

ETC-C

EPR TECHNICAL CODE FOR CIVIL WORKS

2012 Edition

1st Errata – July 2015

afcen

French Association for Design, Construction, and In Service
Inspection Rules for Nuclear Island Components

NOTE TO THE USER

Based on the feedback of code Users, this document proposes a small number of modifications which mainly correspond to editorial errors in ETC-C 2012.

These editorial errors have been identified through:

- the feedback of ETC-C 2012 users;
- the preparation of RCC-CW 2015 Edition.

Page	§	ETC-C V2012			Corrected Text		
193/509	1.8.4.2.1.1	The requirements of CEB, 1.5.1.3 or ETAG 001 or CEN/TS 1992-4 (2009) shall be applied.			The requirements of CEB, 15.1.3 or ETAG 001 or CEN/TS 1992-4 (2009) shall be applied.		
194/509	1.8.4.2.1.5	When using CEB, an additional verification is required for diameter pressure according to the requirements in EN 1994, 6.6.3.1 Equation 6.19.			When using CEB, an additional verification is required for diameter pressure according to the requirements in EN 1994-1-1, 6.6.3.1 Equation 6.19.		
208/509	1.9.2.5, Table 1.9.2-3	Shallow foundations & Buried galleries	SLS STR: rupture of buried structures due to earth pressure	Densities Shear strength (C, Phi) Earth pressure coefficient at rest K ₀ Groundwater levels	Shallow foundations & Buried galleries	ULS STR: rupture of buried structures due to earth pressure	Densities Shear strength (C, Phi) Earth pressure coefficient at rest K ₀ Groundwater levels
255/509	Eq 1.C-19	$\frac{1}{K_{\phi}} = w = \frac{a^2}{64\pi \cdot D} \cdot [(4 - 3 \cdot \gamma^2) + 4 \cdot \gamma^2 \cdot \ln \gamma]$			$\frac{1}{K_{\phi}} = w = \frac{r^2}{64\pi \cdot D} \cdot [(4 - 3 \cdot \gamma^2) + 4 \cdot \gamma^2 \cdot \ln \gamma]$		
255/509	Eq 1.C-21	$u_{\phi} = \frac{a^2 \cdot M_{\phi}}{4 \cdot D} \cdot \frac{[4 - 3 \cdot \gamma^2 + 4 \cdot \gamma^2 \cdot \ln \gamma]}{(\gamma^2 - 4 \cdot \ln \gamma)}$			$u_{\phi} = \frac{r^2 \cdot M_{\phi}}{4 \cdot D} \cdot \frac{[4 - 3 \cdot \gamma^2 + 4 \cdot \gamma^2 \cdot \ln \gamma]}{(\gamma^2 - 4 \cdot \ln \gamma)}$		
258/509	1.D.3	$\left(\frac{\rho \cdot V^2}{10^6 \cdot f_{ck}} \right)_{just\ penetration} = 1.89 \cdot \left(\frac{\rho \cdot H^2 \cdot D}{M} \right)^{4/3}$			$\left(\frac{\rho \cdot V^2}{f_{ck}} \right)_{just\ penetration} = 1.89 \cdot \left(\frac{\rho \cdot H^2 \cdot D}{M} \right)^{4/3}$ (NOTE: f_{ck} is expressed in Pa)		

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269/509	Appendix 1.F Table 1.F-1	<table border="1"> <thead> <tr> <th colspan="4">Diagrams of supports</th> <th>λ</th> <th>μ</th> </tr> <tr> <th>a</th> <th>a'</th> <th>b</th> <th>b'</th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td>A</td> <td>A</td> <td>A</td> <td>A</td> <td>1.00</td> <td>1.00</td> </tr> <tr> <td>A</td> <td>A</td> <td>A</td> <td>E</td> <td>0.94</td> <td>1.52</td> </tr> <tr> <td>A</td> <td>A</td> <td>E</td> <td>E</td> <td>0.84</td> <td>2.20</td> </tr> <tr> <td>A</td> <td>E</td> <td>A</td> <td>E</td> <td>1.41</td> <td>1.41</td> </tr> <tr> <td>A</td> <td>E</td> <td>E</td> <td>E</td> <td>1.26</td> <td>2.07</td> </tr> <tr> <td>E</td> <td>E</td> <td>E</td> <td>E</td> <td>1.90</td> <td>1.90</td> </tr> </tbody> </table>	Diagrams of supports				λ	μ	a	a'	b	b'			A	A	A	A	1.00	1.00	A	A	A	E	0.94	1.52	A	A	E	E	0.84	2.20	A	E	A	E	1.41	1.41	A	E	E	E	1.26	2.07	E	E	E	E	1.90	1.90	<table border="1"> <thead> <tr> <th colspan="4">Diagrams of supports</th> <th>λ</th> <th>μ</th> </tr> <tr> <th>a</th> <th>a'</th> <th>b</th> <th>b'</th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td>A</td> <td>A</td> <td>A</td> <td>A</td> <td>1.00</td> <td>1.00</td> </tr> <tr> <td>A</td> <td>A</td> <td>A</td> <td>E</td> <td>1.52</td> <td>0.94</td> </tr> <tr> <td>A</td> <td>A</td> <td>E</td> <td>E</td> <td>2.20</td> <td>0.84</td> </tr> <tr> <td>A</td> <td>E</td> <td>A</td> <td>E</td> <td>1.41</td> <td>1.41</td> </tr> <tr> <td>A</td> <td>E</td> <td>E</td> <td>E</td> <td>2.07</td> <td>1.26</td> </tr> <tr> <td>E</td> <td>E</td> <td>E</td> <td>E</td> <td>1.90</td> <td>1.90</td> </tr> </tbody> </table>	Diagrams of supports				λ	μ	a	a'	b	b'			A	A	A	A	1.00	1.00	A	A	A	E	1.52	0.94	A	A	E	E	2.20	0.84	A	E	A	E	1.41	1.41	A	E	E	E	2.07	1.26	E	E	E	E	1.90	1.90
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303/509	2.2.1.2.6	A study for the use of a particular type of cement in mass concrete shall be carried out, in order to prevent potential problems caused by internal sulfate reaction.	A study for the use of a particular type of cement in mass concrete shall be carried out, in order to prevent potential problems caused by DEF .																																																																																																
312/509	2.2.1.4.4	– determination of fineness by wet sieving, in accordance with EN 451-2 (45 μm sieve passing) or by laser granulometry (ISO 13320).	– determination of fineness by wet sieving, in accordance with EN 451-2 (45 μm sieve residue) or by laser granulometry (ISO 13320).																																																																																																
312/509	2.2.1.4.5	– granularity in accordance with EN 933-10 or ISO 2591-1 (63 μm sieve residue) or by laser granulometry (ISO 13320).	– granularity in accordance with EN 933-10 or ISO 2591-1 (63 μm sieve passing) or by laser granulometry (ISO 13320).																																																																																																
314/509	2.2.1.4.8	– granularity in accordance with ISO 2591-1 (315 μm and 63 μm sieve residue) or by laser granulometry (ISO 13320).	– granularity in accordance with ISO 2591-1 (315 μm and 63 μm sieve passing) or by laser granulometry (ISO 13320).																																																																																																
316/509	2.2.1.5.2	The chloride and sulfate content of admixtures shall be such that the concrete mix complies with the requirements stated in 2.2.2.6.	The chloride and sulfide content of admixtures shall be such that the concrete mix complies with the requirements stated in 2.2.2.6.																																																																																																
318/509	2.2.2.4	– refractory concrete,	– high temperature resistant concrete,																																																																																																
351/509	2.4.5.4.1	The instructions given in 2.4.5.3.3 on the bending and re-straightening of reinforcing steel shall be observed.	The requirements given in 2.4.5.3 on the bending and re-straightening of reinforcing steel shall be observed.																																																																																																

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486/509	2.H.6.2	As a convention: <ul style="list-style-type: none">- months corresponding to 12 weeks;- 5 months corresponding to 20 weeks;- 12 months corresponding to 52 weeks.	As a convention: <ul style="list-style-type: none">- 3 months corresponding to 12 weeks;- 5 months corresponding to 20 weeks;- 12 months corresponding to 52 weeks.