fib CEB-FIP

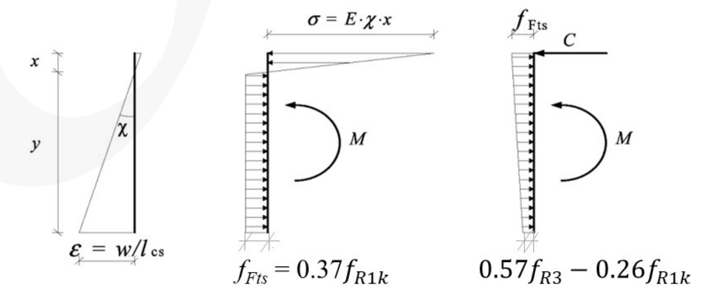
fib Model Code for Concrete Structures (2020)

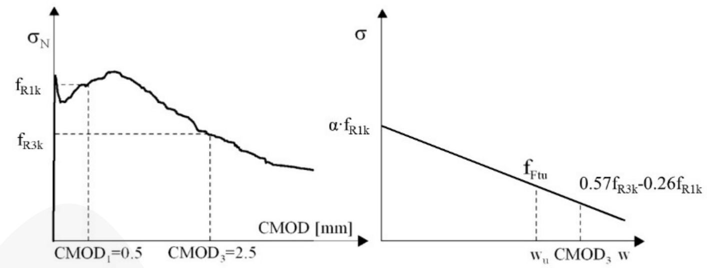
Erratum

Errata to ***fib* Model Code 2020 – Version 2 [2023]** – Errata release date 28-01-2026

	Page .nr.	Par. / Eq. / Fig.	Original	Correction
	IV	TOC	Heading "14 Concretes"	"14 Concrete"
2	110	11.3.2.1	Informative side, last paragraph: "The semi-probabilistic format for ultimate limit states in this Model Code is calibrated to the target reliability levels in Table 11.35 and Table 11.3-6; see section 12.5.4."	"The semi-probabilistic format for ultimate limit states in this Model Code is calibrated to the target reliability levels in Table 11.3-5 and Table 11.3-6; see section 12.5.4."
1	110	11.3.2.2.1	Informative side, 2e sentence: "In most design situations, the design values obtained considering either $\beta_{t,eco,1}$ or $\beta_{t,eco,50}$ values in Table 11.3-2 and Table 11.3-3, respectively,….."	"In most design situations, the design values obtained considering either $\beta_{t,eco,1}$ or $\beta_{t,eco,50}$ values in Table 11.3-5 and Table 11.3-6, respectively,….."
1	111	11.3.2.2.1	Informative side, 4rd paragraph "Further, the $\beta_{t,eco}$-values provided in Table 11.35 and Table 11.3-6….."	"Further, the $\beta_{t,eco}$-values provided in Table 11.3-5 and Table 11.3-6….."
2	111	11.3.2.2.1	Informative side, 7nd paragraph "The target reliability indices $\beta_{t,eco}$ provided in Table 11.35 and Table 11.3-6 are indicative for developed countries."	"The target reliability indices $\beta_{t,eco}$ provided in Table 11.3-5 and Table 11.3-6 are indicative for developed countries."
1	128	Par. 12.5.3	Heading "15.5.3.2 Basic rules for probabilistic approach"	"12.5.3.2 Basic rules for probabilistic approach"
1	144	12.5.4.2.3.3.1	Informative side, last paragraph: "The values of the partial factors given in Table 12.5-13 are based on (12.5-18) and obtained by numerical integration. The approximations based on Gumbel (for imposed, snow, and wind) and lognormal (road traffic) distributions, given in (6.4.3-7) and (6.4.3-10) respectively, underestimate γ-values (errors around 5%) and the correction factor can be considered as $\delta = 1.05$."	"The values of the partial factors given in Table 12.5-13 are based on Eq. (12.5-18) and obtained by numerical integration. The approximations based on Gumbel (for imposed, snow, and wind) and lognormal (road traffic) distributions, given in Eq. (12.5-20) and Eq. (12.5-23) respectively, underestimate γ-values (errors around 5%) and the correction factor can be considered as $\delta = 1.05$."
1	161	14.	Heading "14 Concretes"	"14 Concrete"
2	174	14.7.2	Normative side, text above Eq. 14.7-4: "……. E_c according to Eq. (14.6-23) should….."	"……. E_c according to Eq. (14.7-4) should….."
2	180	Eq. 14.9-2	Definition of *t* "*t* is the age of concrete in days adjusted according to Eq (14.6-80)……"	"*t* is the age of concrete in days adjusted according to Eq (14.11-1)……"
1	181	14.9.2	Heading	

			"14.9.3 Development of modulus of elasticity with time"	"14.9.2 Development of modulus of elasticity with time"
1	183	Eq. 14.10-7	Definition of t_0 "t_0 is the age of concrete at loading in days adjusted according to Eqs. (14.10-20) and (14.6-80)."	"t_0 is the age of concrete at loading in days adjusted according to Eqs. (14.10-20) and (14.11-1)."
1	184	Eq. 14.10-11	Definition of β_{dc} (f_{cm}) is missing	$\beta_{dc}(f_{cm}) = \frac{412}{(f_{cm})^{1.4}}$ (14.10-12a)
1	184	Eq. 14.10-12	Renumber equation (14.10-12) to include β_{dc}	Change numbering "Eq. (14.10-12)" into "Eq. (14-10-12b)"
1	184	Eq. 14.10-18	Definition of $t_{0,adj}$ "$t_{0,adj}$ is the adjusted age at loading in days according to Eq. (14.6-68)."	"$t_{0,adj}$ is the adjusted age at loading in days according to Eq. (14.10-20)."
1	187	Table 14.10-3	Heading: *"Total shrinkage values $\varepsilon_{cs,50y}\cdot 10^3$ of an ordinary structural concrete after a duration of drying of 50 years (service life according to Table 11.2-1)."*	*"Total shrinkage values $\varepsilon_{cs,50y}\cdot 10^{-3}$ of an ordinary structural concrete after a duration of drying of 50 years (service life according to Table 11.2-1)."*
1	188	14.11.3.1	Informative side, first sentence: "Eqs. (14.6-82) and (14.6-83) are valid for sealed concrete tested in the hot state shortly after completion of the heating. "	"Eqs. (14.11-3) and (14.11-4) are valid for sealed concrete tested in the hot state shortly after completion of the heating."
1	190	Eq. 14.11-11	Definition of f_{ctm} "f_{ctm} is the uniaxial tensile strength in MPa at T = 20 °C from Eq. (14.63);"	"f_{ctm} is the uniaxial tensile strength in MPa at T = 20 °C from Eq. (14.6-3);"
1	192	Eq. 14.11-26	Definition of $\beta_{h,T}$ and β_h "$\beta_{h,T}$ is a temperature dependent coefficient replacing β_h in Eq. (14.10-15a); β_h is the coefficient according to Eq. (14.10-15c);"	"$\beta_{h,T}$ is a temperature dependent coefficient replacing β_h in Eq. (14.10-15); β_h is the coefficient according to Eq. (14.10-17);"
1	197	Par. 14.13.5	Normative side, first sentence: "For monotonically increasing compressive stresses or strains up to the peak stress, as an approximation Eq. (14.8-1) may be used together with Eqs. (14.131) - (14.13-4) for the peak stress $f_{c,imp}$, Eqs. (14.13-5) and (14.13-6) for the modulus of elasticity $E_{c,imp}$ and Eq. (14.13-7) for the strain at maximum stress $\varepsilon_{c1,imp}$."	"For monotonically increasing compressive stresses or strains up to the peak stress, as an approximation Eq. (14.8-1) may be used together with Eqs. (14.13-1) - (14.13-4) for the peak stress $f_{c,imp}$, Eqs. (14.13-5) and (14.13-6) for the modulus of elasticity $E_{c,imp}$ and Eq. (14.13-7) for the strain at maximum stress $\varepsilon_{c1,imp}$."
1	210	Par. 14.19.1.2	Normative side, third sentence:	

			"The values given in Table 14.191 are approximate values for the E modulus E_{cm}, being the secant value between $\sigma_c = 0$ and $0.4\ f_{cm}$ for concrete with quartzite aggregate, subjected to short term loading."	"The values given in Table 14.19-1 are approximate values for the E modulus E_{cm}, being the secant value between $\sigma_c = 0$ and $0.4\ f_{cm}$ for concrete with quartzite aggregate, subjected to short term loading."
2	211	14.19.1.4	Informative side, 1st sentence: "The strength reduction factor h_{fc} was defined in MC(2010) for the case of diagonal compression in shear."	"The strength reduction factor η_{fc} was defined in MC(2010) for the case of diagonal compression in shear."
2	211	14.19.1.4	Normative side, last sentence: "For the same reason as mentioned for αcc, for new structures $\alpha_{ct} = 1.0$"	"For the same reason as mentioned for α_{cc}, for new structures $\alpha_{ct} = 1.0$"
1	262	Par. 18.3	Normative side, 2e paragraph: "The strength interval is defined by two subsequent numbers in the series: 1.0, 1.5, 2.0, 2.5, 3.0, 4.0, 5.0, 6.0, 7.0, 8.0, 10.0, 12.0, 14.0 [MPa] while the letters a, b, c, d, e, correspond to the residual strength ratios:"	"The strength interval is defined by two subsequent numbers in the series: 1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0, 4.5, 5.0, 6.0, 7.0, 8.0, 10.0, 12.0, 14.0 [MPa] while the letters a, b, c, d, e, correspond to the residual strength ratios:"
1	264	Eq. 18.4-6	Replace equation: $f_{Ftu} = f_{Fts} - \frac{w_u}{CMOD_3}\left(f_{Fts} - 0.57 f_{R3k} + 0.26 f_{R1k}\right) \ge 0$	$f_{Ftu} = f_{Fts} - \frac{w_u - CMOD_1}{CMOD_3 - CMOD_1}\left(f_{Fts} - 0.57 f_{R3k} + 0.26 f_{R1k}\right) \ge 0$
1	264	Fig. 18.4-4	Replace figure.	
1	264	18.4.2	Informative side, 1st sentence underneath Eq. (18.4-7) "The coefficient introduced in Eq. (18.4-3) is affected…"	"The coefficient introduced in Eq. (18.4-5) is affected…"

1	265	Fig. 18.4-5	Replace figure.	
1	265	Eq. 18.4-9	Replace equation: $a = 0.52 - 0.15\frac{f_{R3}}{f_{R1}}$	$\alpha = 0.52 - 0.15\frac{f_{R3}}{f_{R1}}$
1	266	Eq. 18.4-15	Replace equation: $e_{ULS} = w_u / l_{cs} = \min\left(e_{Fu};\ 2.5 / l_{cs}\right)$	$\varepsilon_{ULS} = w_u / l_{cs} = \min\left(\varepsilon_{Fu};\ 2.5 / l_{cs}\right)$
1	267	Eq. 18.4-17	Replace equation: $e_D = \varepsilon_{FU} = 2.5\text{mm}/l_{cs}$;	$\varepsilon_D = \varepsilon_{FU} = 2.5\text{mm}/l_{cs}$;
1	267	Eq. 18.4-19	Replace equation: $s(w) = a \cdot w^2 + b \cdot w + c$	$\sigma(w) = a \cdot w^2 + b \cdot w + c$
1	267	18.4.2	1[e] sentence underneath Figure 18.4-6 “The values α_s and β can be identified by means of equilibrium equations: may be assumed conservatively as α_s =1 and β=0.75.”	“The values α_s and β can be identified by means of equilibrium equations: they may be assumed conservatively as α_s =1 and β=0.75.”
1	267	Eq. 18.4-20	Replace equation: $\frac{ds}{dw} = \frac{-f_{Ftu}}{\left(\frac{l_f}{2} - w_D\right)}$	$\frac{d\sigma}{dw} = \frac{-f_{Ftu}}{\left(\frac{l_f}{2} - w_D\right)}$
1	268	Eq. 18.6-1	Replace equation: “$e_{c2} = 0.002(1+0.03f_{R1k})$”	“$\varepsilon_{c2} = 0.002(1+0.03f_{R1k})$”
2	269	18.6.2	Definition underneath equation 18.6-4: “A_{ct}, expressed in m^2 is the area of cracked concrete involved in the failure mechanism”	“A_{ct} is the area of cracked concrete involved in the failure mechanism, expressed in m^2”
1	269	Eq. 18.6-7	Replace equation:	

			$s_{rm} = \left(k_c \cdot c + k_{\phi/\rho} \cdot k_{fl} \cdot k_b \dfrac{\left(f_{ctm-} \cdot f_{\mathrm{Fts,ef}}\right)\phi}{\tau_{bms} \cdot \rho_{s,ef}} \right)$	$s_{rm} = \left(k_c \cdot c + k_{\phi/\rho} \cdot k_{fl} \cdot k_b \dfrac{\left(f_{ctm-} \cdot f_{Fts,ef}\right)\phi}{\tau_{bms} \cdot \rho_{s,ef}} \right)$
2	307	20.5.1.1	Informative side, 3th paragraph: "Reinforcement and concrete have the same strain ($e_s = e_c$) in those…."	"Reinforcement and concrete have the same strain ($\varepsilon_s = \varepsilon_c$) in those…."
2	307	20.5.1.1	Informative side, 5th paragraph, 11th line: "The local change in relative displacement is characterized by the strain difference ds/dx = $e_s - e_c$."	"The local change in relative displacement is characterized by the strain difference ds/dx = $\varepsilon_s - \varepsilon_c$."
2	307	Eq. 20.5-5	Definitions: "h_2 = 1.0 for good bond conditions; "	"η_2 = 1.0 for good bond conditions; "
1	308	Table 20.5-1	Replace in the table: "$e_s < e_{s,y}$" "t_{bmax}" "$t_{bu,split}$" "t_{max}" "t_{bf}"	"$\varepsilon_s < \varepsilon_{s,y}$" "$\tau_{bmax}$" "$\tau_{bu,split}$" "$\tau_{bmax}$" "$\tau_{bf}$"
1	388	Eq. 29.2-15	Definitions: "$S_2(t)$"	"$S^2(t)$"
1	389	Eq. 29.2-17	Replace equation: $S^{j+1}(t) = S^{el,1} + \sum_{i=1}^{j} \cdot \Delta S^{el,i} \cdot \xi(t',t_0,t_i)$	$S^{j+1}(t) = S^{el,1} + \sum_{i=1}^{j} \cdot \Delta S^{el,i} \cdot \xi(t,t_0,t_i)$
1	389	29.2.3.8	Informative side, 7th row from the top: "to obtain $\xi(t,t_0,t_1))$ from $J(t,t')$."	"to obtain $\xi(t,t_0,t_i)$ from $J(t,t')$."
1	389	Eq. 29.2-17	Definitions: "$DS^{el,i}$"	"$\Delta S^{el,i}$"
1	391		Informative side, 24th row from the bottom: "Dt_k"	"Δt_k"
1	391		Normative side, 14th row from the bottom "$De_{c\sigma}(t_1) = e_\sigma(t_0)$"	"$\Delta\varepsilon_{cs}(t_1) = \varepsilon_s(t_0)$"
1	402	30.1.2.1.3	Informative side, 1e sentence: "To ensure that the ductility demand is met, the term $\lvert q_{pl} - q_{el} \rvert$ in Eq. (30.1-6) should not be greater than 15°, unless refined calculations are undertaken to justify a higher value."	"To ensure that the ductility demand is met, the term $\lvert \theta_{pl} - \theta_{el} \rvert$ in Eq. (30.1-5b) should not be greater than 15°, unless refined calculations are undertaken to justify a higher value."
1	402	30.1.2.1.3	Normative side, sentence underneath Eq. 30.1-6:	

			"where σ_2 is the minor principal (compressive) stress and k_ε may be taken as 1.0 or determined in accordance with subsection 5.1.6."	"where σ_2 is the minor principal (compressive) stress and k_ε may be taken as 1.0 or determined in accordance with subsection 14.6-3."
1	402	30.1.3.1.2	Normative side, text above equation 30.1-8: "the contribution of point loads applied within a distance of $d < \alpha_v \leq 2d$ from the face of the support to the design shear force V_{Ed} may be reduced by the factor:"	"the contribution of point loads applied within a distance of $d < a_v \leq 2d$ from the face of the support to the design shear force V_{Ed} may be reduced by the factor:"
1	403	30.1.3.1.2	Normative side, first sentence: "– in the case of point loads applied as close as $\alpha_v < d$ from the face of the support, the design shear force V_{Ed} shall be calculated with k_{dir} = 0.5 as if the load was applied at $\alpha_v = d$."	"– in the case of point loads applied as close as $a_v < d$ from the face of the support, the design shear force V_{Ed} shall be calculated with k_{dir} = 0.5 as if the load was applied at $a_v = d$. "
1	403/404	30.1.3.1.2 / Eq. 30.1-10	Text underneath Eq. 30.1-10: "– It is permissible to use a value of e$_x$ that is greater than half the yield strain of the longitudinal bars (e$_{sy}$/2) but a more detailed cross-sectional analysis shall be undertaken. The strain e$_x$ shall not exceed 0.003. – If the value of e$_x$ is negative, $E_s \cdot A_s$ in Eq. (30.1-10) shall be replaced by $(E_c \cdot A_{c,ten} + E_s \cdot A_s)$ where $A_{c,ten}$ is the area of the tension chord due to bending – For sections closer than d to the face of the support, the value of e$_x$ taken at d from the face of the support may be used. – For sections within a distance $z_v/2$ of a significant bar curtailment, the calculated value e$_x$ shall be increased by a factor of 1.5. – A_s comprises the main longitudinal reinforcing bars in the tensile chord; any distributed longitudinal reinforcement (longitudinal web reinforcement) is neglected. – In calculating A_s (and A_p) the area of the bars that are terminated less than their development length from the section under consideration shall be reduced in proportion to their lack of full	"– It is permissible to use a value of ε_x that is greater than half the yield strain of the longitudinal bars (ε_{sy}/2) but a more detailed cross-sectional analysis shall be undertaken. The strain ε_x shall not exceed 0.003. – If the value of ε_x is negative, $E_s \cdot A_s$ in Eq. (30.1-10) shall be replaced by $(E_c \cdot A_{c,ten} + E_s \cdot A_s)$ where $A_{c,ten}$ is the area of the tension chord due to bending – For sections closer than d to the face of the support, the value of ε_x taken at d from the face of the support may be used. – For sections within a distance $z_v/2$ of a significant bar curtailment, the calculated value ε_x shall be increased by a factor of 1.5. – A_s comprises the main longitudinal reinforcing bars in the tensile chord; any distributed longitudinal reinforcement (longitudinal web reinforcement) is neglected. – In calculating A_s (and A_p) the area of the bars that are terminated less than their development length from the section under consideration shall be reduced in proportion to their lack of full development. – If the axial tension is large enough to crack the flexural compression face of the section, the calculated value of ε_x

			development. – If the axial tension is large enough to crack the flexural compression face of the section, the calculated value of e_x shall be multiplied by a factor of 2.0."	shall be multiplied by a factor of 2.0."
2	404	30.1.3.2	Informative side, first sentence: "The level I equation is derived from the more general level II approximation with the assumption that the mid-depth strain at the control section may be taken as $e_x \approx f_{yd}/(2E_s)$."	"The level I equation is derived from the more general level II approximation with the assumption that the mid-depth strain at the control section may be taken as $\varepsilon_x \approx f_{yd}/(2E_s)$."
2	404	30.1.3.2 eq/ 30.1-15	Replace equation: $k_v = \frac{0.4}{1+750 f_{yd}/E_s} \cdot \frac{1300}{1000+1.25 z_v}$	$k_v = \frac{0.4}{1+750 f_{yd}/E_s} \cdot \frac{1'300}{1'000+1.25 z_v}$
1	405	30.1.3.2	Informative side, first sentence: "As given in Eq. (30.1-10), the longitudinal strain e_x can be calculated as a function of the internal forces M_{Ed}, V_{Ed} and N_{Ed}. For designing new structures, this strain may be calculated directly as a function of the internal forces. For calculating the shear resistance of an existing structure, an iteration until the design value of the internal force corresponds to the resistance is needed to find e_x. "	"As given in Eq. (30.1-10), the longitudinal strain ε_x can be calculated as a function of the internal forces M_{Ed}, V_{Ed} and N_{Ed}. For designing new structures, this strain may be calculated directly as a function of the internal forces. For calculating the shear resistance of an existing structure, an iteration until the design value of the internal force corresponds to the resistance is needed to find ε_x. "
1	405	30.1.3.3.1	Informative side, first sentence: "The web reinforcement ratio r_w given by Eq. (30.1-21) corresponds to the minimum reinforcement ratio as defined in section 30.13.6."	"The web reinforcement ratio ρ_w given by Eq. (30.1-21) corresponds to the minimum reinforcement ratio as defined in section 30.13.6."
2	408	30.1.3.3.1	Normative side, equation 30.1-41 " $\cot\theta_{min} = \cot(15° + 3'000\varepsilon_x)$ for ductility class (30.1-41)"	" $\cot\theta_{min} = \cot(15° + 3'000\varepsilon_x)$ for ductility class B (30.1-41)"
2	412	30.1.3.4.3.4	Normative side, first sentence: "….. crack determined by Eq. (30.1-23)."	"….. crack determined by Eq. (30.1-76)."
2	416	Equation 30.1-88	Replace equation: $R_t[mm] = \frac{40 \cdot V}{\pi D^2}$	$R_t[mm] = \frac{4 \cdot V}{\pi D^2}$
2	438	30.1.9.2	Informative side, 6th line:	

			"It is suggested to limit |di|≤15°"	"It is suggested to limit $\|\delta_i\|\leq 15°$"
2	447	Equation 30.1-167	Replace equation: $\varepsilon_{x,det} = \frac{1}{2E_s \cdot A_{s,det}} \frac{1}{k_{bond}} \left\{ \frac{M_{Ed}}{z} + V_{Ed} + N_{Ed} \left(\frac{1}{2} \pm \frac{D_e}{z} \right) \right\}$	$\varepsilon_{x,det} = \frac{1}{2E_s \cdot A_{s,det}} \frac{1}{k_{bond}} \left\{ \frac{M_{Ed}}{z} + V_{Ed} + N_{Ed} \left(\frac{1}{2} \pm \frac{\Delta_e}{z} \right) \right\}$
2	468	30.2.2.1.6.2	Informative side, 2nd paragraph, 2nd sentence: "The value of 0.5 for can be assumed according to the relevant technical document, JSCE Standard Specifications for Concrete Structures [30.2-5]."	"The value of 0.5 for $k_{c,f}$ can be assumed according to the relevant technical document, JSCE Standard Specifications for Concrete Structures [30.2-5]."
2	468	30.2.2.1.6.2	Normative side, last sentence on the page: " is the reduction factor for fatigue strength of shear reinforcement."	"$k_{s,f}$ is the reduction factor for fatigue strength of shear reinforcement."
2	506	30.6.3.3	Heading "30.6.3.3 Shear transfer at critical connections"	"30.3.6.3 Shear transfer at critical connections"
2	506	30.6.3.4	Heading "30.6.3.4 Provisions for the post-tensioning tendons"	"30.3.6.4 Provisions for the post-tensioning tendons"
2	507	30.6.3.5	Heading "30.6.3.5 Calculation of flexural strength at given storey drift levels"	"30.3.6.5 Calculation of flexural strength at given storey drift levels"
2	530	30.5.2.4.4.1	Underneath equation 30.5-2 "b_{TS} is a coefficient to assess the mean steel stress…."	"β_{TS} is a coefficient to assess the mean steel stress…."
1	533	30.5.2.4.4.2	Text above Eq. 30.5-16 "If different bar diameters are used in the tensile area, ……"	"If different bar diameters are used in the effective tension area, ……"
1	553	Eq. 30.6-6	Replace equation: $V_{corr} = 0{,}0116 I_{corr}$	$V_{corr} = 11.6 I_{corr}$
1	575	30.7.3.3.2	Last sentence "In FRC structures satisfying minimum requirements (Eqs. (18.3-4) and (18.3-5)), .."	"In FRC structures satisfying minimum requirements (Eqs. (18.3-5) and (18.3-6)), .."

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Concrete is the most extensively used construction material in terms of annual tonnage, being used for innumerable buildings and structures over some 2'000 years. Globally it provides a very adaptable means of creating the facilities and assets required to meet the needs of society. Furthermore, this has been done largely using the locally available material resources. Modern concrete technology has extended those inherent advantages, creating an extensive family of concrete types with a diverse range of properties and performances, allowing concrete to be tailor-made for a great variety of uses.

While concrete has a low CO_2-eq value per unit weight, its prodigious global usage has resulted in it becoming a significant contributor to climate change; which has been described by the United Nations as "the defining issue of our time". This has served as a compelling catalyst for change and the increased emphasis on sustainability in the *fib* Model Code for Concrete Structures (2020), also known as *fib* MC (2020). This distinguishes it from the foci of preceding editions of that *fib* Model Code.

fib MC (2020) takes sustainability as a fundamental requirement for design, based on an all-inclusive treatment of societal needs and impacts, life-cycle cost and environmental impacts. The code adopts an integrated life-cycle perspective, which means that the requirements for social performance will have defining implications for subsidiary performance requirements that are crucial in designing new structures and extending the useful life of existing ones. These performance requirements include aspects such as human and environmental safety, serviceability, durability, robustness of the structure, resilience of its functionality, aesthetics, adaptability, maintenance, and reducing CO_2-eq emissions.

fib MC (2020) presents new consensus guidance on developments relating to concrete structures and structural materials, as well as providing a basis for future codes for concrete structure. It addresses significant advances made on a wide range of issues including those relating to structural design and analysis methods, seismic design and assessment procedures, durability, structural monitoring, service life design, structural assessment through-life and making interventions to adapt existing structures or enhance their performance to accommodate revised requirements or extend their useful life.

fib MC (2020), like previous editions of the *fib* Model Code, not only specifies requirements and recommended practices, but gives explanations in the adjoining informative column of the document.

fib MC (2020), the most comprehensive code for concrete structures, takes a holistic life-cycle perspective considering both design and life-cycle management aspects. It is expected to become an important document for both national and international code committees, practitioners and researchers.

fib MC (2020) involves contributions from over 1'400 technical experts from 67 countries which, taken with the support of *fib's* 42 national member bodies, make it an exceptional and truly global effort.

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