmänna laster – Vindlast

Eurocode 1: Actions on structures – Part 1-4: General actions – Wind actions

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EUROPEAN STANDARD

EN 1991-1-4:2005/AC

NORME EUROPÉENNE

EUROPÄISCHE NORM

January 2010

ICS 91.010.30

English version

Eurocode 1: Actions on structures - Part 1-4: General actions - Wind actions

Eurocode 1 : Actions sur les structures -
Partie 1-4 : Actions générales - Actions du
vent

Eurocode 1: Einwirkungen auf Tragwerke -
Teil 1-4: Allgemeine Einwirkungen -
Windlasten

This corrigendum becomes effective on 27 January 2010 for incorporation in the three official language versions of the EN.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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Ref. No.: EN 1991-1-4:2005/AC:2010 E

SS-EN 1991-1-4:2005/AC:2010 (E)

1) Modifications to "National annex for EN 1991-1-4"

Page 7, delete the following:

"1.1 (11) Note 1".

Page 8, replace:

"8.4.2 (1) Notes 1 and 2"

with:

"8.4.2 (1)".

2) Modifications to 1.1

Page 9, replace paragraph (2) with the following one:

"(2) This Part is applicable to:

- Buildings and civil engineering works with heights up to 200 m, see also (11).
- Bridges having no span greater than 200 m, provided that they satisfy the criteria for dynamic response, see (12) and 8.2."

Pages 9 and 10, replace paragraph (11):

"(11) This part does not give guidance on the following aspects:

- wind actions on lattice towers with non-parallel chords
- wind actions on guyed masts and guyed chimneys
- torsional vibrations, e.g. tall buildings with a central core
- bridge deck vibrations from transverse wind turbulence
- cable supported bridges
- vibrations where more than the fundamental mode needs to be considered

NOTE 1 The National Annex may provide guidance on these aspects as non contradictory complementary information.

NOTE 2 For wind actions on guyed masts, guyed chimneys and lattice towers with non-parallel chords, see EN 1993-3-1, Annex A.

NOTE 3 For wind actions on lighting columns, see EN 40."

with:

"(11) Guyed masts and lattice towers are treated in EN 1993-3-1 and lighting columns in EN 40.

(12) This part does not give guidance on the following aspects:

- torsional vibrations, e.g. tall buildings with a central core

- bridge deck vibrations from transverse wind turbulence
- wind actions on cable supported bridges
- vibrations where more than the fundamental mode needs to be considered.”.

3) Modifications to 1.7

Pages 11 and 12, paragraph (2), “Latin upper case letters”, between the lines dedicated to “ K ” and “ K_{iv} ”, add the following line:

“ K_a aerodynamic damping parameter”.

Page 12, paragraph (2), “Latin lower case letters”, between the lines dedicated to “ c_p ” and “ c_{prob} ”, add the following lines:

“ c_{pe} external pressure coefficient

c_{pi} internal pressure coefficient

$c_{p,net}$ net pressure coefficient”.

Page 13, paragraph (2), “Latin lower case letters”, between the lines dedicated to “ k ” and “ k_p ”, add the following lines:

“ k_t turbulence factor”.

Page 14, paragraph (2), “Greek lower case letters”, definition of “ δ_a ”, replace “aerodynamic logarithmic decrement of damping” with “logarithmic decrement of aerodynamic damping”.

Page 14, paragraph (2), “Greek lower case letters”, definition of “ δ_s ”, replace “structural logarithmic decrement of damping” with “logarithmic decrement of structural damping”.

4) Modification to “Section 2”

Page 16, paragraph (2), replace the NOTE:

“NOTE See also EN 1991-1-3, EN 1991-2 and ISO FDIS12494”

with the following:

“NOTE See also EN 1991-1-3, EN 1991-2 and ISO 12494”.

5) Modification to 6.3.2

Page 30, paragraph (1), 3rd line, replace “5.2” with “5.3”.

6) Modification to 7.2.8

Page 50, paragraph (1), Figure 7.11, replace the three lines between the figure itself and its title:

“for $0 < h/d < 0,5$, $c_{pe,10}$ is obtained by linear interpolation

for $0,2 \leq f/d \leq 0,3$ and $h/d \geq 0,5$, two values of $c_{pe,10}$ have to be considered

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the diagram is not applicable for flat roofs”

with:

“For Zone A:

- for $0 < h/d < 0,5$, the coefficient $c_{pe,10}$ is obtained by linear interpolation
- for $0,2 \leq f/d \leq 0,3$ and $h/d \geq 0,5$, two values of $c_{pe,10}$ have to be considered
- the diagram is not applicable for flat roofs”.

7) Modification to 7.3

Page 56, paragraph 8), Table 7.6, 5th row “[Roof angle $\alpha =]10^\circ$ ”, 4th column “Zone A”, 3rd line in the cell (corresponding to “Minimum $\varphi = 1$ ”), replace “- 2,1” with “- 1,6”.

8) Modifications to 7.8

Page 68, paragraph (1), Table 7.11, replace the table with the following one:

“

| Number of sides | Sections | Finish of surface and of corners | Reynolds number $Re^{(a)}$ | $c_{f,0}$ |
|-----------------|---------------------------|---|---|---|
| 5 | Pentagon | all | All | 1,80 |
| 6 | Hexagon | all | All | 1,60 |
| 8 | Octagon | surface smooth ^(b) $r/b < 0,075$ | $Re \leq 2,4 \cdot 10^5$ | 1,45 |
| | | | $Re \geq 3 \cdot 10^5$ | 1,30 |
| | | surface smooth ^(b) $r/b \geq 0,075$ | $Re \leq 2 \cdot 10^5$ | 1,30 |
| | | | $Re \geq 7 \cdot 10^5$ | 1,10 |
| 10 | Decagon | all | All | 1,30 |
| 12 | Dodecagon | surface smooth ^(c) corners rounded | $2 \cdot 10^5 < Re < 1,2 \cdot 10^6$ | 0,90 |
| | | all others | $Re < 4 \cdot 10^5$ | 1,30 |
| | | | $Re > 4 \cdot 10^5$ | 1,10 |
| 16-18 | Hexdecagon to Octadecagon | surface smooth ^(c) corners rounded | $Re < 2 \cdot 10^5$ | treat as a circular cylinder, see (7.9) |
| | | | $2 \cdot 10^5 \leq Re < 1,2 \cdot 10^6$ | 0,70 |

^(a) Reynolds number with $v = v_m$ and v_m given in 4.3, Re , is defined in 7.9

^(b) r = corner radius, b = diameter of circumscribed circumference, see Figure 7.26

^(c) From wind tunnel tests on sectional models with galvanised steel surface and a section with $b = 0,3$ m and corner radius of $0,06 \cdot b$

“

Page 68, paragraph (2), replace the paragraph with the following text:

“(2) For buildings where $h/d > 5$, c_f may be determined from Expression (7.13).