

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 1993-3-1:2006/AC

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English version
Version Française
Deutsche Fassung

Eurocode 3 - Design of steel structures - Part 3-1: Towers, masts and chimneys - Towers and masts

**Eurocode 3 - Calcul des structures en acier
- Partie 3-1: Tours, mâts et cheminées -
Pylônes et mâts haubanés**

**Eurocode 3 - Bemessung und Konstruktion
von Stahlbauten - Teil 3-1: Türme, Maste
und Schornsteine - Türme und Maste**

This corrigendum becomes effective on 1 July 2009 for incorporation in the three official language versions of the EN.

Ce corrigendum prendra effet le 1 juillet 2009 pour incorporation dans les trois versions linguistiques officielles de la EN.

Die Berichtigung tritt am 1. Juli 2009 zur Einarbeitung in die drei offiziellen Sprachfassungen der EN in Kraft.



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

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Ref. No.: EN 1993-3-1:2006/AC:2009 D/E/F

1) Modifications to "National Annex for EN 1993-3-1"

2nd paragraph, list, delete the line:

"- B.2.3(3)".

2nd paragraph, list, replace "D.1.1(1)" with "D.1.1(2)".

2) Modification to 1.1.2

Paragraph "(1)", replace "Provisions for self-supporting and guyed cylindrical towers" with "Provisions for self-supporting and guyed cylindrical and conical towers".

3) Modification to 1.5.12

Replace "(See Annex A and Annex B.)" with "(See Annex B.)".

4) Modification to 2.3.2

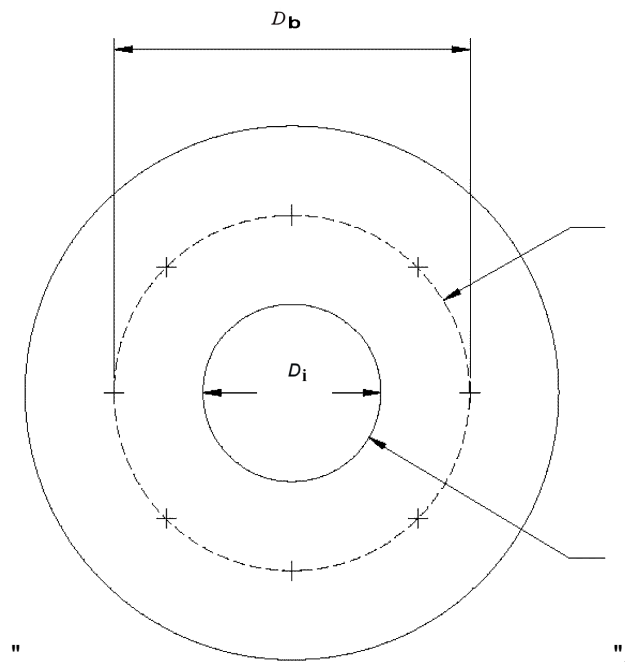
Paragraph "(1)", "NOTE", replace "for actions on towers and masts" with "for wind and ice on towers and masts".

5) Modification to 6.2.2

Paragraph "(1)", replace "given in 3.10.3 of EN 1993-1-8 (if bolted) or 4.13 (if welded)" with "given in EN 1993-1-8 clauses 3.10.3 (if bolted) or 4.13 (if welded)".

6) Modifications to 6.4.2

Paragraph "(2)", replace "Figure 6.1" with the following one:



Paragraph "(2)", delete the last sentence from the "NOTE".

7) Modification to Clause 8

Paragraph "(2)", "NOTE", replace "given in Annex C to EN 1993-3-2" with "given in Annex D of EN 1993-3-2".

8) Modification to 9.2.1

Paragraph "(1)", replace the whole paragraph "(1)" including the "NOTE" with the following text:

"(1) Fatigue loading of lattice towers due to in-line vibrations (without cross-wind vibrations) induced by gusty wind need not be determined.

NOTE: For guyed masts provided that the detail category of the structural details are greater than 71 N/mm², the fatigue life of these structures subject to in-line vibrations only (without cross-wind vibrations) induced by gusty wind may be assumed to be greater than 50 years."

9) Modifications to B.2.1.3

Paragraph "(1)", 1st line, replace " c_f " with " $\sum c_f$ ".

Paragraph "(1)", Equation "(B.1)", replace " c_f " with " $\sum c_f$ ".

10) Modifications to B.2.2.1

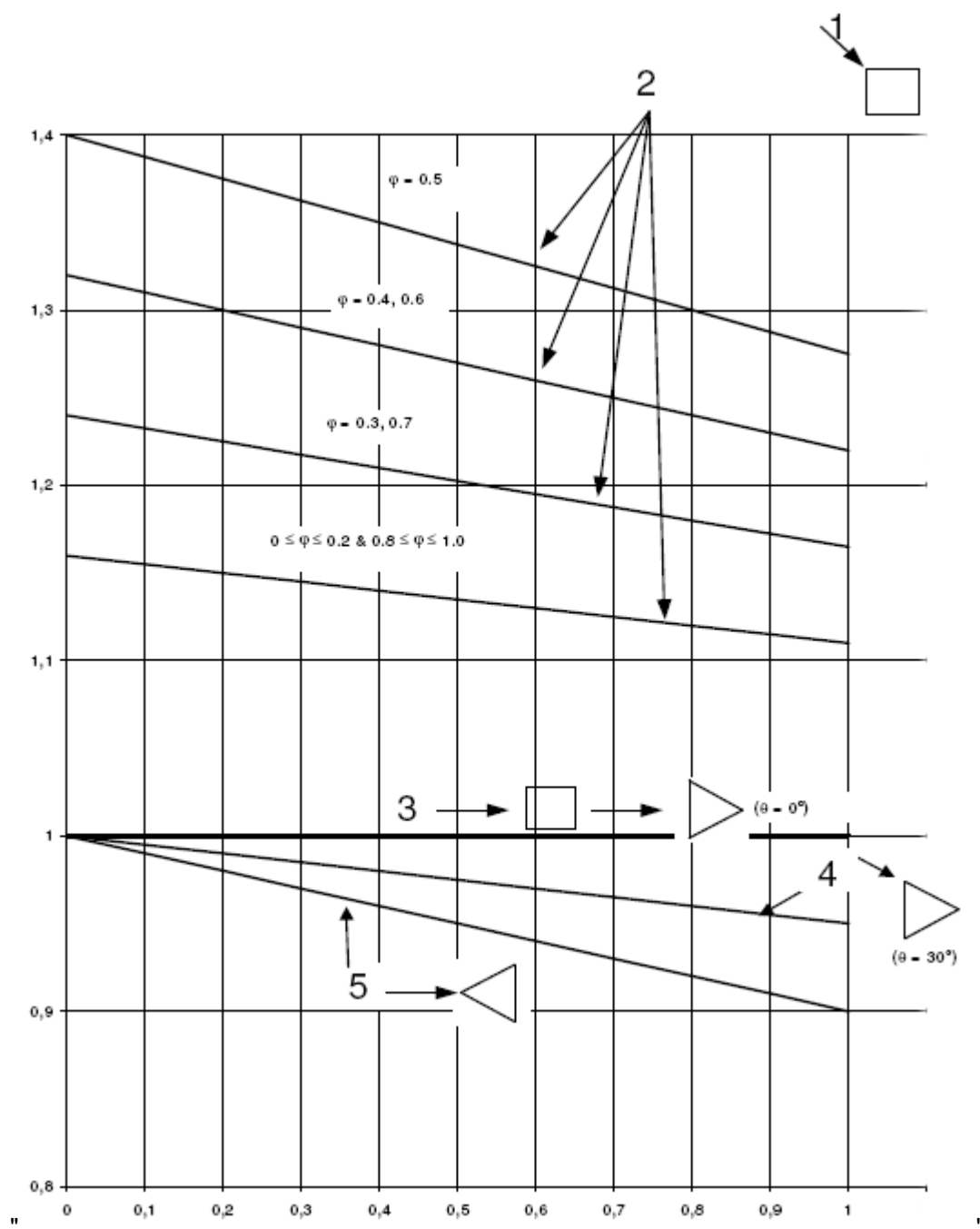
Paragraph "(1)", replace " c_f " with " $c_{f,S}$ ".

Paragraph "(1)", replace equation "(B.2)" with " $c_{f,S} = K_\theta \cdot c_{f,S,0} \cdot \frac{A_s}{\sum A}$ ".

Paragraph "(1)", list under "where:...", add the following elements:

- " A_s " is the total area projected normal to the face of the structural components, including those ancillaries treated as structural elements, of the considered face within one section height at the level concerned (see Figure B.2.1) and including icing where appropriate;
- $\sum A$ is taken as A_{ref} in 5.3(2) of EN 1991-1-4 and can be taken as any notional value (say unity) as long as A_{ref} is taken as the same value."

Paragraph "(6)", "Figure B.2.2", replace the figure with the following one:



11) Modifications to B.2.3

Paragraph "(1)", replace "Equation (B.6)" with " $c_{f,A} = K_A \cdot c_{f,A,0} \cdot \sin^2 \psi \cdot \frac{A_A}{\sum A}$ ".

Paragraph "(1)", list under "where:...", add the following elements:

" A_A is the area of the part visible when viewed in the wind direction including icing when appropriate. For cylinders with strakes, the value of A_A should be based on the overall width including twice the strake depth;

" $\sum A$ as defined in B.2.2.1(1)."

Paragraph "(2)", list entry "b)", replace "figure B.2.1" with "Figure B.2.1".

Paragraph "(2)", "Table B.2.1", 1st row at the top (table heading), 3rd column, replace " $c_{f,G}$ " with " $c_{f,G,0}$ ".

12) Modification to B.2.5

Paragraph "(1)", replace:

"where: $c_{f,G}$ is..."

with:

"where: $c_{f,G,0}$ is..."

13) Modification to B.2.7.1

Paragraph "(2)", between the paragraph beginning with " $c_{f,A1}$ to $c_{f,A4}$ " and the one beginning with " η_1 and η_2 ", add:

" ΣA is to be taken as A_{ref} as in clause 5.3(2) of EN 1991-1-4 and can be taken as any notional value (say unity) as long as A_{ref} is taken as the same value."

14) Modification to B.3.1

Paragraph "(3)", Equation "(B.12)", replace " c_{fT} " with " $c_{f,T}$ ".

15) Modification to B.3.2.1

Paragraph "(1)", replace the two occurrences of "resistance" with "wind force"; then replace reference to "B.2.2" with "B.2".

16) Modifications to B.3.2.2.1

Paragraph "(2)", Equation "(B14a)", replace " A_{rcf} " with " A_{ref} ".

Paragraph "(3)", under "where:...", replace " c_0 " with " $c_0(z_m)$ ".

17) Modifications to B.3.2.2.2

Paragraph "(1)", replace:

"where: S_W ..."

with:

"where: $S_{m,W}$...".

Paragraph "(1)", under "where:...", add:

" $c_0(z_m)$ is defined in B.3.2.2.1(3)."

18) Modifications to B.3.2.2.6

Paragraph "(4)", list entry "c)", just before "NOTE 1", add:

" Σc_f according to B.2.1.3 (1).".

Paragraph "(5)", below Equation "(B.20)", add:

"where: $S_{m,cw}$ is the mean load effect on the cables derived from the load component in (B.16);

S_{cables} is the fluctuating load effect on the cables derived from the fluctuating component in (B.16).".

19)Modification to B.4.2

Paragraph "(3)", list entry "c)", replace the definition of "R" with: "the average total of the product of the force coefficient c_f times the reference area ΣA as defined in B.2.2.1(1);".

20)Modifications to B.4.3.2.1

Paragraph "(1)", Equation "(B.22)", replace " $F_{m,W}$ " with " $F_{m,W}(z)$ "; then replace " A " with " A_{ref} ".

Paragraph "(1)", last line, replace the reference to "B.4.2" with "B.2.1.3".

Paragraph "(3)", 1st line, replace " F_{GW} " with " $F_{GW}(z)$ ".

Paragraph "(3)", Equation "(B.23)", replace " F_{GW} " with " $F_{GW}(z)$ "; then replace " $c_G(z)$ " with " $c_{f,G}(z)$ ".

Paragraph "(3)", replace:

"where: $c_G(z)$..."

with

"where: $c_{f,G}(z)$...".

Paragraph "(4)", replace "should be taken as" with "should be based on".

21)Modifications to B.4.3.2.2

Paragraph "(2)", Equation "(B.24)", replace " F_{PW} " with " $F_{PW}(z)$ ", and replace " A " with " A_{ref} ".

Paragraph "(2)", replace:

" k_s is a scaling factor;"

with:

" k_s is a scaling factor which defines the probability of occurrence;".

22)Modifications to B.4.3.2.3

Paragraph "(1)", 1st line, replace " F_{PG} " with " $F_{PG}(z)$ ".

Paragraph "(1)", Equation "(B.25)", replace " F_{PG} " with " $F_{PG}(z)$ ".

Paragraph "(1)", Equation "(B.25)" and two lines below the equation, replace the two occurrences of " $c_G(z)$ " with " $c_{f,G}(z)$ ".

23) Modification to B.4.4

Paragraph "(2)", replace "(See B.4.3.2) using $k_S=3,5$." with "(see B.4.3.2). The value of k_S should be taken as $k_S=2,95$ ".

24) Modification to C.5

Paragraph "(1)", replace "one lane of the top guy level" with "the guy or guys in one lane of the top guy level"; then replace "two lanes of the top guy level" with "the guy or guys in two lanes of the top guy level".

25) Modification to C.6

Replace the number of paragraph "(3)" with "(2)".

26) Modification to F.2

Paragraph "(3)", replace reference to "EN 1993-1-1" with "EN 1090-2"; then replace "(see 4.2.2)" with "(see F.4.2)".

27) Modifications to G.2

Paragraph "(1)", "Table G.1", 1st column on the left, row about "**Case (c)**", replace "Secondary bending at both ends" with "Secondary bracing at both ends".

Paragraph "(1)", "Table G.2", part "(b)", 1st row of the table, last column on the right, replace " $K^{(3)(5)}$ " with " $k^{(3)(5)}$ ".

Paragraph "(1)", "Table G.2", part "(b)", last row of the table, "NOTE 3" and "NOTE 5", replace " K " with " k ".

28) Modification to H.3.2

"Figure H.1", bottom row of the figure, left-hand side, cell about "IA", add into the cell: "Single lattice".

29) Modification to H.4

Paragraph "(5)", 4th line, replace "when the primary force is smaller" with "when the primary force is smaller than the notional force".