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English version  
Version Française  
Deutsche Fassung

Eurocode 2: Design of concrete structures - Part 1-1: General rules and  
rules for buildings

Eurocode 2: Calcul des structures en béton  
- Partie 1-1: Règles générales et règles  
pour les bâtiments

Eurocode 2: Bemessung und Konstruktion  
von Stahlbeton- und  
Spannbetontragwerken - Teil 1-1:  
Allgemeine Bemessungsregeln und Regeln  
für den Hochbau

This corrigendum becomes effective on 16 January 2008 for incorporation in the three official language versions of the EN.

Ce corrigendum prendra effet le 16 janvier 2008 pour incorporation dans les trois versions linguistiques officielles de la EN.

Die Berichtigung tritt am 16. Januar 2008 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 1992-1-1:2004/AC:2008 D/E/F

## English version

### National annex for EN 1992-1-1

*Page 13 - replace:*

“6.8.6(2)”

*with the following:*

“6.8.6(3)”.

*Page 13 - replace:*

“J.1(3)”

*with the following:*

“J.1(2)”.

## SECTION 1 GENERAL

*Under 1.2.2, Other reference standards, replace:*

“EN ISO 17760: Permitted welding process for reinforcement”

*with the following:*

“EN ISO 17660 (all parts): Welding – Welding of reinforcing steel”.

## SECTION 3 MATERIALS

*In Table 3.1, 9<sup>th</sup> row, last column replace:*

“ $\varepsilon_{c1}(\text{‰}) = 0.7 f_{cm}^{0,31} < 2,8$ ”

*with the following:*

“ $\varepsilon_{c1}(\text{‰}) = 0,7 f_{cm}^{0,31} \leq 2,8$ ”.

*In 3.1.4 (4) replace:*

“ $\varphi_k(\infty, t_0)$ ”

*with the following:*

“ $\varphi_{nl}(\infty, t_0)$ ”.

*In 3.1.4 (4) replace:*

“ $k_{\sigma}$  is the stress-strength ratio  $\sigma_c/f_{cm}(t_0) \dots$ ”

*with the following:*

“ $k_{\sigma}$  is the stress-strength ratio  $\sigma_c/f_{ck}(t_0)$ , where  $\sigma_c$  is the compressive stress and  $f_{ck}(t_0)$  is the characteristic concrete...”.

*In 3.2.4 (2) replace in the Note:*

“Values of  $(f_t/f_y)_k$  and....”

*with the following:*

“Values of  $k = (f_t/f_y)_k$  and....”.

*In 3.2.5 (2)P replace:*

“...with EN ISO 17760.”

*with the following:*

“...with EN ISO 17660.”.

*In 3.2.7 (2) replace in point a):*

“ $\gamma_s$ ”

*with the following:*

“ $\gamma_s$ ”.

*In Figure 3.8 replace:*

“ $\gamma_s$ ”

*with the following:*

“ $\gamma_s$ ”.

*In 3.3.2 (9) replace:*

“...10.3.2.2 applies.”

*with the following:*

“...10.3.2.1 applies.”.

*In Figure 3.10 replace:*

“ $\gamma_s$ ”

*with the following:*

“ $\gamma_s$ ”.

## SECTION 4 DURABILITY AND COVER TO REINFORCEMENT

*In 4.4.1.3 (4) replace:*

“minimum cover”

*with the following:*

“nominal cover”.

## SECTION 5 STRUCTURAL ANALYSIS

*Under 5.1.1 General requirements*

*delete Clause (5)*

*and renumber the subsequent clauses as follows:*

“(6)P” into “(5)P”,

“(7)” into “(6)” and

“(8)” into “(7)”.

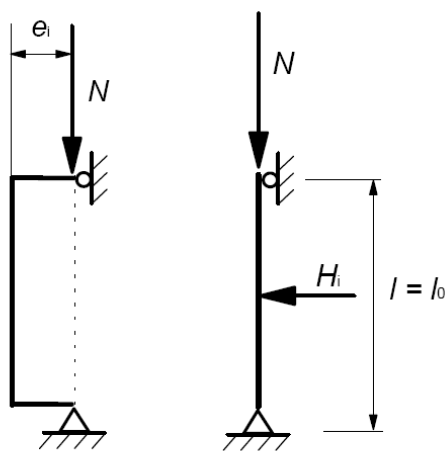
*In 5.2 (5) replace:*

“ $l$  is the length or height [m], see (4)”

*with the following:*

“ $l$  is the length or height [m], see (6)”.

*Correct Figure 5.1 a2) as follows:*



**a2) Braced**

*In 5.6.3 (2) replace:*

“In region of yield hinges,  $x_u/d$  shall not...”

*with the following:*

“In region of yield hinges,  $x_u/d$  should not...”.

*In 5.8.6 (3) replace:*

“... Expressions (3.14) and 3.2.3 (Figure 3.8) ...”

*with the following:*

“... Expressions (3.14) and 3.2.7 (Figure 3.8) ...”.

*In 5.8.6 (3) replace in Expression (5.20) and in the Note:*

“ $\gamma_{cE}$ ”

*with the following:*

“ $\gamma_{CE}$ ”.

*In 5.8.7.1 (2) replace:*

“... as compared with 5.8.6 (2).”

*with the following:*

“... as compared with 5.8.5 (1).”.

*In 5.8.7.3 (1) replace:*

“... moments resulting from a linear analysis, namely:”

*with the following:*

“... moments resulting from a first order analysis, namely:”.

*In 5.8.8.1 (1) replace:*

“... (see also 5.8.5(4)).”

*with the following:*

“... (see also 5.8.5 (3)).”.

*In 5.8.8.2 (2) replace:*

“Differing first order end moments  $M_{01}$  and  $M_{02}$  may be....”

*with the following:*

“For members without loads applied between their ends, differing first order end moments  $M_{01}$  and  $M_{02}$  may be....”.

*In 5.8.9 (3) replace:*

“... and if the relative eccentricities  $e_y/h$  and  $e_z/b$  (see figure 5.7) satisfy...”

*with the following:*

“... and if the relative eccentricities  $e_y/h_{eq}$  and  $e_z/b_{eq}$  (see figure 5.8) satisfy...”.

*In 5.10.2.1 (2) replace:*

“... the maximum prestressing force  $P_{max}$  may be increased to  $k_3 \cdot f_{p0,1k}$  (e.g. for...”

*with the following:*

“... the maximum prestressing force  $P_{max}$  may be increased to  $k_3 \cdot f_{p0,1k} \cdot A_p$  (e.g. for...”.

*In 5.10.4 (1) replace in the Note:*

“...(see Annex D)”

*with the following:*

“...(see 10.3.2.1 and Annex D)”.

*In 5.10.5.2 (4) replace in the Note:*

“HPDE”

*with the following:*

“HDPE”.

*In 5.10.6 (2) in Expression (5.46) replace:*

“ $I_c$ ”

*with the following:*

“ $I_c$ ”.

*In 5.10.6 (2) replace:*

“ $E_p$  is the modulus of elasticity for the prestressing steel, see 3.3.3(9)”

*with the following:*

“ $E_p$  is the modulus of elasticity for the prestressing steel, see 3.3.6 (2)”.

## SECTION 6 ULTIMATE LIMIT STATES (ULS)

*In 6.1 (5) replace:*

“...concentric loading ( $e/h < 0,1$ ), such...”

*with the following:*

“...concentric loading ( $e_d/h < 0,1$ ), such...”.

*In 6.2.1 (5) replace:*

“...(see Expression (6.8)).”

*with the following:*

“...(see Expression (6.1)).”.

*In 6.2.2 (1) replace:*

“ $N_{Ed}$  is the axial ... for compression). The influence on  $N_E$  may be ignored.”

*with the following:*

“ $N_{Ed}$  is the axial ... for compression). The influence on  $N_{Ed}$  may be ignored.”.

*In 6.2.3 (1) replace:*

“... the longitudinal tensile force due to shear defined in (3).”

*with the following:*

“... the longitudinal tensile force due to shear defined in (7).”.

*In 6.2.3 (5) replace:*

“...(e.g. for uniformly distributed loading) the shear reinforcement in any length increment  $l = z(\cot \theta + \cot \alpha)$  may be... “

*with the following:*

“...(e.g. for uniformly distributed loading applied at the top) the shear reinforcement in any length increment  $l = z(\cot \theta)$  may be... “.

*In 6.2.3 (6) replace:*

“Where the web contains grouted ducts...”

*with the following:*

“Where the web contains grouted metal ducts...”.

*In 6.2.3 (8) replace:*

“The value  $V_{Ed}$  calculated without reduction by  $\beta$ , should however always satisfy Expression (6.5).”

*with the following:*

“The value  $V_{Ed}$  calculated without reduction by  $\beta$ , should however always be less than  $V_{Rd,max}$ , see Expression (6.9).”.

*Replace the title of paragraph 6.2.4:*

“6.2.4 Shear between web and flanges of T-sections”

*with the following:*

“6.2.4 Shear between web and flanges”.

In 6.2.5 (2) replace:

“...following examples:

- Very smooth: a surface cast against steel, plastic or specially prepared wooden moulds:  $c = 0,25$  and  $\mu = 0,5$
- Smooth: a slipformed or extruded surface, or a free surface left without further treatment after vibration:  $c = 0,35$  and  $\mu = 0,6$
- Rough: a surface with at least 3 mm roughness at about 40 mm spacing, achieved by raking, exposing of aggregate or other methods giving an equivalent behaviour:  $c = 0,45$  and  $\mu = 0,7$ ”

with the following:

“...following examples:

- Very smooth: a surface cast against steel, plastic or specially prepared wooden moulds:  $c = 0,025$  to  $0,10$  and  $\mu = 0,5$
- Smooth: a slipformed or extruded surface, or a free surface left without further treatment after vibration:  $c = 0,20$  and  $\mu = 0,6$
- Rough: a surface with at least 3 mm roughness at about 40 mm spacing, achieved by raking, exposing of aggregate or other methods giving an equivalent behaviour:  $c = 0,40$  and  $\mu = 0,7$ ”.

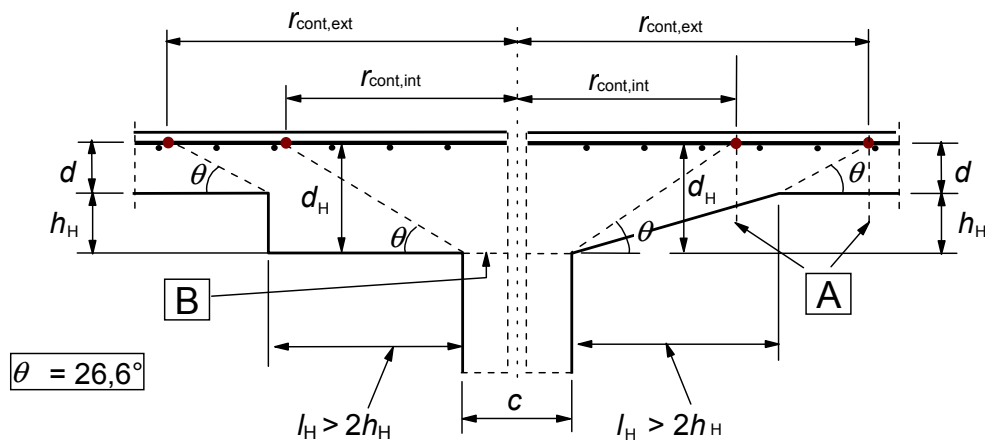
In 6.3.2 (4) replace:

“where  $\nu$  follows from 6.2.2 (6) and  $\alpha_c$  from Expression (6.9)”

with the following:

“where  $\nu$  follows from 6.2.2 (6) and  $\alpha_{cw}$  from Expression (6.9)”.

In 6.4.2 (11) correct Figure 6.18 as follows: ”



**A** - basic control sections  
for circular columns

**B** - loaded area  $A_{load}$

Figure 6.18 - Slab with enlarged column head where  $l_H > 2(d + h_H)$ ”.



In 6.4.3 (2) replace:

$$V_{Ed} < V_{Rd,max}$$

with the following:

$$V_{Ed} \leq V_{Rd,max}$$

and

$$V_{Ed} < V_{Rd,c}$$

with the following:

$$V_{Ed} \leq V_{Rd,c}$$

In 6.4.3 (3) replace Equation (6.40):

$$W_1 = \int_0^{u_1} |e| dl$$

with the following:

$$W_i = \int_0^{u_i} |e| dl$$

In 6.4.3 (3) replace after Equation (6.42):

“where  $D$  is the diameter of the circular column”

with the following:

“where  $D$  is the diameter of the circular column

$e$  is the eccentricity of the applied load  $e = M_{Ed} / V_{Ed}$ ”.

In 6.4.3 (4) replace after Equation (6.45):

“...the eccentricity  $e$  should be measured from the centroid of the control perimeter.”

with the following:

“...the distance  $e$  should be measured from the centroid axis of the control perimeter.”.

In 6.4.4 (2) replace in Equation (6.50):

$$\rho$$

with the following:

$$\rho$$

In 6.5.4 (6) replace:

“... and (3.25) with  $\sigma_{Rd,max} \leq k_4 \nu' f_{cd}$  if for all three directions...”

with the following:

“... and (3.25) with an upper limit  $\sigma_{Rd,max} \leq k_4 \nu' f_{cd}$  if for all three directions...”.

In 6.5.4 (9) replace:

“... in accordance with 8.4.”

with the following:

“... in accordance with 8.3.”.

*In 6.8.5 (3) replace in Expression (6.71):*

“ $\gamma_{s,fat}$ ”

*with the following:*

“ $\gamma_{S,fat}$ ”.

*In 6.8.6 (1) replace:*

“For welded reinforcing bars ...under frequent load combined with the basic...”

*with the following:*

“For welded reinforcing bars ...under frequent cyclic load combined with the basic...”.

*In 6.8.6 (2) replace:*

“...above verification may be carried out using the Frequent load...”

*with the following:*

“...above verification may be carried out using the frequent load...”.

## **SECTION 7 SERVICEABILITY LIMIT STATES (SLS)**

*In 7.2 (5) replace:*

“Unacceptable cracking or deformation...”

*with the following:*

“For the appearance unacceptable cracking or deformation...”.

*In 7.3.1 (5) replace:*

“A limiting calculated crack width,  $w_{max}$ , taking into account...”

*with the following:*

“A limiting value,  $w_{max}$ , for the calculated crack width,  $w_k$ , taking into account...”.

*In 7.3.1 (5) in Note 1 of Table 7.1N replace:*

“...this limit is set to guarantee acceptable appearance. In the absence...”

*with the following:*

“...this limit is set to give generally acceptable appearance. In the absence...”.

*In 7.3.3 (2) in Note 1 of Table 7.2N replace:*

“... $h_{cr} = 0,5; (h-d) = \dots$ ”

*with the following:*

“... $h_{cr} = 0,5h; (h-d) = \dots$ ”.

*In 7.3.3 (2) in Note 1 of Table 7.2N replace:*

“... $k' = 1,0$ ”

*with the following:*

“... $k_4 = 1,0$ ”.

*In 7.3.3 (3) replace:*

“...or a suitable simplification (see 7.3.3(2)) assuming pure tension...”

*with the following:*

“...or a suitable simplification assuming pure tension...”.

*In 7.3.3 (5) replace:*

“...detailing rules given in 9.2.2, 9.2.3, 9.3.2 and 9.4.4.3 are observed.”

*with the following:*

“...detailing rules given in 9.2.2, 9.2.3, 9.3.2 and 9.4.3 are observed.”.

*In 7.3.4 (3) replace Equation (7.13):*

“ $k_2 = (\varepsilon_1 + \varepsilon_2) / 2\varepsilon_1$ ”

*with the following:*

“ $k_2 = (\varepsilon_1 + \varepsilon_2) / (2\varepsilon_1)$ ”.

*In 7.4.2 (2) replace:*

“ $\rho_0$  is the reference reinforcement ratio =  $\sqrt{f_{ck}} 10^{-3}$ ”

*with the following:*

“ $\rho_0$  is the reference reinforcement ratio =  $10^{-3} \sqrt{f_{ck}}$ ”.

*In 7.4.3 (5) replace:*

“ $\varphi(\infty, t_0)$  is the creep coefficient relevant for the load and time interval (see 3.1.3)”

*with the following:*

“ $\varphi(\infty, t_0)$  is the creep coefficient relevant for the load and time interval (see 3.1.4)”.

## SECTION 8 DETAILING OF REINFORCEMENT AND PRESTRESSING

### TENDONS – GENERAL

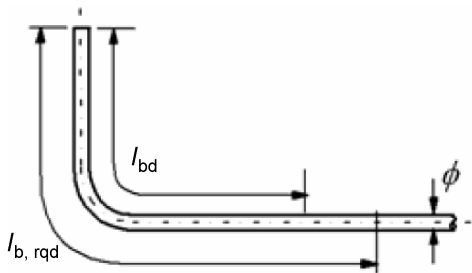
In 8.3 (2) in the Note of Table 8.1N replace:

“...in accordance with prEN ISO 17660 Annex B”

with the following:

“...in accordance with EN ISO 17660 Annex B”.

In 8.4.1 (2) correct figure 8.1 a) as follows:



**a) Basic tension anchorage length,  $l_b$ , for any shape measured along the centreline**

In 8.4.3 (3) replace:

“...the basic anchorage length,  $l_b$ , and the design...”

with the following:

“...the basic required anchorage length,  $l_{b,rqd}$ , and the design...”.

In 8.4.4 (1) in Equation (8.6) replace:

“ $l_{b,min} > \max\{0,3l_{b,rqd}; 10 \varphi; 100 \text{ mm}\}$ ”

with the following:

“ $l_{b,min} \geq \max\{0,3l_{b,rqd}; 10 \varphi; 100 \text{ mm}\}$ ”.

In 8.4.4 (1) in Equation (8.7) replace:

“ $l_{b,min} > \max\{0,6l_{b,rqd}; 10 \varphi; 100 \text{ mm}\}$ ”

with the following:

“ $l_{b,min} \geq \max\{0,6l_{b,rqd}; 10 \varphi; 100 \text{ mm}\}$ ”.

In 8.6 (5) replace:

“If two welded cross bars with a minimum spacing of  $\varphi t$  are used, the anchorage length given by...”

with the following:

“If two welded cross bars with a minimum spacing of  $\varphi t$  are used, the anchorage capacity given by...”.

In 8.7.3 (1) in Equation (8.11) replace:

“ $l_{0,min} > \max\{0,3 \alpha_6 l_{b,rqd}; 15 \varphi; 200 \text{ mm}\}$ ”

with the following:

“ $l_{0,min} \geq \max\{0,3 \alpha_6 l_{b,rqd}; 15 \varphi; 200 \text{ mm}\}$ ”.

In 8.7.4.1 (3) replace:

“Where the diameter,  $\varphi$ , of the lapped bars is greater than or equal to 20 mm, the transverse reinforcement should have a total area,  $A_{st}$  (sum of all legs...”

with the following:

“Where the diameter,  $\varphi$ , of the lapped bars is greater than or equal to 20 mm, the transverse reinforcement should have a total area,  $\Sigma A_{st}$  (sum of all legs...”.

In 8.8 (4) replace:

“...or where the stress is not greater than 80% ...”

with the following:

“...or where the reinforcement stress is not greater than 80 % ...”.

In 8.9.2 (2) correct Figure 8.12 as follows:

“

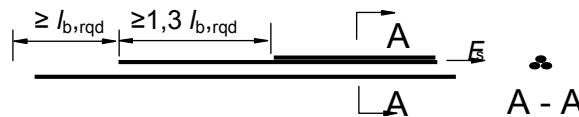


Figure 8.12 - Anchorage of widely staggered bars in a bundle

”.

In 8.10.2.2 (1) replace:

“ $f_{ctd}(t)$  is the design tensile value of strength at time of release;  $f_{ctd}(t) = \alpha_{ct} \cdot 0,7 \cdot f_{ctm}(t) / \gamma_c$  (see also 3.1.2 (8) and 3.1.6 (2)P)”

with the following:

“ $f_{ctd}(t)$  is the design tensile value of strength at time of release;  $f_{ctd}(t) = \alpha_{ct} \cdot 0,7 \cdot f_{ctm}(t) / \gamma_c$  (see also 3.1.2 (9) and 3.1.6 (2)P)”.

*In 8.10.2.2 (4) replace:*

“...see Figure 8.17:”

*with the following:*

“...see Figure 8.16:”.

*Replace the title of 8.10.2.3*

“ Anchorage of tensile force for the ultimate limit state”

*with the following:*

“ Anchorage of tendons for the ultimate limit state”.

*In 8.10.2.3 (1) replace:*

“...the effect of shear according to 6.2.3(6); see also...”

*with the following:*

“...the effect of shear according to 6.2.3(7); see also...”.

## SECTION 9 DETAILING OF MEMBERS AND PARTICULAR RULES

*In 9.2.1.4 (1) replace:*

“The area of bottom reinforcement provided at supports with little...”

*with the following:*

“The area of bottom reinforcement provided at end supports with little...”.

*In 9.2.1.4 (2) replace:*

“The tensile force to be anchored may be determined according to 6.2.3(6) (members...”

*with the following:*

“The tensile force to be anchored may be determined according to 6.2.3(7) (members...”.

*In 9.2.1.4 (2) replace Equation (9.3):*

“ $F_E = |V_{Ed}| \cdot a_l / z + N_{Ed}$ ”

*with the following:*

“ $F_{Ed} = |V_{Ed}| \cdot a_l / z + N_{Ed}$ ”.

*In 9.8.2.1 (1) replace:*

“...the design model shown in 9.8.2.1 may be used.”

*with the following:*

“...the design model shown in 9.8.2.2 may be used.”.

*In 9.8.5 (3) replace:*

“Bored piles with diameters not exceeding  $h_1$  should be provided with a minimum longitudinal reinforcement area  $A_{s,bpmin}$ .”

*with the following:*

“Bored piles should be provided with a minimum longitudinal reinforcement  $A_{s,bpmin}$  related to pile cross section  $A_c$ .”

NOTE The values of  $A_{s,bpmin}$  and the associated  $A_c$  for use in a country may be found in its national annex. The recommended values are given in Table 9.6N. This reinforcement should be distributed along the periphery of the section.”.

*In 9.10.2.2 (2) replace Equation (9.15):*

$$F_{tie,per} = l_1 \cdot q_1 \leq q_2$$

*with the following:*

$$F_{tie,per} = l_1 \cdot q_1 \geq Q_2$$

*In 9.10.2.2(2) replace in the Note:*

“ $q_2$ ”

*with the following:*

“ $Q_2$ ”.

*In 9.10.2.3 (4) replace Equation (9.16):*

$$F_{tie} = (l_1 + l_2) / 2 \cdot q_3 \leq q_4$$

*with the following:*

$$F_{tie} = q_3 \cdot (l_1 + l_2) / 2 \geq q_4$$

## SECTION 10 ADDITIONAL RULES FOR PRECAST CONCRETE ELEMENTS AND STRUCTURES

*In 10.3.1.1 (3) replace:*

“... $f_{cm}(t)$ , may be estimated from Expression (3.3) in which...”

*with the following:*

“... $f_{cm}(t)$ , may be estimated from Expression (3.1) in which...”.

*Under 10.3.2 Prestressing Steel correct the numbering of heading:*

“10.3.2.2 Technological properties of prestressing steel”

*with the following:*

“10.3.2.1 Technological properties of prestressing steel”.

*In 10.5.2 (1) replace:*

“ $\alpha_C$  is the linear coefficient of thermal expansion for concrete (see 3.1.2)”

*with the following:*

“ $\alpha_C$  is the linear coefficient of thermal expansion for concrete (see 3.1.3(5))”.

*In 10.9.6.2 (2) replace:*

“...The lap length according to 8.6 should be increased...”

*with the following:*

“...The lap length according to 8.7 should be increased...”.

## SECTION 11 LIGHTWEIGHT AGGREGATE CONCRETE STRUCTURES

*In 11.3.1 (1P) replace:*

“In EN 206-1 lightweight aggregate is classified...”

*with the following:*

“In EN 206-1 lightweight aggregate concrete is classified...”.

*In Table 11.3.1, 12<sup>th</sup> row, last column replace*

“ $|\varepsilon_{cu2u}| \geq |\varepsilon_{ic2}|$ ”

*with the following:*

“ $|\varepsilon_{cu2}| \geq |\varepsilon_{ic2}|$ ”

*In 11.3.5 (1P) replace (2 occurrences):*

“ $\gamma_c$ ”

*with the following:*

“ $\gamma_C$ ” (upper case “C”).

*In 11.3.5 (1P) replace:*

“where  $\gamma_c$  is the partial safety factor for concrete, see 2.4.1.4, and...”

*with the following:*

“where  $\gamma_C$  is the partial safety factor for concrete, see 2.4.2.4, and...”.



In 11.3.5 (2P) replace (2 occurrences):

“ $\gamma_c$ ”

with the following:

“ $\gamma_c$ ” (upper case “C”).

In 11.5.1 replace in the Note:

“For light weight concrete the value of  $\theta_{pl,pl}$ , as shown in Figure 5.6N, should be multiplied by a factor  $\epsilon_{lc2u}/\epsilon_{cu2}$ .”

with the following:

“For light weight concrete the value of  $\theta_{pl,d}$  as shown in Figure 5.6N, should be multiplied by a factor  $\epsilon_{lcu2}/\epsilon_{cu2}$ .”

In 11.6.1(1) replace Equation (11.6.2):

“ $V_{IRdc} = [\dots] \geq (v_{l,min} + k_1 \sigma_{cp}) b_w d$ ”

with the following:

“ $V_{IRdc} = [\dots] \geq (\eta_1 v_{l,min} + k_1 \sigma_{cp}) b_w d$ ”.

In 11.6.1 (1) replace in the Note:

“...0,15/  $\gamma_c$  ...”

with the following:

“...0,15/  $\gamma_c$  ...” (upper case “C”).

In 11.6.1 (1) replace in the Note:

“...  $v_{l,min}$  is  $0,30 k^{3/2} f_{ck}^{1/2}$  ...”

with the following:

“...  $v_{l,min}$  is  $0,028 k^{3/2} f_{ck}^{1/2}$  ...”.

In 11.6.1 (1) replace in the Note:

“...and that  $k_1$  is 0.15...”

with the following:

“...and that for  $k_1$  is 0,15...”.

In 11.6.1 (1) replace caption of Table 11.6.1N:

“Table 11.6.1N: Values of  $v_{l,min}$  for given values of  $d$  and  $f_{ck}$ ”

with the following:

“Table 11.6.1N: Values of  $v_{l,min}$  for given values of  $d$  and  $f_{lck}$ ”.

In 11.6.1 (1) replace in Table 11.6.1N (2<sup>nd</sup> row):

“  $f_{ck}$  (MPa)”

with the following:

“  $f_{lck}$  (MPa)”.

In 11.6.1 (1) replace in Table 11.6.1N (6<sup>th</sup> row 2<sup>nd</sup> column):

“ 0.40 ”

with the following:

“ 0.23 ”.

In 11.6.2 (1) replace Equation (11.6.6N):

“  $v_1 = 0,5 \eta_1 (1 - f_{lck}/250)$ ”

with the following:

“  $v_1 = 0,5 (1 - f_{lck}/250)$ ”.

In 11.6.4.1 (2) replace:

“  $\rho_1$ ”

with the following:

“  $\rho_l$ ”.

In 11.8.1 (1) replace:

“...for normal density concrete given in 8.4.4 to avoid...”

with the following:

“...for normal density concrete given in 8.3 to avoid...”.

In 11.8.2 (1) replace:

“...with  $f_{lctd} = f_{lctk,0.05}/\gamma_c$ .”

with the following:

“...with  $f_{lctd} = f_{lctk,0.05}/\gamma_c$ .”.

## SECTION 12 PLAIN AND LIGHTLY REINFORCED CONCRETE STRUCTURES

In 12.3.1 (2) replace in Equation (12.1):

“  $f_{ctd} = \alpha_{ct} f_{ctk,0.05} / \gamma_c$  ”

with the following:

“  $f_{ctd,pl} = \alpha_{ct,pl} f_{ctk,0.05} / \gamma_c$  ”.

In 12.6.1 (3) replace in Equation n (12.2):

$f_{cd}$

with the following:

$f_{cd,pl}$ .

In 12.6.1 (3) replace:

“where:

$\eta f_{cd}$  is the design effective compressive...”

with the following:

“where:

$\eta f_{cd,pl}$  is the design effective compressive...”.

In 12.6.3 (2) and in Equation (12.7) replace:

$f_{cd}$

with the following:

$f_{cd,pl}$

(3 occurrences).

In 12.6.3 (2) and in Equations (12.5), (12.6), (12.7), replace:

$f_{ctd}$

with the following:

$f_{ctd,pl}$

(7 occurrences).

In 12.6.3 (3) replace:

$f_{ctd}$

with the following:

$f_{ctd,pl}$ .

In 12.6.5.2 (1) replace in Equation (12.10):

$f_{cd}$

with the following:

$f_{cd,pl}$ .

In 12.6.5.2 (1) replace Equation (12.11):

$\Phi = (1,14 \times (1-2e_{tot}/h_w) - 0,02 \times l_o/h_w \leq (1-2 e_{tot}/h_w))$

with the following:

$\Phi = 1,14 \times (1-2e_{tot}/h_w) - 0,02 \times l_o/h_w \leq (1-2 e_{tot}/h_w)$ .

In 12.9.3 (1) replace Equation (12.13):

$$\frac{0,85 \cdot h_F}{a} \geq \sqrt{(9\sigma_{gd} / f_{ctd})}$$

with the following:

$$\frac{0,85 \cdot h_F}{a} \geq \sqrt{(3\sigma_{gd} / f_{ctd,pl})}$$

In 12.9.3 (1) replace:

“ $f_{ctd}$ ”

with the following:

“ $f_{ctd,pl}$ ”.

## ANNEX A MODIFICATION OF PARTIAL FACTORS FOR MATERIALS

In A.2.1 (1) replace:

“ $\gamma_{s,red1}$ ”

with the following:

“ $\gamma_{S,red1}$ ” (upper case “S”).

In A.2.1 (1) in the Note of Table A.1 replace:

“ $\gamma_{s,red1}$ ”

with the following:

“ $\gamma_{S,red1}$ ” (upper case “S”).

In A.2.1 (2) and in the Note replace:

“ $\gamma_{c,red1}$ ”

with the following:

“ $\gamma_{C,red1}$ ” (upper case “C”).

In A.2.2 (1) and in the Note replace:

“ $\gamma_{s,red2}$ ”

with the following:

“ $\gamma_{S,red2}$ ” (upper case “S”).

*In A.2.2 (1) and in the Note replace:*

“ $\gamma_{c,red2}$ ”

*with the following:*

“ $\gamma_{C,red2}$ ” (upper case “C”).

*In A.2.2 (2) and in the Note replace:*

“ $\gamma_{c,red3}$ ”

*with the following:*

“ $\gamma_{C,red3}$ ” (upper case “C”).

*In A.2.3 (1) replace:*

“ $\gamma_c$ ”

*with the following:*

“ $\gamma_C$ ” (upper case “C”).

*In A.2.3 (1) and in the Note replace:*

“ $\gamma_{c,red4}$ ”

*with the following:*

“ $\gamma_{C,red4}$ ” (upper case “C”).

*In A.3.2 (1) replace:*

“ $\gamma_{s,pcrd}$ ”

*with the following:*

“ $\gamma_{S,pcrd}$ ” (upper case “S”).

*In A.3.2 (1) replace:*

“ $\gamma_{c,pcrd}$ ”

*with the following:*

“ $\gamma_{C,pcrd}$ ” (upper case “C”).

## ANNEX C PROPERTIES OF REINFORCEMENT SUITABLE FOR USE WITH THIS EUROCODE

*In C.1 (1) in the text after Table C.2N replace:*

“...the bond stresses shall satisfy the recommended...”

*with the following:*

“...the bond stresses should satisfy the recommended...”.

*In C.1 (3) replace:*

“- the individual values of yield strength  $f_{yk}$  and  $\varepsilon_{uk}$  should be greater than...”

*with the following:*

“- the individual values of yield strength  $f_y$  and  $\varepsilon_u$  should be greater than...”.

*In C.1 (3) in Table C.3N 3<sup>rd</sup> row, 1<sup>st</sup> column replace:*

“ $K$ ”

*with the following:*

“ $k$ ”.

*In C.3 (1P) replace:*

“...specified for bending in Table 8.1 of this Eurocode.”

*with the following:*

“...specified for bending in Table 8.1N of this Eurocode.”.

## **ANNEX D DETAILED CALCULATION METHOD FOR PRESTRESSING STEEL RELAXATION LOSSES**

*In D.1 (4) replace:*

“...given by Expression (3.31), becomes:”

*with the following:*

“...given by Expression (3.29), becomes:”.

## **ANNEX E INDICATIVE STRENGTH CLASSES FOR DURABILITY**

*In E.1 (2) replace:*

“...calculation of minimum reinforcement according to 7.3.2 and 9.1.1.1 and crack...”

*with the following:*

“...calculation of minimum reinforcement according to 7.3.2 and 9.2.1.1 and crack...”.

## **ANNEX I ANALYSIS OF FLAT SLABS AND SHEAR WALLS**

*In I.1.3 (2) replace:*

“...to edge of columns given in 5.11.2 should be applied.”

*with the following:*

“...to edge of columns given in I.1.2 (5) should be applied.”.

## ANNEX J DETAILING RULES FOR PARTICULAR SITUATIONS

*In J.1 (2) in the Note replace:*

“...(see figure 9.7).”

*with the following:*

“...(see Figure J.1).”.