Post-Tensioned Member (Bonded Tendons) Permissible Stress BS8110 (TR.43), ACI318, AS3600, EC2 (TR.43-2)			60%FTW-FS-DS	C28/35
Characterictic Strength of Concrete		**Cube**	**Cylinder**	
Characteristic strength of concrete (PT beam and slab), f_{cu} / f_c'		**35**	**28**	N/mm^2
Characteristic strength of concrete at transfer (PT beam and slab), f_{ci} / f_{ci}'		**25**	**20**	N/mm^2
Incorporation of CSTW-FS-DS Approach Within a FTW-FS-DS Approach	**%M_{HOG}**	**%I**	**%f_{min}**	**[1.7 %M_{HOG} + %I + %f_{min}]**
ks = 60%MHOG | 0.5I | 1.3fmin [FTW-FS-DS] [BS8110 TR.43, ACI318, EC2 TR	**60%**	**0.5**	**1.3**	**1.08**
ks = 60%MHOG | 0.5I | 1.0fmin [FTW-FS-DS] [AS3600]	**60%**	**0.5**	**1.0**	**0.83**

Permissible Stress [N/mm^2] [BS8110, TR.43]							
		Serviceability Class 1 No Flexural Tensile Stresses		**Serviceability Class 2** Flexural Tensile Stresses, Uncracked (No Visible Cracking)		**Serviceability Class 3** Flexural Tensile Stresses, Cracked	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**
		12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2
	Flat Slab (FTW-FS-DS)	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**
		6.0 N/mm2	8.3 N/mm2	6.0 N/mm2	8.3 N/mm2	6.0 N/mm2	8.3 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-1.0 #B**	**-1.0 #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**-0.25 f_{ci} #B1**	**-0.25 f_{ci} #B1**
		-1.0 N/mm2	-1.0 N/mm2	-1.8 N/mm2	-1.8 N/mm2	-6.3 N/mm2	-6.3 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-1.0 #B**	**k_σ . -1.0 #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**k_σ . -0.36 $\sqrt{f_{ci}}$ #B**	**-0.45 $\sqrt{f_{ci}}$ #B2**	**k_σ . -0.45 $\sqrt{f_{ci}}$ #B2**
		-1.0 N/mm2	-1.1 N/mm2	-1.8 N/mm2	-2.0 N/mm2	-2.3 N/mm2	-2.4 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	No Rebar	No Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**
		11.6 N/mm2	14.0 N/mm2	11.6 N/mm2	14.0 N/mm2	11.6 N/mm2	14.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**
		11.6 N/mm2	8.4 N/mm2	11.6 N/mm2	8.4 N/mm2	11.6 N/mm2	8.4 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.0 #D**	**0.0 #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**-<.....> #D1**	**-<.....> #D1**
		0.0 N/mm2	0.0 N/mm2	-2.1 N/mm2	-2.1 N/mm2	-3.4 N/mm2	-3.4 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . 0.0 #D**	**0.0 #D**	**k_σ . -0.36 $\sqrt{f_{cu}}$ #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**k_σ . -0.45 $\sqrt{f_{cu}}$ #D2**	**-0.45 $\sqrt{f_{cu}}$ #D2**
		0.0 N/mm2	0.0 N/mm2	-2.3 N/mm2	-2.1 N/mm2	-2.9 N/mm2	-2.7 N/mm2
		With Rebar	No Rebar	With Rebar	No Rebar	With Rebar	No Rebar

#A1: Note beam, one-way slab or two-way slab option to cl.4.3.5.1 BS8110.
#A2: Note flat slab option to T.2 TR.43 and cl.6.10.2 TR.43.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.4.3.5.2 BS8110.
#B1: Note beam, one-way slab or two-way slab option to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to T.2 TR.43 and cl.6.10.2 TR.43.
#C1: Note beam, one-way slab or two-way slab option to cl.4.3.4.2 BS8110.
#C2: Note flat slab option to T.2 TR.43.
#D: Note beam, one-way slab, two-way slab or flat slab option to cl.4.3.4.3 BS8110.
#D1: Note beam, one-way slab or two-way slab option to cl.4.3.4.3 BS8110. Note -<.....> = MAX {-0.25f_{cu}, (0.7-1.1).(-0.58$\sqrt{f_{cu}}$ to -0.82$\sqrt{f_{cu}}$)-4N/mm^2/1.0%} as the code allows for an increase in the tensile stress limit from 1% of longitudinal steel (untensioned reinforcement) onwards (-4N/mm^2 for every 1% of longitudinal steel (untensioned reinforcement), increasing proportionally, up to the specified upper limit of -0.25f_{cu}). Note crack width @ 0.20mm, %rebar **0.15%** and overall depth, h **600** mm
#D2: Note flat slab option to T.2 TR.43.

Permissible Stress [N/mm^2] [ACI318]							
		Serviceability Class U Uncracked		**Serviceability Class T** Transition		**Serviceability Class C** Cracked	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**
		12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**
		12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.30 f_{ci}' #B1**	**-0.30 f_{ci}' #B1**
		-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.50 $\sqrt{f_{ci}}$' #B2**	**k_σ . -0.50 $\sqrt{f_{ci}}$' #B2**
		-1.1 N/mm2	-1.2 N/mm2	-1.1 N/mm2	-1.2 N/mm2	-2.2 N/mm2	-2.4 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	No Rebar	No Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**
		17.0 N/mm2	17.0 N/mm2	17.0 N/mm2	17.0 N/mm2	17.0 N/mm2	17.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**
		17.0 N/mm2	17.0 N/mm2	17.0 N/mm2	17.0 N/mm2	17.0 N/mm2	17.0 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.62 $\sqrt{f_c}$' #D1**	**-0.62 $\sqrt{f_c}$' #D1**	**-1.00 $\sqrt{f_c}$' #D1**	**-1.00 $\sqrt{f_c}$' #D1**	**-0.30 f_c' #D1**	**-0.30 f_c' #D1**
		-3.3 N/mm2	-3.3 N/mm2	-5.3 N/mm2	-5.3 N/mm2	-8.5 N/mm2	-8.5 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**
		-2.9 N/mm2	-2.7 N/mm2	-2.9 N/mm2	-2.7 N/mm2	-2.9 N/mm2	-2.7 N/mm2
		With Rebar	With Rebar	With Rebar	With Rebar	With Rebar	With Rebar

#A: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.3.1 ACI318.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.3.2 ACI318.
#B1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to cl.24.5.3.2.1 ACI318.
#C: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.4.1 ACI318.
#D1: Note beam, one-way slab or two-way slab option to cl.24.5.2.1 ACI318 and analogous to cl.4.3.4.3 BS8110.
#D2: Note flat slab option to cl.24.5.2.1 ACI318.

Post-Tensioned Member (Bonded Tendons) Permissible Stress BS8110 (TR.43), ACI318, AS3600, EC2 (TR.43-2)			60%FTW-FS-DS	C28/35
Characterictic Strength of Concrete		Cube	Cylinder	
Characteristic strength of concrete (PT beam and slab), f_{cu} / f_c'		35	28	N/mm^2
Characteristic strength of concrete at transfer (PT beam and slab), f_{ci} / f_{ci}'		25	20	N/mm^2
Incorporation of CSTW-FS-DS Approach Within a FTW-FS-DS Approach	$\%M_{HOG}$	%I	$\%f_{min}$	[1/ $\%M_{HOG}$]: %I: $\%f_{min}$
ks = 60%MHOG | 0.5I | 1.3fmin [FTW-FS-DS] [BS8110 TR.43, ACI318, EC2 TR	60%	0.5	1.3	1.08
ks = 60%MHOG | 0.5I | 1.0fmin [FTW-FS-DS] [AS3600]	60%	0.5	1.0	0.83

Permissible Stress [N/mm^2] [AS3600]

		Serviceability Class U Uncracked		Serviceability Class T Transition		Serviceability Class C Cracked	
Stress Type	Floor Type	Top	Bottom	Top	Bottom	Top	Bottom
TLS compressive $f'_{max,t/b}$	Beam, One-Way or Two-Way Slab	$0.50 f_{ci}'$ #A	$0.50 f_{ci}'$ #A	$0.50 f_{ci}'$ #A	$0.50 f_{ci}'$ #A	$0.50 f_{ci}'$ #A	$0.50 f_{ci}'$ #A
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
	Flat Slab (FTW-FS-DS)	$0.50 f_{ci}'$ #A	$0.50 f_{ci}'$ #A	$0.50 f_{ci}'$ #A	$0.50 f_{ci}'$ #A	$0.50 f_{ci}'$ #A	$0.50 f_{ci}'$ #A
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
TLS tensile $f'_{min,t/b}$	Beam, One-Way or Two-Way Slab	$-0.25 \sqrt{f_{ci}'}$ #B	$-0.25 \sqrt{f_{ci}'}$ #B	$-0.60 \sqrt{f_{ci}'}$ #B	$-0.60 \sqrt{f_{ci}'}$ #B	$-0.30 f_{ci}'$ #B1	$-0.30 f_{ci}'$ #B1
		-1.1 N/mm2	-1.1 N/mm2	-2.7 N/mm2	-2.7 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	$-0.25 \sqrt{f_{ci}'}$ #B	$k_\sigma \cdot -0.25 \sqrt{f_{ci}'}$ #B	$-0.60 \sqrt{f_{ci}'}$ #B	$k_\sigma \cdot -0.60 \sqrt{f_{ci}'}$ #B	$-0.60 \sqrt{f_{ci}'}$ #B2	$k_\sigma \cdot -0.60 \sqrt{f_{ci}'}$ #B2
		-1.1 N/mm2	-0.9 N/mm2	-2.7 N/mm2	-2.2 N/mm2	-2.7 N/mm2	-2.2 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
SLS compressive $f_{max,t/b}$	Beam, One-Way or Two-Way Slab	$0.50 f_c'$ #C	$0.50 f_c'$ #C	$0.50 f_c'$ #C	$0.50 f_c'$ #C	$0.50 f_c'$ #C	$0.50 f_c'$ #C
		14.2 N/mm2	14.2 N/mm2	14.2 N/mm2	14.2 N/mm2	14.2 N/mm2	14.2 N/mm2
	Flat Slab (FTW-FS-DS)	$0.50 f_c'$ #C	$0.50 f_c'$ #C	$0.50 f_c'$ #C	$0.50 f_c'$ #C	$0.50 f_c'$ #C	$0.50 f_c'$ #C
		14.2 N/mm2	14.2 N/mm2	14.2 N/mm2	14.2 N/mm2	14.2 N/mm2	14.2 N/mm2
SLS tensile $f_{min,t/b}$	Beam, One-Way or Two-Way Slab	$-0.25 \sqrt{f_c'}$ #D	$-0.25 \sqrt{f_c'}$ #D	$-0.60 \sqrt{f_c'}$ #D	$-0.60 \sqrt{f_c'}$ #D	$-0.30 f_c'$ #D1	$-0.30 f_c'$ #D1
		-1.3 N/mm2	-1.3 N/mm2	-3.2 N/mm2	-3.2 N/mm2	-8.5 N/mm2	-8.5 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	$k_\sigma \cdot -0.25 \sqrt{f_c'}$ #D	$-0.25 \sqrt{f_c'}$ #D	$k_\sigma \cdot -0.60 \sqrt{f_c'}$ #D	$-0.60 \sqrt{f_c'}$ #D	$k_\sigma \cdot -0.60 \sqrt{f_c'}$ #D2	$-0.60 \sqrt{f_c'}$ #D2
		-1.1 N/mm2	-1.3 N/mm2	-2.7 N/mm2	-3.2 N/mm2	-2.7 N/mm2	-3.2 N/mm2
		With Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar

#A: Note beam, one-way slab, two-way slab or flat slab option to cl.8.1.6.2 AS3600.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.8.6.2 and cl.9.4.2 AS3600.
#B1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to cl.9.4.2 AS3600.
#C: Note beam, one-way slab, two-way slab or flat slab option to cl.8.1.6.2 AS3600.
#D: Note beam, one-way slab, two-way slab or flat slab option to cl.8.6.2 and cl.9.4.2 AS3600.
#D1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.4.3 BS8110.
#D2: Note flat slab option to cl.9.4.2 AS3600 as an alternative to cl.6.9.5.3 AS3600.

Permissible Stress [N/mm^2] [EC2 and TR.43-2]

		Serviceability Class U Uncracked		Serviceability Class T Transition		Serviceability Class C Cracked	
Stress Type	Floor Type	Top	Bottom	Top	Bottom	Top	Bottom
TLS compressive $f'_{max,t/b}$	Beam, One-Way or Two-Way Slab	$0.50 f_{ci}'$ #A1	$0.50 f_{ci}'$ #A1	$0.50 f_{ci}'$ #A1	$0.50 f_{ci}'$ #A1	$0.50 f_{ci}'$ #A1	$0.50 f_{ci}'$ #A1
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
	Flat Slab (FTW-FS-DS)	$0.30 f_{ci}'$ #A2	$0.40 f_{ci}'$ #A2	$0.30 f_{ci}'$ #A2	$0.40 f_{ci}'$ #A2	$0.30 f_{ci}'$ #A2	$0.40 f_{ci}'$ #A2
		6.0 N/mm2	8.0 N/mm2	6.0 N/mm2	8.0 N/mm2	6.0 N/mm2	8.0 N/mm2
TLS tensile $f'_{min,t/b}$	Beam, One-Way or Two-Way Slab	$-0.21 f_{ci}'^{2/3}$ #B1	$-0.21 f_{ci}'^{2/3}$ #B1	$-0.21 f_{ci}'^{2/3}$ #B1	$-0.21 f_{ci}'^{2/3}$ #B1	$-0.30 f_{ci}'$ #B1	$-0.30 f_{ci}'$ #B1
		-1.5 N/mm2	-1.5 N/mm2	-1.5 N/mm2	-1.5 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	$-0.09 f_{ci}'^{2/3}$ #B2	$k_\sigma \cdot -0.09 f_{ci}'^{2/3}$ #B2	$-0.09 f_{ci}'^{2/3}$ #B2	$k_\sigma \cdot -0.09 f_{ci}'^{2/3}$ #B2	$-0.27 f_{ci}'^{2/3}$ #B2	$k_\sigma \cdot -0.27 f_{ci}'^{2/3}$ #B2
		-0.7 N/mm2	-0.7 N/mm2	-0.7 N/mm2	-0.7 N/mm2	-2.0 N/mm2	-2.2 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
SLS compressive $f_{max,t/b}$	Beam, One-Way or Two-Way Slab	$0.60 f_c'$ #C1	$0.60 f_c'$ #C1	$0.60 f_c'$ #C1	$0.60 f_c'$ #C1	$0.60 f_c'$ #C1	$0.60 f_c'$ #C1
		17.0 N/mm2	17.0 N/mm2	17.0 N/mm2	17.0 N/mm2	17.0 N/mm2	17.0 N/mm2
	Flat Slab (FTW-FS-DS)	$0.40 f_c'$ #C2	$0.30 f_c'$ #C2	$0.40 f_c'$ #C2	$0.30 f_c'$ #C2	$0.40 f_c'$ #C2	$0.30 f_c'$ #C2
		11.3 N/mm2	8.5 N/mm2	11.3 N/mm2	8.5 N/mm2	11.3 N/mm2	8.5 N/mm2
SLS tensile $f_{min,t/b}$	Beam, One-Way or Two-Way Slab	$-0.21 f_c'^{2/3}$ #D1	$-0.21 f_c'^{2/3}$ #D1	$-0.21 f_c'^{2/3}$ #D1	$-0.21 f_c'^{2/3}$ #D1	-<.......> #D2	-<.......> #D2
		-2.0 N/mm2	-2.0 N/mm2	-2.0 N/mm2	-2.0 N/mm2	-4.6 N/mm2	-4.6 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	$k_\sigma \cdot -0.09 f_c'^{2/3}$ #D3	$-0.09 f_c'^{2/3}$ #D3	$k_\sigma \cdot -0.09 f_c'^{2/3}$ #D3	$-0.09 f_c'^{2/3}$ #D3	$k_\sigma \cdot -0.27 f_c'^{2/3}$ #D3	$-0.27 f_c'^{2/3}$ #D3
		-0.9 N/mm2	-0.8 N/mm2	-0.9 N/mm2	-0.8 N/mm2	-2.7 N/mm2	-2.5 N/mm2
		With Rebar	No Rebar	With Rebar	No Rebar	With Rebar	No Rebar

#A1: Note beam, one-way slab or two-way slab option to cl.5.8.2 TR.43-2.
#A2: Note flat slab option to T.4 TR.43-2 and cl.5.8.2 TR.43-2.
#B1: Note beam, one-way slab or two-way slab option to cl.5.8.2 TR.43-2 and analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to T.4 TR.43-2 and cl.5.8.2 TR.43-2.
#C1: Note beam, one-way slab or two-way slab option to cl.5.10.2.2 EC2.
#C2: Note flat slab option to T.4 TR.43-2.
#D1: Note beam, one-way slab or two-way slab option analogous to cl.5.8.2 TR.43-2.
#D2: Note beam, one-way slab or two-way slab option to cl.5.8.1 TR.43-2. Note -<.......> = MAX {$-0.30f_c'$, ($-0.40f_c'^{2/3}$ to $-0.50f_c'^{2/3}$)-4N/mm^2/1.0%} as the code allows for an increase in the tensile stress limit from 1% of longitudinal steel (untensioned reinforcement) onwards (-4N/mm^2 for every 1% of longitudinal steel (untensioned reinforcement), increasing proportionally, up to the specified upper limit of $-0.30f_c'$). Note crack width @ 0.20mm and %rebar 0.15%
#D3: Note flat slab option to T.4 TR.43-2.

Post-Tensioned Member (Bonded Tendons) Permissible Stress BS8110 (TR.43), ACI318, AS3600, EC2 (TR.43-2)			60%FTW-FS-DS	C32/40
Characterictic Strength of Concrete		**Cube**	**Cylinder**	
Characteristic strength of concrete (PT beam and slab), f_{cu} / f_c'		**40**	**32**	N/mm^2
Characteristic strength of concrete at transfer (PT beam and slab), f_{ci} / f_{ci}'		**25**	**20**	N/mm^2
Incorporation of CSTW-FS-DS Approach Within a FTW-FS-DS Approach	**%M_{HOG}**	**%I**	**%f_{min}**	**[1.] %M_{HOG}]. %I. %f_{min}**
ks = 60%MHOG | 0.5I | 1.3fmin [FTW-FS-DS] [BS8110 TR.43, ACI318, EC2 TR	**60%**	**0.5**	**1.3**	**1.08**
ks = 60%MHOG | 0.5I | 1.0fmin [FTW-FS-DS] [AS3600]	**60%**	**0.5**	**1.0**	**0.83**

Permissible Stress [N/mm^2] [BS8110, TR.43]							
		Serviceability Class 1 **No Flexural Tensile Stresses**		**Serviceability Class 2** **Flexural Tensile Stresses, Uncracked (No Visible Cracking)**		**Serviceability Class 3** **Flexural Tensile Stresses, Cracked**	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**
		12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2
	Flat Slab (FTW-FS-DS)	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**
		6.0 N/mm2	8.3 N/mm2	6.0 N/mm2	8.3 N/mm2	6.0 N/mm2	8.3 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-1.0 #B**	**-1.0 #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**-0.25 f_{ci} #B1**	**-0.25 f_{ci} #B1**
		-1.0 N/mm2	-1.0 N/mm2	-1.8 N/mm2	-1.8 N/mm2	-6.3 N/mm2	-6.3 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-1.0 #B**	**k_σ . -1.0 #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**k_σ . -0.36 $\sqrt{f_{ci}}$ #B**	**-0.45 $\sqrt{f_{ci}}$ #B2**	**k_σ . -0.45 $\sqrt{f_{ci}}$ #B2**
		-1.0 N/mm2	-1.1 N/mm2	-1.8 N/mm2	-2.0 N/mm2	-2.3 N/mm2	-2.4 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	No Rebar	No Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**
		13.2 N/mm2	16.0 N/mm2	13.2 N/mm2	16.0 N/mm2	13.2 N/mm2	16.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**
		13.2 N/mm2	9.6 N/mm2	13.2 N/mm2	9.6 N/mm2	13.2 N/mm2	9.6 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.0 #D**	**0.0 #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**-<.....> #D1**	**-<.....> #D1**
		0.0 N/mm2	0.0 N/mm2	-2.3 N/mm2	-2.3 N/mm2	-4.5 N/mm2	-4.5 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . 0.0 #D**	**0.0 #D**	**k_σ . -0.36 $\sqrt{f_{cu}}$ #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**k_σ . -0.45 $\sqrt{f_{cu}}$ #D2**	**-0.45 $\sqrt{f_{cu}}$ #D2**
		0.0 N/mm2	0.0 N/mm2	-2.5 N/mm2	-2.3 N/mm2	-3.1 N/mm2	-2.8 N/mm2
		With Rebar	No Rebar	With Rebar	No Rebar	With Rebar	No Rebar

#A1: Note beam, one-way slab or two-way slab option to cl.4.3.5.1 BS8110.
#A2: Note flat slab option to T.2 TR.43 and cl.6.10.2 TR.43.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.4.3.5.2 BS8110.
#B1: Note beam, one-way slab or two-way slab option to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to T.2 TR.43 and cl.6.10.2 TR.43.
#C1: Note beam, one-way slab or two-way slab option to cl.4.3.4.2 BS8110.
#C2: Note flat slab option to T.2 TR.43.
#D: Note beam, one-way slab, two-way slab or flat slab option to cl.4.3.4.3 BS8110.
#D1: Note beam, one-way slab or two-way slab option to cl.4.3.4.3 BS8110. Note -<.....> = MAX {-0.25f_{cu}, (0.7-1.1).(-0.58$\sqrt{f_{cu}}$ to -0.82$\sqrt{f_{cu}}$)-4N/mm^2/1.0%} as the code allows for an increase in the tensile stress limit from 1% of longitudinal steel (untensioned reinforcement) onwards (-4N/mm^2 for every 1% of longitudinal steel (untensioned reinforcement), increasing proportionally, up to the specified upper limit of -0.25f_{cu}). Note crack width @ 0.20mm, %rebar **0.15%** and overall depth, h **600** mm
#D2: Note flat slab option to T.2 TR.43.

Permissible Stress [N/mm^2] [ACI318]							
		Serviceability Class U **Uncracked**		**Serviceability Class T** **Transition**		**Serviceability Class C** **Cracked**	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**
		12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**
		12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.30 f_{ci}' #B1**	**-0.30 f_{ci}' #B1**
		-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.50 $\sqrt{f_{ci}}$' #B2**	**k_σ . -0.50 $\sqrt{f_{ci}}$' #B2**
		-1.1 N/mm2	-1.2 N/mm2	-1.1 N/mm2	-1.2 N/mm2	-2.2 N/mm2	-2.4 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	No Rebar	No Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**
		19.0 N/mm2	19.0 N/mm2	19.0 N/mm2	19.0 N/mm2	19.0 N/mm2	19.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**
		19.0 N/mm2	19.0 N/mm2	19.0 N/mm2	19.0 N/mm2	19.0 N/mm2	19.0 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.62 $\sqrt{f_c}$' #D1**	**-0.62 $\sqrt{f_c}$' #D1**	**-1.00 $\sqrt{f_c}$' #D1**	**-1.00 $\sqrt{f_c}$' #D1**	**-0.30 f_c' #D1**	**-0.30 f_c' #D1**
		-3.5 N/mm2	-3.5 N/mm2	-5.6 N/mm2	-5.6 N/mm2	-9.5 N/mm2	-9.5 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**
		-3.0 N/mm2	-2.8 N/mm2	-3.0 N/mm2	-2.8 N/mm2	-3.0 N/mm2	-2.8 N/mm2
		With Rebar	With Rebar	With Rebar	With Rebar	With Rebar	With Rebar

#A: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.3.1 ACI318.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.3.2 ACI318.
#B1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to cl.24.5.3.2.1 ACI318.
#C: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.4.1 ACI318.
#D1: Note beam, one-way slab or two-way slab option to cl.24.5.2.1 ACI318 and analogous to cl.4.3.4.3 BS8110.
#D2: Note flat slab option to cl.24.5.2.1 ACI318.

Post-Tensioned Member (Bonded Tendons) Permissible Stress BS8110 (TR.43), ACI318, AS3600, EC2 (TR.43-2)		60%FTW-FS-DS	C32/40
Characterictic Strength of Concrete	**Cube**	**Cylinder**	
Characteristic strength of concrete (PT beam and slab), f_{cu} / f_c'	**40**	**32**	N/mm^2
Characteristic strength of concrete at transfer (PT beam and slab), f_{ci} / f_{ci}'	**25**	**20**	N/mm^2
Incorporation of CSTW-FS-DS Approach Within a FTW-FS-DS Approach	**%M_{HOG}**	**%I**	**%f_{min}**
ks = 60%MHOG | 0.5I | 1.3fmin [FTW-FS-DS] [BS8110 TR.43, ACI318, EC2 TR	**60%**	**0.5**	**1.3**
ks = 60%MHOG | 0.5I | 1.0fmin [FTW-FS-DS] [AS3600]	**60%**	**0.5**	**1.0**

Permissible Stress [N/mm^2] [AS3600]							
		Serviceability Class U Uncracked		Serviceability Class T Transition		Serviceability Class C Cracked	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	Beam, One-Way or Two-Way Slab	$0.50\ f_{ci}'$ #A	$0.50\ f_{ci}'$ #A	$0.50\ f_{ci}'$ #A	$0.50\ f_{ci}'$ #A	$0.50\ f_{ci}'$ #A	$0.50\ f_{ci}'$ #A
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
	Flat Slab (FTW-FS-DS)	$0.50\ f_{ci}'$ #A	$0.50\ f_{ci}'$ #A	$0.50\ f_{ci}'$ #A	$0.50\ f_{ci}'$ #A	$0.50\ f_{ci}'$ #A	$0.50\ f_{ci}'$ #A
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
TLS tensile $f'_{min,t/b}$	Beam, One-Way or Two-Way Slab	$-0.25\ \sqrt{f_{ci}}'$ #B	$-0.25\ \sqrt{f_{ci}}'$ #B	$-0.60\ \sqrt{f_{ci}}'$ #B	$-0.60\ \sqrt{f_{ci}}'$ #B	$-0.30\ f_{ci}'$ #B1	$-0.30\ f_{ci}'$ #B1
		-1.1 N/mm2	-1.1 N/mm2	-2.7 N/mm2	-2.7 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	$-0.25\ \sqrt{f_{ci}}'$ #B	$k_\sigma\ .\ -0.25\ \sqrt{f_{ci}}'$ #B	$-0.60\ \sqrt{f_{ci}}'$ #B	$k_\sigma\ .\ -0.60\ \sqrt{f_{ci}}'$ #B	$-0.60\ \sqrt{f_{ci}}'$ #B2	$k_\sigma\ .\ -0.60\ \sqrt{f_{ci}}'$ #B2
		-1.1 N/mm2	-0.9 N/mm2	-2.7 N/mm2	-2.2 N/mm2	-2.7 N/mm2	-2.2 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
SLS compressive $f_{max,t/b}$	Beam, One-Way or Two-Way Slab	$0.50\ f_c'$ #C	$0.50\ f_c'$ #C	$0.50\ f_c'$ #C	$0.50\ f_c'$ #C	$0.50\ f_c'$ #C	$0.50\ f_c'$ #C
		15.8 N/mm2	15.8 N/mm2	15.8 N/mm2	15.8 N/mm2	15.8 N/mm2	15.8 N/mm2
	Flat Slab (FTW-FS-DS)	$0.50\ f_c'$ #C	$0.50\ f_c'$ #C	$0.50\ f_c'$ #C	$0.50\ f_c'$ #C	$0.50\ f_c'$ #C	$0.50\ f_c'$ #C
		15.8 N/mm2	15.8 N/mm2	15.8 N/mm2	15.8 N/mm2	15.8 N/mm2	15.8 N/mm2
SLS tensile $f_{min,t/b}$	Beam, One-Way or Two-Way Slab	$-0.25\ \sqrt{f_c}'$ #D	$-0.25\ \sqrt{f_c}'$ #D	$-0.60\ \sqrt{f_c}'$ #D	$-0.60\ \sqrt{f_c}'$ #D	$-0.30\ f_c'$ #D1	$-0.30\ f_c'$ #D1
		-1.4 N/mm2	-1.4 N/mm2	-3.4 N/mm2	-3.4 N/mm2	-9.5 N/mm2	-9.5 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	$k_\sigma\ .\ -0.25\ \sqrt{f_c}'$ #D	$-0.25\ \sqrt{f_c}'$ #D	$k_\sigma\ .\ -0.60\ \sqrt{f_c}'$ #D	$-0.60\ \sqrt{f_c}'$ #D	$k_\sigma\ .\ -0.60\ \sqrt{f_c}'$ #D2	$-0.60\ \sqrt{f_c}'$ #D2
		-1.2 N/mm2	-1.4 N/mm2	-2.8 N/mm2	-3.4 N/mm2	-2.8 N/mm2	-3.4 N/mm2
		With Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar

#A: Note beam, one-way slab, two-way slab or flat slab option to cl.8.1.6.2 AS3600.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.8.6.2 and cl.9.4.2 AS3600.
#B1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to cl.9.4.2 AS3600.
#C: Note beam, one-way slab, two-way slab or flat slab option to cl.8.1.6.2 AS3600.
#D: Note beam, one-way slab, two-way slab or flat slab option to cl.8.6.2 and cl.9.4.2 AS3600.
#D1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.4.3 BS8110.
#D2: Note flat slab option to cl.9.4.2 AS3600 as an alternative to cl.6.9.5.3 AS3600.

Permissible Stress [N/mm^2] [EC2 and TR.43-2]							
		Serviceability Class U Uncracked		Serviceability Class T Transition		Serviceability Class C Cracked	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	Beam, One-Way or Two-Way Slab	$0.50\ f_{ci}'$ #A1	$0.50\ f_{ci}'$ #A1	$0.50\ f_{ci}'$ #A1	$0.50\ f_{ci}'$ #A1	$0.50\ f_{ci}'$ #A1	$0.50\ f_{ci}'$ #A1
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
	Flat Slab (FTW-FS-DS)	$0.30\ f_{ci}'$ #A2	$0.40\ f_{ci}'$ #A2	$0.30\ f_{ci}'$ #A2	$0.40\ f_{ci}'$ #A2	$0.30\ f_{ci}'$ #A2	$0.40\ f_{ci}'$ #A2
		6.0 N/mm2	8.0 N/mm2	6.0 N/mm2	8.0 N/mm2	6.0 N/mm2	8.0 N/mm2
TLS tensile $f'_{min,t/b}$	Beam, One-Way or Two-Way Slab	$-0.21\ f_{ci}'^{2/3}$ #B1	$-0.21\ f_{ci}'^{2/3}$ #B1	$-0.21\ f_{ci}'^{2/3}$ #B1	$-0.21\ f_{ci}'^{2/3}$ #B1	$-0.30\ f_{ci}'$ #B1	$-0.30\ f_{ci}'$ #B1
		-1.5 N/mm2	-1.5 N/mm2	-1.5 N/mm2	-1.5 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	$-0.09\ f_{ci}'^{2/3}$ #B2	$k_\sigma\ .\ -0.09\ f_{ci}'^{2/3}$ #B2	$-0.09\ f_{ci}'^{2/3}$ #B2	$k_\sigma\ .\ -0.09\ f_{ci}'^{2/3}$ #B2	$-0.27\ f_{ci}'^{2/3}$ #B2	$k_\sigma\ .\ -0.27\ f_{ci}'^{2/3}$ #B2
		-0.7 N/mm2	-0.7 N/mm2	-0.7 N/mm2	-0.7 N/mm2	-2.0 N/mm2	-2.2 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
SLS compressive $f_{max,t/b}$	Beam, One-Way or Two-Way Slab	$0.60\ f_c'$ #C1	$0.60\ f_c'$ #C1	$0.60\ f_c'$ #C1	$0.60\ f_c'$ #C1	$0.60\ f_c'$ #C1	$0.60\ f_c'$ #C1
		19.0 N/mm2	19.0 N/mm2	19.0 N/mm2	19.0 N/mm2	19.0 N/mm2	19.0 N/mm2
	Flat Slab (FTW-FS-DS)	$0.40\ f_c'$ #C2	$0.30\ f_c'$ #C2	$0.40\ f_c'$ #C2	$0.30\ f_c'$ #C2	$0.40\ f_c'$ #C2	$0.30\ f_c'$ #C2
		12.7 N/mm2	9.5 N/mm2	12.7 N/mm2	9.5 N/mm2	12.7 N/mm2	9.5 N/mm2
SLS tensile $f_{min,t/b}$	Beam, One-Way or Two-Way Slab	$-0.21\ f_c'^{2/3}$ #D1	$-0.21\ f_c'^{2/3}$ #D1	$-0.21\ f_c'^{2/3}$ #D1	$-0.21\ f_c'^{2/3}$ #D1	-<.....> #D2	-<.....> #D2
		-2.1 N/mm2	-2.1 N/mm2	-2.1 N/mm2	-2.1 N/mm2	-5.0 N/mm2	-5.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	$k_\sigma\ .\ -0.09\ f_c'^{2/3}$ #D3	$-0.09\ f_c'^{2/3}$ #D3	$k_\sigma\ .\ -0.09\ f_c'^{2/3}$ #D3	$-0.09\ f_c'^{2/3}$ #D3	$k_\sigma\ .\ -0.27\ f_c'^{2/3}$ #D3	$-0.27\ f_c'^{2/3}$ #D3
		-1.0 N/mm2	-0.9 N/mm2	-1.0 N/mm2	-0.9 N/mm2	-2.9 N/mm2	-2.7 N/mm2
		With Rebar	No Rebar	With Rebar	No Rebar	With Rebar	No Rebar

#A1: Note beam, one-way slab or two-way slab option to cl.5.8.2 TR.43-2.
#A2: Note flat slab option to T.4 TR.43-2 and cl.5.8.2 TR.43-2.
#B1: Note beam, one-way slab or two-way slab option to cl.5.8.2 TR.43-2 and analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to T.4 TR.43-2 and cl.5.8.2 TR.43-2.
#C1: Note beam, one-way slab or two-way slab option to cl.5.10.2.2 EC2.
#C2: Note flat slab option to T.4 TR.43-2.
#D1: Note beam, one-way slab or two-way slab option analogous to cl.5.8.2 TR.43-2.
#D2: Note beam, one-way slab or two-way slab option to cl.5.8.1 TR.43-2. Note -<.....> = MAX {$-0.30f_c'$, ($-0.40f_c'^{2/3}$ to $-0.50f_c'^{2/3}$)$-4N/mm^2/1.0\%$} as the code allows for an increase in the tensile stress limit from 1% of longitudinal steel (untensioned reinforcement) onwards ($-4N/mm^2$ for every 1% of longitudinal steel (untensioned reinforcement), increasing proportionally, up to the specified upper limit of $-0.30f_c'$). Note crack width @ 0.20mm and %rebar **0.15%**
#D3: Note flat slab option to T.4 TR.43-2.

Post-Tensioned Member (Bonded Tendons) Permissible Stress BS8110 (TR.43), ACI318, AS3600, EC2 (TR.43-2)			60%FTW-FS-DS	C35/45
Characterictic Strength of Concrete		**Cube**	**Cylinder**	
Characteristic strength of concrete (PT beam and slab), f_{cu} / f_c'		**45**	**35**	N/mm^2
Characteristic strength of concrete at transfer (PT beam and slab), f_{ci} / f_{ci}'		**25**	**20**	N/mm^2
Incorporation of CSTW-FS-DS Approach Within a FTW-FS-DS Approach	**%M_{HOG}**	**%I**	**%f_{min}**	**[1.] %M_{HOG}]. %I. %f_{min}**
ks = 60%MHOG | 0.5I | 1.3fmin [FTW-FS-DS] [BS8110 TR.43, ACI318, EC2 TR	**60%**	**0.5**	**1.3**	**1.08**
ks = 60%MHOG | 0.5I | 1.0fmin [FTW-FS-DS] [AS3600]	**60%**	**0.5**	**1.0**	**0.83**

Permissible Stress [N/mm^2] [BS8110, TR.43]							
		Serviceability Class 1 No Flexural Tensile Stresses		**Serviceability Class 2** Flexural Tensile Stresses, Uncracked (No Visible Cracking)		**Serviceability Class 3** Flexural Tensile Stresses, Cracked	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**
		12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2
	Flat Slab (FTW-FS-DS)	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**
		6.0 N/mm2	8.3 N/mm2	6.0 N/mm2	8.3 N/mm2	6.0 N/mm2	8.3 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-1.0 #B**	**-1.0 #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**-0.25 f_{ci} #B1**	**-0.25 f_{ci} #B1**
		-1.0 N/mm2	-1.0 N/mm2	-1.8 N/mm2	-1.8 N/mm2	-6.3 N/mm2	-6.3 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-1.0 #B**	**k_σ . -1.0 #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**k_σ . -0.36 $\sqrt{f_{ci}}$ #B**	**-0.45 $\sqrt{f_{ci}}$ #B2**	**k_σ . -0.45 $\sqrt{f_{ci}}$ #B2**
		-1.0 N/mm2	-1.1 N/mm2	-1.8 N/mm2	-2.0 N/mm2	-2.3 N/mm2	-2.4 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	No Rebar	No Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**
		14.9 N/mm2	18.0 N/mm2	14.9 N/mm2	18.0 N/mm2	14.9 N/mm2	18.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**
		14.9 N/mm2	10.8 N/mm2	14.9 N/mm2	10.8 N/mm2	14.9 N/mm2	10.8 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.0 #D**	**0.0 #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**-<.....> #D1**	**-<.....> #D1**
		0.0 N/mm2	0.0 N/mm2	-2.4 N/mm2	-2.4 N/mm2	-4.5 N/mm2	-4.5 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . 0.0 #D**	**0.0 #D**	**k_σ . -0.36 $\sqrt{f_{cu}}$ #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**k_σ . -0.45 $\sqrt{f_{cu}}$ #D2**	**-0.45 $\sqrt{f_{cu}}$ #D2**
		0.0 N/mm2	0.0 N/mm2	-2.6 N/mm2	-2.4 N/mm2	-3.3 N/mm2	-3.0 N/mm2
		With Rebar	No Rebar	With Rebar	No Rebar	With Rebar	No Rebar

#A1: Note beam, one-way slab or two-way slab option to cl.4.3.5.1 BS8110.
#A2: Note flat slab option to T.2 TR.43 and cl.6.10.2 TR.43.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.4.3.5.2 BS8110.
#B1: Note beam, one-way slab or two-way slab option to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to T.2 TR.43 and cl.6.10.2 TR.43.
#C1: Note beam, one-way slab or two-way slab option to cl.4.3.4.2 BS8110.
#C2: Note flat slab option to T.2 TR.43.
#D: Note beam, one-way slab, two-way slab or flat slab option to cl.4.3.4.3 BS8110.
#D1: Note beam, one-way slab or two-way slab option to cl.4.3.4.3 BS8110. Note -<.....> = MAX {-0.25f_{cu}, (0.7-1.1).(-0.58$\sqrt{f_{cu}}$ to -0.82$\sqrt{f_{cu}}$)-4N/mm^2/1.0%} as the code allows for an increase in the tensile stress limit from 1% of longitudinal steel (untensioned reinforcement) onwards (-4N/mm^2 for every 1% of longitudinal steel (untensioned reinforcement), increasing proportionally, up to the specified upper limit of -0.25f_{cu}). Note crack width @ 0.20mm, %rebar **0.15%** and overall depth, h **600** mm
#D2: Note flat slab option to T.2 TR.43.

Permissible Stress [N/mm^2] [ACI318]							
		Serviceability Class U Uncracked		**Serviceability Class T** Transition		**Serviceability Class C** Cracked	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**
		12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**
		12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.30 f_{ci}' #B1**	**-0.30 f_{ci}' #B1**
		-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.50 $\sqrt{f_{ci}}$' #B2**	**k_σ . -0.50 $\sqrt{f_{ci}}$' #B2**
		-1.1 N/mm2	-1.2 N/mm2	-1.1 N/mm2	-1.2 N/mm2	-2.2 N/mm2	-2.4 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	No Rebar	No Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**
		21.0 N/mm2	21.0 N/mm2	21.0 N/mm2	21.0 N/mm2	21.0 N/mm2	21.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**
		21.0 N/mm2	21.0 N/mm2	21.0 N/mm2	21.0 N/mm2	21.0 N/mm2	21.0 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.62 $\sqrt{f_c}$' #D1**	**-0.62 $\sqrt{f_c}$' #D1**	**-1.00 $\sqrt{f_c}$' #D1**	**-1.00 $\sqrt{f_c}$' #D1**	**-0.30 f_c' #D1**	**-0.30 f_c' #D1**
		-3.7 N/mm2	-3.7 N/mm2	-5.9 N/mm2	-5.9 N/mm2	-10.5 N/mm2	-10.5 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**
		-3.2 N/mm2	-3.0 N/mm2	-3.2 N/mm2	-3.0 N/mm2	-3.2 N/mm2	-3.0 N/mm2
		With Rebar	With Rebar	With Rebar	With Rebar	With Rebar	With Rebar

#A: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.3.1 ACI318.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.3.2 ACI318.
#B1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to cl.24.5.3.2.1 ACI318.
#C: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.4.1 ACI318.
#D1: Note beam, one-way slab or two-way slab option to cl.24.5.2.1 ACI318 and analogous to cl.4.3.4.3 BS8110.
#D2: Note flat slab option to cl.24.5.2.1 ACI318.

Post-Tensioned Member (Bonded Tendons) Permissible Stress BS8110 (TR.43), ACI318, AS3600, EC2 (TR.43-2)			60%FTW-FS-DS	C35/45
Characterictic Strength of Concrete		**Cube**	**Cylinder**	
Characteristic strength of concrete (PT beam and slab), f_{cu} / f_c'		**45**	**35**	N/mm^2
Characteristic strength of concrete at transfer (PT beam and slab), f_{ci} / f_{ci}'		**25**	**20**	N/mm^2
Incorporation of CSTW-FS-DS Approach Within a FTW-FS-DS Approach	**%M_{HOG}**	**%I**	**%f_{min}**	**[1.] %M_{HOG}]. %I. %f_{min}**
ks = 60%MHOG | 0.5I | 1.3fmin [FTW-FS-DS] [BS8110 TR.43, ACI318, EC2 TR	**60%**	**0.5**	**1.3**	**1.08**
ks = 60%MHOG | 0.5I | 1.0fmin [FTW-FS-DS] [AS3600]	**60%**	**0.5**	**1.0**	**0.83**

Permissible Stress [N/mm^2] [AS3600]							
		Serviceability Class U Uncracked		**Serviceability Class T Transition**		**Serviceability Class C Cracked**	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B**	**-0.30 f_{ci}' #B1**	**-0.30 f_{ci}' #B1**
		-1.1 N/mm2	-1.1 N/mm2	-2.7 N/mm2	-2.7 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.60 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B2**	**k_σ . -0.60 $\sqrt{f_{ci}}$' #B2**
		-1.1 N/mm2	-0.9 N/mm2	-2.7 N/mm2	-2.2 N/mm2	-2.7 N/mm2	-2.2 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**
		17.5 N/mm2	17.5 N/mm2	17.5 N/mm2	17.5 N/mm2	17.5 N/mm2	17.5 N/mm2
	Flat Slab (FTW-FS-DS)	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**
		17.5 N/mm2	17.5 N/mm2	17.5 N/mm2	17.5 N/mm2	17.5 N/mm2	17.5 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.25 $\sqrt{f_c}$' #D**	**-0.25 $\sqrt{f_c}$' #D**	**-0.60 $\sqrt{f_c}$' #D**	**-0.60 $\sqrt{f_c}$' #D**	**-0.30 f_c' #D1**	**-0.30 f_c' #D1**
		-1.5 N/mm2	-1.5 N/mm2	-3.5 N/mm2	-3.5 N/mm2	-10.5 N/mm2	-10.5 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . -0.25 $\sqrt{f_c}$' #D**	**-0.25 $\sqrt{f_c}$' #D**	**k_σ . -0.60 $\sqrt{f_c}$' #D**	**-0.60 $\sqrt{f_c}$' #D**	**k_σ . -0.60 $\sqrt{f_c}$' #D2**	**-0.60 $\sqrt{f_c}$' #D2**
		-1.2 N/mm2	-1.5 N/mm2	-3.0 N/mm2	-3.5 N/mm2	-3.0 N/mm2	-3.5 N/mm2
		With Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar

#A: Note beam, one-way slab, two-way slab or flat slab option to cl.8.1.6.2 AS3600.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.8.6.2 and cl.9.4.2 AS3600.
#B1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to cl.9.4.2 AS3600.
#C: Note beam, one-way slab, two-way slab or flat slab option to cl.8.1.6.2 AS3600.
#D: Note beam, one-way slab, two-way slab or flat slab option to cl.8.6.2 and cl.9.4.2 AS3600.
#D1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.4.3 BS8110.
#D2: Note flat slab option to cl.9.4.2 AS3600 as an alternative to cl.6.9.5.3 AS3600.

Permissible Stress [N/mm^2] [EC2 and TR.43-2]							
		Serviceability Class U Uncracked		**Serviceability Class T Transition**		**Serviceability Class C Cracked**	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.30 f_{ci}' #A2**	**0.40 f_{ci}' #A2**	**0.30 f_{ci}' #A2**	**0.40 f_{ci}' #A2**	**0.30 f_{ci}' #A2**	**0.40 f_{ci}' #A2**
		6.0 N/mm2	8.0 N/mm2	6.0 N/mm2	8.0 N/mm2	6.0 N/mm2	8.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.30 f_{ci}' #B1**	**-0.30 f_{ci}' #B1**
		-1.5 N/mm2	-1.5 N/mm2	-1.5 N/mm2	-1.5 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-0.09 f_{ci}'$^{2/3}$ #B2**	**k_σ . -0.09 f_{ci}'$^{2/3}$ #B2**	**-0.09 f_{ci}'$^{2/3}$ #B2**	**k_σ . -0.09 f_{ci}'$^{2/3}$ #B2**	**-0.27 f_{ci}'$^{2/3}$ #B2**	**k_σ . -0.27 f_{ci}'$^{2/3}$ #B2**
		-0.7 N/mm2	-0.7 N/mm2	-0.7 N/mm2	-0.7 N/mm2	-2.0 N/mm2	-2.2 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**
		21.0 N/mm2	21.0 N/mm2	21.0 N/mm2	21.0 N/mm2	21.0 N/mm2	21.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.40 f_c' #C2**	**0.30 f_c' #C2**	**0.40 f_c' #C2**	**0.30 f_c' #C2**	**0.40 f_c' #C2**	**0.30 f_c' #C2**
		14.0 N/mm2	10.5 N/mm2	14.0 N/mm2	10.5 N/mm2	14.0 N/mm2	10.5 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.21 f_c'$^{2/3}$ #D1**	**-0.21 f_c'$^{2/3}$ #D1**	**-0.21 f_c'$^{2/3}$ #D1**	**-0.21 f_c'$^{2/3}$ #D1**	**-<.....> #D2**	**-<.....> #D2**
		-2.2 N/mm2	-2.2 N/mm2	-2.2 N/mm2	-2.2 N/mm2	-5.3 N/mm2	-5.3 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . -0.09 f_c'$^{2/3}$ #D3**	**-0.09 f_c'$^{2/3}$ #D3**	**k_σ . -0.09 f_c'$^{2/3}$ #D3**	**-0.09 f_c'$^{2/3}$ #D3**	**k_σ . -0.27 f_c'$^{2/3}$ #D3**	**-0.27 f_c'$^{2/3}$ #D3**
		-1.0 N/mm2	-1.0 N/mm2	-1.0 N/mm2	-1.0 N/mm2	-3.1 N/mm2	-2.9 N/mm2
		With Rebar	No Rebar	With Rebar	No Rebar	With Rebar	No Rebar

#A1: Note beam, one-way slab or two-way slab option to cl.5.8.2 TR.43-2.
#A2: Note flat slab option to T.4 TR.43-2 and cl.5.8.2 TR.43-2.
#B1: Note beam, one-way slab or two-way slab option to cl.5.8.2 TR.43-2 and analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to T.4 TR.43-2 and cl.5.8.2 TR.43-2.
#C1: Note beam, one-way slab or two-way slab option to cl.5.10.2.2 EC2.
#C2: Note flat slab option to T.4 TR.43-2.
#D1: Note beam, one-way slab or two-way slab option analogous to cl.5.8.2 TR.43-2.
#D2: Note beam, one-way slab or two-way slab option to cl.5.8.1 TR.43-2. Note -<.....> = MAX {-0.30f_c', (-0.40f_c'$^{2/3}$ to -0.50f_c'$^{2/3}$)-4N/mm^2/1.0%} as the code allows for an increase in the tensile stress limit from 1% of longitudinal steel (untensioned reinforcement) onwards (-4N/mm^2 for every 1% of longitudinal steel (untensioned reinforcement), increasing proportionally, up to the specified upper limit of -0.30f_c'). Note crack width @ 0.20mm and %rebar **0.15%**
#D3: Note flat slab option to T.4 TR.43-2.

Post-Tensioned Member (Bonded Tendons) Permissible Stress BS8110 (TR.43), ACI318, AS3600, EC2 (TR.43-2)			60%FTW-FS-DS	C40/50
Characterictic Strength of Concrete		**Cube**	**Cylinder**	
Characteristic strength of concrete (PT beam and slab), f_{cu} / f_c'		**50**	**40**	N/mm^2
Characteristic strength of concrete at transfer (PT beam and slab), f_{ci} / f_{ci}'		**25**	**20**	N/mm^2
Incorporation of CSTW-FS-DS Approach Within a FTW-FS-DS Approach	**%M_{HOG}**	**%I**	**%f_{min}**	**[1/ %M_{HOG}]. %I. %f_{mi}**
ks = 60%MHOG | 0.5I | 1.3fmin [FTW-FS-DS] [BS8110 TR.43, ACI318, EC2 TR	**60%**	**0.5**	**1.3**	**1.08**
ks = 60%MHOG | 0.5I | 1.0fmin [FTW-FS-DS] [AS3600]	**60%**	**0.5**	**1.0**	**0.83**

Permissible Stress [N/mm^2] [BS8110, TR.43]							
		Serviceability Class 1 **No Flexural Tensile Stresses**		**Serviceability Class 2** **Flexural Tensile Stresses, Uncracked (No Visible Cracking)**		**Serviceability Class 3** **Flexural Tensile Stresses, Cracked**	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**
		12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2
	Flat Slab (FTW-FS-DS)	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**
		6.0 N/mm2	8.3 N/mm2	6.0 N/mm2	8.3 N/mm2	6.0 N/mm2	8.3 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-1.0 #B**	**-1.0 #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**-0.25 f_{ci} #B1**	**-0.25 f_{ci} #B1**
		-1.0 N/mm2	-1.0 N/mm2	-1.8 N/mm2	-1.8 N/mm2	-6.3 N/mm2	-6.3 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-1.0 #B**	**k_σ . -1.0 #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**k_σ . -0.36 $\sqrt{f_{ci}}$ #B**	**-0.45 $\sqrt{f_{ci}}$ #B2**	**k_σ . -0.45 $\sqrt{f_{ci}}$ #B2**
		-1.0 N/mm2	-1.1 N/mm2	-1.8 N/mm2	-2.0 N/mm2	-2.3 N/mm2	-2.4 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	No Rebar	No Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**
		16.5 N/mm2	20.0 N/mm2	16.5 N/mm2	20.0 N/mm2	16.5 N/mm2	20.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**
		16.5 N/mm2	12.0 N/mm2	16.5 N/mm2	12.0 N/mm2	16.5 N/mm2	12.0 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.0 #D**	**0.0 #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**-<.....> #D1**	**-<.....> #D1**
		0.0 N/mm2	0.0 N/mm2	-2.5 N/mm2	-2.5 N/mm2	-5.2 N/mm2	-5.2 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . 0.0 #D**	**0.0 #D**	**k_σ . -0.36 $\sqrt{f_{cu}}$ #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**k_σ . -0.45 $\sqrt{f_{cu}}$ #D2**	**-0.45 $\sqrt{f_{cu}}$ #D2**
		0.0 N/mm2	0.0 N/mm2	-2.8 N/mm2	-2.5 N/mm2	-3.4 N/mm2	-3.2 N/mm2
		With Rebar	No Rebar	With Rebar	No Rebar	With Rebar	No Rebar

#A1: Note beam, one-way slab or two-way slab option to cl.4.3.5.1 BS8110.
#A2: Note flat slab option to T.2 TR.43 and cl.6.10.2 TR.43.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.4.3.5.2 BS8110.
#B1: Note beam, one-way slab or two-way slab option to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to T.2 TR.43 and cl.6.10.2 TR.43.
#C1: Note beam, one-way slab or two-way slab option to cl.4.3.4.2 BS8110.
#C2: Note flat slab option to T.2 TR.43.
#D: Note beam, one-way slab, two-way slab or flat slab option to cl.4.3.4.3 BS8110.
#D1: Note beam, one-way slab or two-way slab option to cl.4.3.4.3 BS8110. Note -<.....> = MAX {-0.25f_{cu}, (0.7-1.1).(-0.58$\sqrt{f_{cu}}$ to -0.82$\sqrt{f_{cu}}$)-4N/mm^2/1.0%} as the code allows for an increase in the tensile stress limit from 1% of longitudinal steel (untensioned reinforcement) onwards (-4N/mm^2 for every 1% of longitudinal steel (untensioned reinforcement), increasing proportionally, up to the specified upper limit of -0.25f_{cu}). Note crack width @ 0.20mm, %rebar **0.15%** and overall depth, h **600** mm
#D2: Note flat slab option to T.2 TR.43.

Permissible Stress [N/mm^2] [ACI318]							
		Serviceability Class U **Uncracked**		**Serviceability Class T** **Transition**		**Serviceability Class C** **Cracked**	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**
		12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**
		12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.30 f_{ci}' #B1**	**-0.30 f_{ci}' #B1**
		-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.50 $\sqrt{f_{ci}}$' #B2**	**k_σ . -0.50 $\sqrt{f_{ci}}$' #B2**
		-1.1 N/mm2	-1.2 N/mm2	-1.1 N/mm2	-1.2 N/mm2	-2.2 N/mm2	-2.4 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	No Rebar	No Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**
		24.0 N/mm2	24.0 N/mm2	24.0 N/mm2	24.0 N/mm2	24.0 N/mm2	24.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**
		24.0 N/mm2	24.0 N/mm2	24.0 N/mm2	24.0 N/mm2	24.0 N/mm2	24.0 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.62 $\sqrt{f_c}$' #D1**	**-0.62 $\sqrt{f_c}$' #D1**	**-1.00 $\sqrt{f_c}$' #D1**	**-1.00 $\sqrt{f_c}$' #D1**	**-0.30 f_c' #D1**	**-0.30 f_c' #D1**
		-3.9 N/mm2	-3.9 N/mm2	-6.3 N/mm2	-6.3 N/mm2	-12.0 N/mm2	-12.0 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**
		-3.4 N/mm2	-3.2 N/mm2	-3.4 N/mm2	-3.2 N/mm2	-3.4 N/mm2	-3.2 N/mm2
		With Rebar	With Rebar	With Rebar	With Rebar	With Rebar	With Rebar

#A: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.3.1 ACI318.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.3.2 ACI318.
#B1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to cl.24.5.3.2.1 ACI318.
#C: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.4.1 ACI318.
#D1: Note beam, one-way slab or two-way slab option to cl.24.5.2.1 ACI318 and analogous to cl.4.3.4.3 BS8110.
#D2: Note flat slab option to cl.24.5.2.1 ACI318.

Post-Tensioned Member (Bonded Tendons) Permissible Stress BS8110 (TR.43), ACI318, AS3600, EC2 (TR.43-2)			60%FTW-FS-DS	C40/50
Characterictic Strength of Concrete		**Cube**	**Cylinder**	
Characteristic strength of concrete (PT beam and slab), f_{cu} / f_c'		**50**	**40**	N/mm^2
Characteristic strength of concrete at transfer (PT beam and slab), f_{ci} / f_{ci}'		**25**	**20**	N/mm^2
Incorporation of CSTW-FS-DS Approach Within a FTW-FS-DS Approach	**%M_{HOG}**	**%I**	**%f_{min}**	**[1.] %M_{HOG}]. %I. %f_{mi}**
ks = 60%MHOG | 0.5I | 1.3fmin [FTW-FS-DS] [BS8110 TR.43, ACI318, EC2 TR	**60%**	**0.5**	**1.3**	**1.08**
ks = 60%MHOG | 0.5I | 1.0fmin [FTW-FS-DS] [AS3600]	**60%**	**0.5**	**1.0**	**0.83**

Permissible Stress [N/mm^2] [AS3600]							
		Serviceability Class U Uncracked		**Serviceability Class T Transition**		**Serviceability Class C Cracked**	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B**	**-0.30 f_{ci}' #B1**	**-0.30 f_{ci}' #B1**
		-1.1 N/mm2	-1.1 N/mm2	-2.7 N/mm2	-2.7 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.60 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B2**	**k_σ . -0.60 $\sqrt{f_{ci}}$' #B2**
		-1.1 N/mm2	-0.9 N/mm2	-2.7 N/mm2	-2.2 N/mm2	-2.7 N/mm2	-2.2 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**
		20.0 N/mm2	20.0 N/mm2	20.0 N/mm2	20.0 N/mm2	20.0 N/mm2	20.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**
		20.0 N/mm2	20.0 N/mm2	20.0 N/mm2	20.0 N/mm2	20.0 N/mm2	20.0 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.25 $\sqrt{f_c}$' #D**	**-0.25 $\sqrt{f_c}$' #D**	**-0.60 $\sqrt{f_c}$' #D**	**-0.60 $\sqrt{f_c}$' #D**	**-0.30 f_c' #D1**	**-0.30 f_c' #D1**
		-1.6 N/mm2	-1.6 N/mm2	-3.8 N/mm2	-3.8 N/mm2	-12.0 N/mm2	-12.0 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . -0.25 $\sqrt{f_c}$' #D**	**-0.25 $\sqrt{f_c}$' #D**	**k_σ . -0.60 $\sqrt{f_c}$' #D**	**-0.60 $\sqrt{f_c}$' #D**	**k_σ . -0.60 $\sqrt{f_c}$' #D2**	**-0.60 $\sqrt{f_c}$' #D2**
		-1.3 N/mm2	-1.6 N/mm2	-3.2 N/mm2	-3.8 N/mm2	-3.2 N/mm2	-3.8 N/mm2
		With Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar

#A: Note beam, one-way slab, two-way slab or flat slab option to cl.8.1.6.2 AS3600.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.8.6.2 and cl.9.4.2 AS3600.
#B1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to cl.9.4.2 AS3600.
#C: Note beam, one-way slab, two-way slab or flat slab option to cl.8.1.6.2 AS3600.
#D: Note beam, one-way slab, two-way slab or flat slab option to cl.8.6.2 and cl.9.4.2 AS3600.
#D1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.4.3 BS8110.
#D2: Note flat slab option to cl.9.4.2 AS3600 as an alternative to cl.6.9.5.3 AS3600.

Permissible Stress [N/mm^2] [EC2 and TR.43-2]							
		Serviceability Class U Uncracked		**Serviceability Class T Transition**		**Serviceability Class C Cracked**	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.30 f_{ci}' #A2**	**0.40 f_{ci}' #A2**	**0.30 f_{ci}' #A2**	**0.40 f_{ci}' #A2**	**0.30 f_{ci}' #A2**	**0.40 f_{ci}' #A2**
		6.0 N/mm2	8.0 N/mm2	6.0 N/mm2	8.0 N/mm2	6.0 N/mm2	8.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.30 f_{ci}' #B1**	**-0.30 f_{ci}' #B1**
		-1.5 N/mm2	-1.5 N/mm2	-1.5 N/mm2	-1.5 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-0.09 f_{ci}'$^{2/3}$ #B2**	**k_σ . -0.09 f_{ci}'$^{2/3}$ #B2**	**-0.09 f_{ci}'$^{2/3}$ #B2**	**k_σ . -0.09 f_{ci}'$^{2/3}$ #B2**	**-0.27 f_{ci}'$^{2/3}$ #B2**	**k_σ . -0.27 f_{ci}'$^{2/3}$ #B2**
		-0.7 N/mm2	-0.7 N/mm2	-0.7 N/mm2	-0.7 N/mm2	-2.0 N/mm2	-2.2 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**
		24.0 N/mm2	24.0 N/mm2	24.0 N/mm2	24.0 N/mm2	24.0 N/mm2	24.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.40 f_c' #C2**	**0.30 f_c' #C2**	**0.40 f_c' #C2**	**0.30 f_c' #C2**	**0.40 f_c' #C2**	**0.30 f_c' #C2**
		16.0 N/mm2	12.0 N/mm2	16.0 N/mm2	12.0 N/mm2	16.0 N/mm2	12.0 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.21 f_c'$^{2/3}$ #D1**	**-0.21 f_c'$^{2/3}$ #D1**	**-0.21 f_c'$^{2/3}$ #D1**	**-0.21 f_c'$^{2/3}$ #D1**	**-<.....> #D2**	**-<.....> #D2**
		-2.5 N/mm2	-2.5 N/mm2	-2.5 N/mm2	-2.5 N/mm2	-5.8 N/mm2	-5.8 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . -0.09 f_c'$^{2/3}$ #D3**	**-0.09 f_c'$^{2/3}$ #D3**	**k_σ . -0.09 f_c'$^{2/3}$ #D3**	**-0.09 f_c'$^{2/3}$ #D3**	**k_σ . -0.27 f_c'$^{2/3}$ #D3**	**-0.27 f_c'$^{2/3}$ #D3**
		-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-3.4 N/mm2	-3.2 N/mm2
		With Rebar	No Rebar	With Rebar	No Rebar	With Rebar	No Rebar

#A1: Note beam, one-way slab or two-way slab option to cl.5.8.2 TR.43-2.
#A2: Note flat slab option to T.4 TR.43-2 and cl.5.8.2 TR.43-2.
#B1: Note beam, one-way slab or two-way slab option to cl.5.8.2 TR.43-2 and analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to T.4 TR.43-2 and cl.5.8.2 TR.43-2.
#C1: Note beam, one-way slab or two-way slab option to cl.5.10.2.2 EC2.
#C2: Note flat slab option to T.4 TR.43-2.
#D1: Note beam, one-way slab or two-way slab option analogous to cl.5.8.2 TR.43-2.
#D2: Note beam, one-way slab or two-way slab option to cl.5.8.1 TR.43-2. Note -<.....> = MAX {-0.30f_c', (-0.40f_c'$^{2/3}$ to -0.50f_c'$^{2/3}$)-4N/mm^2/1.0%} as the code allows for an increase in the tensile stress limit from 1% of longitudinal steel (untensioned reinforcement) onwards (-4N/mm^2 for every 1% of longitudinal steel (untensioned reinforcement), increasing proportionally, up to the specified upper limit of -0.30f_c'). Note crack width @ 0.20mm and %rebar **0.15%**
#D3: Note flat slab option to T.4 TR.43-2.

Post-Tensioned Member (Bonded Tendons) Permissible Stress BS8110 (TR.43), ACI318, AS3600, EC2 (TR.43-2)			60%FTW-FS-DS	C45/55
Characterictic Strength of Concrete		**Cube**	**Cylinder**	
Characteristic strength of concrete (PT beam and slab), f_{cu} / f_c'		**55**	**45**	N/mm^2
Characteristic strength of concrete at transfer (PT beam and slab), f_{ci} / f_{ci}'		**25**	**20**	N/mm^2
Incorporation of CSTW-FS-DS Approach Within a FTW-FS-DS Approach	**%M_{HOG}**	**%I**	**%f_{min}**	**[1.7 %M_{HOG} + %I + %f_{min}**
ks = 60%MHOG | 0.5I | 1.3fmin [FTW-FS-DS] [BS8110 TR.43, ACI318, EC2 TR	**60%**	**0.5**	**1.3**	**1.08**
ks = 60%MHOG | 0.5I | 1.0fmin [FTW-FS-DS] [AS3600]	**60%**	**0.5**	**1.0**	**0.83**

Permissible Stress [N/mm^2] [BS8110, TR.43]							
		Serviceability Class 1 **No Flexural Tensile Stresses**		**Serviceability Class 2** **Flexural Tensile Stresses, Uncracked (No Visible Cracking)**		**Serviceability Class 3** **Flexural Tensile Stresses, Cracked**	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**
		12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2
	Flat Slab (FTW-FS-DS)	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**
		6.0 N/mm2	8.3 N/mm2	6.0 N/mm2	8.3 N/mm2	6.0 N/mm2	8.3 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-1.0 #B**	**-1.0 #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**-0.25 f_{ci} #B1**	**-0.25 f_{ci} #B1**
		-1.0 N/mm2	-1.0 N/mm2	-1.8 N/mm2	-1.8 N/mm2	-6.3 N/mm2	-6.3 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-1.0 #B**	**k_σ . -1.0 #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**k_σ . -0.36 $\sqrt{f_{ci}}$ #B**	**-0.45 $\sqrt{f_{ci}}$ #B2**	**k_σ . -0.45 $\sqrt{f_{ci}}$ #B2**
		-1.0 N/mm2	-1.1 N/mm2	-1.8 N/mm2	-2.0 N/mm2	-2.3 N/mm2	-2.4 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	No Rebar	No Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**
		18.2 N/mm2	22.0 N/mm2	18.2 N/mm2	22.0 N/mm2	18.2 N/mm2	22.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**
		18.2 N/mm2	13.2 N/mm2	18.2 N/mm2	13.2 N/mm2	18.2 N/mm2	13.2 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.0 #D**	**0.0 #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**-<.....> #D1**	**-<.....> #D1**
		0.0 N/mm2	0.0 N/mm2	-2.7 N/mm2	-2.7 N/mm2	-5.2 N/mm2	-5.2 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . 0.0 #D**	**0.0 #D**	**k_σ . -0.36 $\sqrt{f_{cu}}$ #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**k_σ . -0.45 $\sqrt{f_{cu}}$ #D2**	**-0.45 $\sqrt{f_{cu}}$ #D2**
		0.0 N/mm2	0.0 N/mm2	-2.9 N/mm2	-2.7 N/mm2	-3.6 N/mm2	-3.3 N/mm2
		With Rebar	No Rebar	With Rebar	No Rebar	With Rebar	No Rebar

#A1: Note beam, one-way slab or two-way slab option to cl.4.3.5.1 BS8110.
#A2: Note flat slab option to T.2 TR.43 and cl.6.10.2 TR.43.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.4.3.5.2 BS8110.
#B1: Note beam, one-way slab or two-way slab option to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to T.2 TR.43 and cl.6.10.2 TR.43.
#C1: Note beam, one-way slab or two-way slab option to cl.4.3.4.2 BS8110.
#C2: Note flat slab option to T.2 TR.43.
#D: Note beam, one-way slab, two-way slab or flat slab option to cl.4.3.4.3 BS8110.
#D1: Note beam, one-way slab or two-way slab option to cl.4.3.4.3 BS8110. Note -<.....> = MAX {-0.25f_{cu}, (0.7-1.1).(-0.58$\sqrt{f_{cu}}$ to -0.82$\sqrt{f_{cu}}$)-4N/mm^2/1.0%} as the code allows for an increase in the tensile stress limit from 1% of longitudinal steel (untensioned reinforcement) onwards (-4N/mm^2 for every 1% of longitudinal steel (untensioned reinforcement), increasing proportionally, up to the specified upper limit of -0.25f_{cu}), Note crack width @ 0.20mm, %rebar **0.15%** and overall depth, h **600** mm
#D2: Note flat slab option to T.2 TR.43.

Permissible Stress [N/mm^2] [ACI318]							
		Serviceability Class U **Uncracked**		**Serviceability Class T** **Transition**		**Serviceability Class C** **Cracked**	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**
		12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**
		12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.30 f_{ci}' #B1**	**-0.30 f_{ci}' #B1**
		-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.50 $\sqrt{f_{ci}}$' #B2**	**k_σ . -0.50 $\sqrt{f_{ci}}$' #B2**
		-1.1 N/mm2	-1.2 N/mm2	-1.1 N/mm2	-1.2 N/mm2	-2.2 N/mm2	-2.4 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	No Rebar	No Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**
		27.0 N/mm2	27.0 N/mm2	27.0 N/mm2	27.0 N/mm2	27.0 N/mm2	27.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**
		27.0 N/mm2	27.0 N/mm2	27.0 N/mm2	27.0 N/mm2	27.0 N/mm2	27.0 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.62 $\sqrt{f_c}$' #D1**	**-0.62 $\sqrt{f_c}$' #D1**	**-1.00 $\sqrt{f_c}$' #D1**	**-1.00 $\sqrt{f_c}$' #D1**	**-0.30 f_c' #D1**	**-0.30 f_c' #D1**
		-4.2 N/mm2	-4.2 N/mm2	-6.7 N/mm2	-6.7 N/mm2	-13.5 N/mm2	-13.5 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**
		-3.6 N/mm2	-3.4 N/mm2	-3.6 N/mm2	-3.4 N/mm2	-3.6 N/mm2	-3.4 N/mm2
		With Rebar	With Rebar	With Rebar	With Rebar	With Rebar	With Rebar

#A: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.3.1 ACI318.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.3.2 ACI318.
#B1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to cl.24.5.3.2.1 ACI318.
#C: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.4.1 ACI318.
#D1: Note beam, one-way slab or two-way slab option to cl.24.5.2.1 ACI318 and analogous to cl.4.3.4.3 BS8110.
#D2: Note flat slab option to cl.24.5.2.1 ACI318.

Post-Tensioned Member (Bonded Tendons) Permissible Stress BS8110 (TR.43), ACI318, AS3600, EC2 (TR.43-2)		60%FTW-FS-DS		C45/55
Characterictic Strength of Concrete		**Cube**	**Cylinder**	
Characteristic strength of concrete (PT beam and slab), f_{cu} / f_c'		55	45	N/mm^2
Characteristic strength of concrete at transfer (PT beam and slab), f_{ci} / f_{ci}'		25	20	N/mm^2
Incorporation of CSTW-FS-DS Approach Within a FTW-FS-DS Approach	**%M_{HOG}**	**%I**	**%f_{min}**	**[1/%M_{HOG}].%I.%f_{mi}**
ks = 60%MHOG | 0.5I | 1.3fmin [FTW-FS-DS] [BS8110 TR.43, ACI318, EC2 TR	60%	0.5	1.3	1.08
ks = 60%MHOG | 0.5I | 1.0fmin [FTW-FS-DS] [AS3600]	60%	0.5	1.0	0.83

Permissible Stress [N/mm^2] [AS3600]

		Serviceability Class U Uncracked		Serviceability Class T Transition		Serviceability Class C Cracked	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	Beam, One-Way or Two-Way Slab	$0.50 f_{ci}'$ #A	$0.50 f_{ci}'$ #A	$0.50 f_{ci}'$ #A	$0.50 f_{ci}'$ #A	$0.50 f_{ci}'$ #A	$0.50 f_{ci}'$ #A
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
	Flat Slab (FTW-FS-DS)	$0.50 f_{ci}'$ #A	$0.50 f_{ci}'$ #A	$0.50 f_{ci}'$ #A	$0.50 f_{ci}'$ #A	$0.50 f_{ci}'$ #A	$0.50 f_{ci}'$ #A
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
TLS tensile $f'_{min,t/b}$	Beam, One-Way or Two-Way Slab	$-0.25 \sqrt{f_{ci}'}$ #B	$-0.25 \sqrt{f_{ci}'}$ #B	$-0.60 \sqrt{f_{ci}'}$ #B	$-0.60 \sqrt{f_{ci}'}$ #B	$-0.30 f_{ci}'$ #B1	$-0.30 f_{ci}'$ #B1
		-1.1 N/mm2	-1.1 N/mm2	-2.7 N/mm2	-2.7 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	$-0.25 \sqrt{f_{ci}'}$ #B	$k_\sigma . -0.25 \sqrt{f_{ci}'}$ #B	$-0.60 \sqrt{f_{ci}'}$ #B	$k_\sigma . -0.60 \sqrt{f_{ci}'}$ #B	$-0.60 \sqrt{f_{ci}'}$ #B2	$k_\sigma . -0.60 \sqrt{f_{ci}'}$ #B2
		-1.1 N/mm2	-0.9 N/mm2	-2.7 N/mm2	-2.2 N/mm2	-2.7 N/mm2	-2.2 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
SLS compressive $f_{max,t/b}$	Beam, One-Way or Two-Way Slab	$0.50 f_c'$ #C	$0.50 f_c'$ #C	$0.50 f_c'$ #C	$0.50 f_c'$ #C	$0.50 f_c'$ #C	$0.50 f_c'$ #C
		22.5 N/mm2	22.5 N/mm2	22.5 N/mm2	22.5 N/mm2	22.5 N/mm2	22.5 N/mm2
	Flat Slab (FTW-FS-DS)	$0.50 f_c'$ #C	$0.50 f_c'$ #C	$0.50 f_c'$ #C	$0.50 f_c'$ #C	$0.50 f_c'$ #C	$0.50 f_c'$ #C
		22.5 N/mm2	22.5 N/mm2	22.5 N/mm2	22.5 N/mm2	22.5 N/mm2	22.5 N/mm2
SLS tensile $f_{min,t/b}$	Beam, One-Way or Two-Way Slab	$-0.25 \sqrt{f_c'}$ #D	$-0.25 \sqrt{f_c'}$ #D	$-0.60 \sqrt{f_c'}$ #D	$-0.60 \sqrt{f_c'}$ #D	$-0.30 f_c'$ #D1	$-0.30 f_c'$ #D1
		-1.7 N/mm2	-1.7 N/mm2	-4.0 N/mm2	-4.0 N/mm2	-13.5 N/mm2	-13.5 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	$k_\sigma . -0.25 \sqrt{f_c'}$ #D	$-0.25 \sqrt{f_c'}$ #D	$k_\sigma . -0.60 \sqrt{f_c'}$ #D	$-0.60 \sqrt{f_c'}$ #D	$k_\sigma . -0.60 \sqrt{f_c'}$ #D2	$-0.60 \sqrt{f_c'}$ #D2
		-1.4 N/mm2	-1.7 N/mm2	-3.4 N/mm2	-4.0 N/mm2	-3.4 N/mm2	-4.0 N/mm2
		With Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar

#A: Note beam, one-way slab, two-way slab or flat slab option to cl.8.1.6.2 AS3600.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.8.6.2 and cl.9.4.2 AS3600.
#B1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to cl.9.4.2 AS3600.
#C: Note beam, one-way slab, two-way slab or flat slab option to cl.8.1.6.2 AS3600.
#D: Note beam, one-way slab, two-way slab or flat slab option to cl.8.6.2 and cl.9.4.2 AS3600.
#D1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.4.3 BS8110.
#D2: Note flat slab option to cl.9.4.2 AS3600 as an alternative to cl.6.9.5.3 AS3600.

Permissible Stress [N/mm^2] [EC2 and TR.43-2]

		Serviceability Class U Uncracked		Serviceability Class T Transition		Serviceability Class C Cracked	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	Beam, One-Way or Two-Way Slab	$0.50 f_{ci}'$ #A1	$0.50 f_{ci}'$ #A1	$0.50 f_{ci}'$ #A1	$0.50 f_{ci}'$ #A1	$0.50 f_{ci}'$ #A1	$0.50 f_{ci}'$ #A1
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
	Flat Slab (FTW-FS-DS)	$0.30 f_{ci}'$ #A2	$0.40 f_{ci}'$ #A2	$0.30 f_{ci}'$ #A2	$0.40 f_{ci}'$ #A2	$0.30 f_{ci}'$ #A2	$0.40 f_{ci}'$ #A2
		6.0 N/mm2	8.0 N/mm2	6.0 N/mm2	8.0 N/mm2	6.0 N/mm2	8.0 N/mm2
TLS tensile $f'_{min,t/b}$	Beam, One-Way or Two-Way Slab	$-0.21 f_{ci}'^{2/3}$ #B1	$-0.21 f_{ci}'^{2/3}$ #B1	$-0.21 f_{ci}'^{2/3}$ #B1	$-0.21 f_{ci}'^{2/3}$ #B1	$-0.30 f_{ci}'$ #B1	$-0.30 f_{ci}'$ #B1
		-1.5 N/mm2	-1.5 N/mm2	-1.5 N/mm2	-1.5 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	$-0.09 f_{ci}'^{2/3}$ #B2	$k_\sigma . -0.09 f_{ci}'^{2/3}$ #B2	$-0.09 f_{ci}'^{2/3}$ #B2	$k_\sigma . -0.09 f_{ci}'^{2/3}$ #B2	$-0.27 f_{ci}'^{2/3}$ #B2	$k_\sigma . -0.27 f_{ci}'^{2/3}$ #B2
		-0.7 N/mm2	-0.7 N/mm2	-0.7 N/mm2	-0.7 N/mm2	-2.0 N/mm2	-2.2 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
SLS compressive $f_{max,t/b}$	Beam, One-Way or Two-Way Slab	$0.60 f_c'$ #C1	$0.60 f_c'$ #C1	$0.60 f_c'$ #C1	$0.60 f_c'$ #C1	$0.60 f_c'$ #C1	$0.60 f_c'$ #C1
		27.0 N/mm2	27.0 N/mm2	27.0 N/mm2	27.0 N/mm2	27.0 N/mm2	27.0 N/mm2
	Flat Slab (FTW-FS-DS)	$0.40 f_c'$ #C2	$0.30 f_c'$ #C2	$0.40 f_c'$ #C2	$0.30 f_c'$ #C2	$0.40 f_c'$ #C2	$0.30 f_c'$ #C2
		18.0 N/mm2	13.5 N/mm2	18.0 N/mm2	13.5 N/mm2	18.0 N/mm2	13.5 N/mm2
SLS tensile $f_{min,t/b}$	Beam, One-Way or Two-Way Slab	$-0.21 f_c'^{2/3}$ #D1	$-0.21 f_c'^{2/3}$ #D1	$-0.21 f_c'^{2/3}$ #D1	$-0.21 f_c'^{2/3}$ #D1	-<.......> #D2	-<.......> #D2
		-2.7 N/mm2	-2.7 N/mm2	-2.7 N/mm2	-2.7 N/mm2	-6.3 N/mm2	-6.3 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	$k_\sigma . -0.09 f_c'^{2/3}$ #D3	$-0.09 f_c'^{2/3}$ #D3	$k_\sigma . -0.09 f_c'^{2/3}$ #D3	$-0.09 f_c'^{2/3}$ #D3	$k_\sigma . -0.27 f_c'^{2/3}$ #D3	$-0.27 f_c'^{2/3}$ #D3
		-1.2 N/mm2	-1.1 N/mm2	-1.2 N/mm2	-1.1 N/mm2	-3.7 N/mm2	-3.4 N/mm2
		With Rebar	No Rebar	With Rebar	No Rebar	With Rebar	No Rebar

#A1: Note beam, one-way slab or two-way slab option to cl.5.8.2 TR.43-2.
#A2: Note flat slab option to T.4 TR.43-2 and cl.5.8.2 TR.43-2.
#B1: Note beam, one-way slab or two-way slab option to cl.5.8.2 TR.43-2 and analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to T.4 TR.43-2 and cl.5.8.2 TR.43-2.
#C1: Note beam, one-way slab or two-way slab option to cl.5.10.2.2 EC2.
#C2: Note flat slab option to T.4 TR.43-2.
#D1: Note beam, one-way slab or two-way slab option analogous to cl.5.8.2 TR.43-2.
#D2: Note beam, one-way slab or two-way slab option to cl.5.8.1 TR.43-2. Note -<.......> = MAX {$-0.30 f_c'$, ($-0.40 f_c'^{2/3}$ to $-0.50 f_c'^{2/3}$)-4N/mm^2/1.0%} as the code allows for an increase in the tensile stress limit from 1% of longitudinal steel (untensioned reinforcement) onwards (-4N/mm^2 for every 1% of longitudinal steel (untensioned reinforcement), increasing proportionally, up to the specified upper limit of $-0.30 f_c'$). Note crack width @ 0.20mm and %rebar 0.15%
#D3: Note flat slab option to T.4 TR.43-2.

Post-Tensioned Member (Bonded Tendons) Permissible Stress BS8110 (TR.43), ACI318, AS3600, EC2 (TR.43-2)			60%FTW-FS-DS	C50/60
Characterictic Strength of Concrete		**Cube**	**Cylinder**	
Characteristic strength of concrete (PT beam and slab), f_{cu} / f_c'		**60**	**50**	N/mm^2
Characteristic strength of concrete at transfer (PT beam and slab), f_{ci} / f_{ci}'		**25**	**20**	N/mm^2
Incorporation of CSTW-FS-DS Approach Within a FTW-FS-DS Approach	**$\%M_{HOG}$**	**%I**	**$\%f_{min}$**	**[1/ %MHOG]. %I. %fmi**
ks = 60%MHOG | 0.5I | 1.3fmin [FTW-FS-DS] [BS8110 TR.43, ACI318, EC2 TR	**60%**	**0.5**	**1.3**	**1.08**
ks = 60%MHOG | 0.5I | 1.0fmin [FTW-FS-DS] [AS3600]	**60%**	**0.5**	**1.0**	**0.83**

Permissible Stress [N/mm^2] [BS8110, TR.43]							
		Serviceability Class 1 No Flexural Tensile Stresses		**Serviceability Class 2** Flexural Tensile Stresses, Uncracked (No Visible Cracking)		**Serviceability Class 3** Flexural Tensile Stresses, Cracked	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**
		12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2
	Flat Slab (FTW-FS-DS)	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**
		6.0 N/mm2	8.3 N/mm2	6.0 N/mm2	8.3 N/mm2	6.0 N/mm2	8.3 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-1.0 #B**	**-1.0 #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**-0.25 f_{ci} #B1**	**-0.25 f_{ci} #B1**
		-1.0 N/mm2	-1.0 N/mm2	-1.8 N/mm2	-1.8 N/mm2	-6.3 N/mm2	-6.3 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-1.0 #B**	**k_σ . -1.0 #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**k_σ . -0.36 $\sqrt{f_{ci}}$ #B**	**-0.45 $\sqrt{f_{ci}}$ #B2**	**k_σ . -0.45 $\sqrt{f_{ci}}$ #B2**
		-1.0 N/mm2	-1.1 N/mm2	-1.8 N/mm2	-2.0 N/mm2	-2.3 N/mm2	-2.4 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	No Rebar	No Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**
		19.8 N/mm2	24.0 N/mm2	19.8 N/mm2	24.0 N/mm2	19.8 N/mm2	24.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**
		19.8 N/mm2	14.4 N/mm2	19.8 N/mm2	14.4 N/mm2	19.8 N/mm2	14.4 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.0 #D**	**0.0 #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**-<.....> #D1**	**-<.....> #D1**
		0.0 N/mm2	0.0 N/mm2	-2.8 N/mm2	-2.8 N/mm2	-5.2 N/mm2	-5.2 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . 0.0 #D**	**0.0 #D**	**k_σ . -0.36 $\sqrt{f_{cu}}$ #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**k_σ . -0.45 $\sqrt{f_{cu}}$ #D2**	**-0.45 $\sqrt{f_{cu}}$ #D2**
		0.0 N/mm2	0.0 N/mm2	-3.0 N/mm2	-2.8 N/mm2	-3.8 N/mm2	-3.5 N/mm2
		With Rebar	No Rebar	With Rebar	No Rebar	With Rebar	No Rebar

#A1: Note beam, one-way slab or two-way slab option to cl.4.3.5.1 BS8110.
#A2: Note flat slab option to T.2 TR.43 and cl.6.10.2 TR.43.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.4.3.5.2 BS8110.
#B1: Note beam, one-way slab or two-way slab option to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to T.2 TR.43 and cl.6.10.2 TR.43.
#C1: Note beam, one-way slab or two-way slab option to cl.4.3.4.2 BS8110.
#C2: Note flat slab option to T.2 TR.43.
#D: Note beam, one-way slab, two-way slab or flat slab option to cl.4.3.4.3 BS8110.
#D1: Note beam, one-way slab or two-way slab option to cl.4.3.4.3 BS8110. Note -<.....> = MAX {-0.25f_{cu}, (0.7-1.1).(-0.58$\sqrt{f_{cu}}$ to -0.82$\sqrt{f_{cu}}$)-4N/mm^2/1.0%} as the code allows for an increase in the tensile stress limit from 1% of longitudinal steel (untensioned reinforcement) onwards (-4N/mm^2 for every 1% of longitudinal steel (untensioned reinforcement), increasing proportionally, up to the specified upper limit of -0.25f_{cu}). Note crack width @ 0.20mm, %rebar **0.15%** and overall depth, h **600** mm
#D2: Note flat slab option to T.2 TR.43.

Permissible Stress [N/mm^2] [ACI318]							
		Serviceability Class U Uncracked		**Serviceability Class T** Transition		**Serviceability Class C** Cracked	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**
		12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**
		12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.30 f_{ci}' #B1**	**-0.30 f_{ci}' #B1**
		-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.50 $\sqrt{f_{ci}}$' #B2**	**k_σ . -0.50 $\sqrt{f_{ci}}$' #B2**
		-1.1 N/mm2	-1.2 N/mm2	-1.1 N/mm2	-1.2 N/mm2	-2.2 N/mm2	-2.4 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	No Rebar	No Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**
		30.0 N/mm2	30.0 N/mm2	30.0 N/mm2	30.0 N/mm2	30.0 N/mm2	30.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**
		30.0 N/mm2	30.0 N/mm2	30.0 N/mm2	30.0 N/mm2	30.0 N/mm2	30.0 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.62 $\sqrt{f_c}$' #D1**	**-0.62 $\sqrt{f_c}$' #D1**	**-1.00 $\sqrt{f_c}$' #D1**	**-1.00 $\sqrt{f_c}$' #D1**	**-0.30 f_c' #D1**	**-0.30 f_c' #D1**
		-4.4 N/mm2	-4.4 N/mm2	-7.1 N/mm2	-7.1 N/mm2	-15.0 N/mm2	-15.0 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**
		-3.8 N/mm2	-3.5 N/mm2	-3.8 N/mm2	-3.5 N/mm2	-3.8 N/mm2	-3.5 N/mm2
		With Rebar	With Rebar	With Rebar	With Rebar	With Rebar	With Rebar

#A: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.3.1 ACI318.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.3.2 ACI318.
#B1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to cl.24.5.3.2.1 ACI318.
#C: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.4.1 ACI318.
#D1: Note beam, one-way slab or two-way slab option to cl.24.5.2.1 ACI318 and analogous to cl.4.3.4.3 BS8110.
#D2: Note flat slab option to cl.24.5.2.1 ACI318.

Post-Tensioned Member (Bonded Tendons) Permissible Stress BS8110 (TR.43), ACI318, AS3600, EC2 (TR.43-2)			60%FTW-FS-DS	C50/60
Characterictic Strength of Concrete		**Cube**	**Cylinder**	
Characteristic strength of concrete (PT beam and slab), f_{cu} / f_c'		**60**	**50**	N/mm^2
Characteristic strength of concrete at transfer (PT beam and slab), f_{ci} / f_{ci}'		**25**	**20**	N/mm^2
Incorporation of CSTW-FS-DS Approach Within a FTW-FS-DS Approach	**%M_{HOG}**	**%I**	**%f_{min}**	**[1.] %M_{HOG}]. %I. %f_{mi}**
ks = 60%MHOG | 0.5I | 1.3fmin [FTW-FS-DS] [BS8110 TR.43, ACI318, EC2 TR	**60%**	**0.5**	**1.3**	**1.08**
ks = 60%MHOG | 0.5I | 1.0fmin [FTW-FS-DS] [AS3600]	**60%**	**0.5**	**1.0**	**0.83**

Permissible Stress [N/mm^2] [AS3600]							
		Serviceability Class U Uncracked		**Serviceability Class T Transition**		**Serviceability Class C Cracked**	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B**	**-0.30 f_{ci}' #B1**	**-0.30 f_{ci}' #B1**
		-1.1 N/mm2	-1.1 N/mm2	-2.7 N/mm2	-2.7 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.60 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B2**	**k_σ . -0.60 $\sqrt{f_{ci}}$' #B2**
		-1.1 N/mm2	-0.9 N/mm2	-2.7 N/mm2	-2.2 N/mm2	-2.7 N/mm2	-2.2 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**
		25.0 N/mm2	25.0 N/mm2	25.0 N/mm2	25.0 N/mm2	25.0 N/mm2	25.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**
		25.0 N/mm2	25.0 N/mm2	25.0 N/mm2	25.0 N/mm2	25.0 N/mm2	25.0 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.25 $\sqrt{f_c}$' #D**	**-0.25 $\sqrt{f_c}$' #D**	**-0.60 $\sqrt{f_c}$' #D**	**-0.60 $\sqrt{f_c}$' #D**	**-0.30 f_c' #D1**	**-0.30 f_c' #D1**
		-1.8 N/mm2	-1.8 N/mm2	-4.2 N/mm2	-4.2 N/mm2	-15.0 N/mm2	-15.0 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . -0.25 $\sqrt{f_c}$' #D**	**-0.25 $\sqrt{f_c}$' #D**	**k_σ . -0.60 $\sqrt{f_c}$' #D**	**-0.60 $\sqrt{f_c}$' #D**	**k_σ . -0.60 $\sqrt{f_c}$' #D2**	**-0.60 $\sqrt{f_c}$' #D2**
		-1.5 N/mm2	-1.8 N/mm2	-3.5 N/mm2	-4.2 N/mm2	-3.5 N/mm2	-4.2 N/mm2
		With Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar

#A: Note beam, one-way slab, two-way slab or flat slab option to cl.8.1.6.2 AS3600.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.8.6.2 and cl.9.4.2 AS3600.
#B1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to cl.9.4.2 AS3600.
#C: Note beam, one-way slab, two-way slab or flat slab option to cl.8.1.6.2 AS3600.
#D: Note beam, one-way slab, two-way slab or flat slab option to cl.8.6.2 and cl.9.4.2 AS3600.
#D1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.4.3 BS8110.
#D2: Note flat slab option to cl.9.4.2 AS3600 as an alternative to cl.6.9.5.3 AS3600.

Permissible Stress [N/mm^2] [EC2 and TR.43-2]							
		Serviceability Class U Uncracked		**Serviceability Class T Transition**		**Serviceability Class C Cracked**	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.30 f_{ci}' #A2**	**0.40 f_{ci}' #A2**	**0.30 f_{ci}' #A2**	**0.40 f_{ci}' #A2**	**0.30 f_{ci}' #A2**	**0.40 f_{ci}' #A2**
		6.0 N/mm2	8.0 N/mm2	6.0 N/mm2	8.0 N/mm2	6.0 N/mm2	8.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.30 f_{ci}' #B1**	**-0.30 f_{ci}' #B1**
		-1.5 N/mm2	-1.5 N/mm2	-1.5 N/mm2	-1.5 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-0.09 f_{ci}'$^{2/3}$ #B2**	**k_σ . -0.09 f_{ci}'$^{2/3}$ #B2**	**-0.09 f_{ci}'$^{2/3}$ #B2**	**k_σ . -0.09 f_{ci}'$^{2/3}$ #B2**	**-0.27 f_{ci}'$^{2/3}$ #B2**	**k_σ . -0.27 f_{ci}'$^{2/3}$ #B2**
		-0.7 N/mm2	-0.7 N/mm2	-0.7 N/mm2	-0.7 N/mm2	-2.0 N/mm2	-2.2 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**
		30.0 N/mm2	30.0 N/mm2	30.0 N/mm2	30.0 N/mm2	30.0 N/mm2	30.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.40 f_c' #C2**	**0.30 f_c' #C2**	**0.40 f_c' #C2**	**0.30 f_c' #C2**	**0.40 f_c' #C2**	**0.30 f_c' #C2**
		20.0 N/mm2	15.0 N/mm2	20.0 N/mm2	15.0 N/mm2	20.0 N/mm2	15.0 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.21 f_c'$^{2/3}$ #D1**	**-0.21 f_c'$^{2/3}$ #D1**	**-0.21 f_c'$^{2/3}$ #D1**	**-0.21 f_c'$^{2/3}$ #D1**	**-<.....> #D2**	**-<.....> #D2**
		-2.9 N/mm2	-2.9 N/mm2	-2.9 N/mm2	-2.9 N/mm2	-6.8 N/mm2	-6.8 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . -0.09 f_c'$^{2/3}$ #D3**	**-0.09 f_c'$^{2/3}$ #D3**	**k_σ . -0.09 f_c'$^{2/3}$ #D3**	**-0.09 f_c'$^{2/3}$ #D3**	**k_σ . -0.27 f_c'$^{2/3}$ #D3**	**-0.27 f_c'$^{2/3}$ #D3**
		-1.3 N/mm2	-1.2 N/mm2	-1.3 N/mm2	-1.2 N/mm2	-4.0 N/mm2	-3.7 N/mm2
		With Rebar	No Rebar	With Rebar	No Rebar	With Rebar	No Rebar

#A1: Note beam, one-way slab or two-way slab option to cl.5.8.2 TR.43-2.
#A2: Note flat slab option to T.4 TR.43-2 and cl.5.8.2 TR.43-2.
#B1: Note beam, one-way slab or two-way slab option to cl.5.8.2 TR.43-2 and analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to T.4 TR.43-2 and cl.5.8.2 TR.43-2.
#C1: Note beam, one-way slab or two-way slab option to cl.5.10.2.2 EC2.
#C2: Note flat slab option to T.4 TR.43-2.
#D1: Note beam, one-way slab or two-way slab option analogous to cl.5.8.2 TR.43-2.
#D2: Note beam, one-way slab or two-way slab option to cl.5.8.1 TR.43-2. Note -<.....> = MAX {-0.30f_c', (-0.40f_c'$^{2/3}$ to -0.50f_c'$^{2/3}$)-4N/mm^2/1.0%} as the code allows for an increase in the tensile stress limit from 1% of longitudinal steel (untensioned reinforcement) onwards (-4N/mm^2 for every 1% of longitudinal steel (untensioned reinforcement), increasing proportionally, up to the specified upper limit of -0.30f_c'). Note crack width @ 0.20mm and %rebar **0.15%**
#D3: Note flat slab option to T.4 TR.43-2.

Post-Tensioned Member (Bonded Tendons) Permissible Stress BS8110 (TR.43), ACI318, AS3600, EC2 (TR.43-2)			65%FTW-FS-DS	C28/35
Characterictic Strength of Concrete		**Cube**	**Cylinder**	
Characteristic strength of concrete (PT beam and slab), f_{cu} / f_c'		**35**	**28**	N/mm^2
Characteristic strength of concrete at transfer (PT beam and slab), f_{ci} / f_{ci}'		**25**	**20**	N/mm^2
Incorporation of CSTW-FS-DS Approach Within a FTW-FS-DS Approach	**%M_{HOG}**	**%I**	**%f_{min}**	**[1.7 %M_{HOG}]. %I. %f_{min}**
ks = 65%MHOG | 0.5I | 1.3fmin [FTW-FS-DS] [BS8110 TR.43, ACI318, EC2 TR	**65%**	**0.5**	**1.3**	**1.00**
ks = 65%MHOG | 0.5I | 1.0fmin [FTW-FS-DS] [AS3600]	**65%**	**0.5**	**1.0**	**0.77**

Permissible Stress [N/mm^2] [BS8110, TR.43]							
		Serviceability Class 1 **No Flexural Tensile Stresses**		**Serviceability Class 2** **Flexural Tensile Stresses, Uncracked (No Visible Cracking)**		**Serviceability Class 3** **Flexural Tensile Stresses, Cracked**	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**
		12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2
	Flat Slab (FTW-FS-DS)	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**
		6.0 N/mm2	8.3 N/mm2	6.0 N/mm2	8.3 N/mm2	6.0 N/mm2	8.3 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-1.0 #B**	**-1.0 #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**-0.25 f_{ci} #B1**	**-0.25 f_{ci} #B1**
		-1.0 N/mm2	-1.0 N/mm2	-1.8 N/mm2	-1.8 N/mm2	-6.3 N/mm2	-6.3 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-1.0 #B**	**k_σ . -1.0 #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**k_σ . -0.36 $\sqrt{f_{ci}}$ #B**	**-0.45 $\sqrt{f_{ci}}$ #B2**	**k_σ . -0.45 $\sqrt{f_{ci}}$ #B2**
		-1.0 N/mm2	-1.0 N/mm2	-1.8 N/mm2	-1.8 N/mm2	-2.3 N/mm2	-2.3 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	No Rebar	No Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**
		11.6 N/mm2	14.0 N/mm2	11.6 N/mm2	14.0 N/mm2	11.6 N/mm2	14.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**
		11.6 N/mm2	8.4 N/mm2	11.6 N/mm2	8.4 N/mm2	11.6 N/mm2	8.4 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.0 #D**	**0.0 #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**-<.....> #D1**	**-<.....> #D1**
		0.0 N/mm2	0.0 N/mm2	-2.1 N/mm2	-2.1 N/mm2	-3.4 N/mm2	-3.4 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . 0.0 #D**	**0.0 #D**	**k_σ . -0.36 $\sqrt{f_{cu}}$ #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**k_σ . -0.45 $\sqrt{f_{cu}}$ #D2**	**-0.45 $\sqrt{f_{cu}}$ #D2**
		0.0 N/mm2	0.0 N/mm2	-2.1 N/mm2	-2.1 N/mm2	-2.7 N/mm2	-2.7 N/mm2
		With Rebar	No Rebar	With Rebar	No Rebar	With Rebar	No Rebar

#A1: Note beam, one-way slab or two-way slab option to cl.4.3.5.1 BS8110.
#A2: Note flat slab option to T.2 TR.43 and cl.6.10.2 TR.43.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.4.3.5.2 BS8110.
#B1: Note beam, one-way slab or two-way slab option to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to T.2 TR.43 and cl.6.10.2 TR.43.
#C1: Note beam, one-way slab or two-way slab option to cl.4.3.4.2 BS8110.
#C2: Note flat slab option to T.2 TR.43.
#D: Note beam, one-way slab, two-way slab or flat slab option to cl.4.3.4.3 BS8110.
#D1: Note beam, one-way slab or two-way slab option to cl.4.3.4.3 BS8110. Note -<.....> = MAX {-0.25f_{cu}, (0.7-1.1).(-0.58$\sqrt{f_{cu}}$ to -0.82$\sqrt{f_{cu}}$)-4N/mm^2/1.0%} as the code allows for an increase in the tensile stress limit from 1% of longitudinal steel (untensioned reinforcement) onwards (-4N/mm^2 for every 1% of longitudinal steel (untensioned reinforcement), increasing proportionally, up to the specified upper limit of -0.25f_{cu}). Note crack width @ 0.20mm, %rebar **0.15%** and overall depth, h **600** mm
#D2: Note flat slab option to T.2 TR.43.

Permissible Stress [N/mm^2] [ACI318]							
		Serviceability Class U **Uncracked**		**Serviceability Class T** **Transition**		**Serviceability Class C** **Cracked**	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**
		12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**
		12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.30 f_{ci}' #B1**	**-0.30 f_{ci}' #B1**
		-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.50 $\sqrt{f_{ci}}$' #B2**	**k_σ . -0.50 $\sqrt{f_{ci}}$' #B2**
		-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-2.2 N/mm2	-2.2 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	No Rebar	No Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**
		17.0 N/mm2	17.0 N/mm2	17.0 N/mm2	17.0 N/mm2	17.0 N/mm2	17.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**
		17.0 N/mm2	17.0 N/mm2	17.0 N/mm2	17.0 N/mm2	17.0 N/mm2	17.0 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.62 $\sqrt{f_c}$' #D1**	**-0.62 $\sqrt{f_c}$' #D1**	**-1.00 $\sqrt{f_c}$' #D1**	**-1.00 $\sqrt{f_c}$' #D1**	**-0.30 f_c' #D1**	**-0.30 f_c' #D1**
		-3.3 N/mm2	-3.3 N/mm2	-5.3 N/mm2	-5.3 N/mm2	-8.5 N/mm2	-8.5 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**
		-2.7 N/mm2	-2.7 N/mm2	-2.7 N/mm2	-2.7 N/mm2	-2.7 N/mm2	-2.7 N/mm2
		With Rebar	With Rebar	With Rebar	With Rebar	With Rebar	With Rebar

#A: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.3.1 ACI318.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.3.2 ACI318.
#B1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to cl.24.5.3.2.1 ACI318.
#C: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.4.1 ACI318.
#D1: Note beam, one-way slab or two-way slab option to cl.24.5.2.1 ACI318 and analogous to cl.4.3.4.3 BS8110.
#D2: Note flat slab option to cl.24.5.2.1 ACI318.

Post-Tensioned Member (Bonded Tendons) Permissible Stress BS8110 (TR.43), ACI318, AS3600, EC2 (TR.43-2)		65%FTW-FS-DS	C28/35
Characterictic Strength of Concrete		**Cube**	**Cylinder**	
Characteristic strength of concrete (PT beam and slab), f_{cu} / f_c'		35	28	N/mm^2
Characteristic strength of concrete at transfer (PT beam and slab), f_{ci} / f_{ci}'		25	20	N/mm^2
Incorporation of CSTW-FS-DS Approach Within a FTW-FS-DS Approach	**%M_{HOG}**	**%I**	**%f_{min}**	**[1/%M_{HOG}]:%I:%f_{mi}**
ks = 65%MHOG | 0.5I | 1.3fmin [FTW-FS-DS] [BS8110 TR.43, ACI318, EC2 TR	65%	0.5	1.3	1.00
ks = 65%MHOG | 0.5I | 1.0fmin [FTW-FS-DS] [AS3600]	65%	0.5	1.0	0.77

Permissible Stress [N/mm^2] [AS3600]

		Serviceability Class U Uncracked		Serviceability Class T Transition		Serviceability Class C Cracked	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	$0.50\ f_{ci}'$ #A 10.0 N/mm2	$0.50\ f_{ci}'$ #A 10.0 N/mm2	$0.50\ f_{ci}'$ #A 10.0 N/mm2	$0.50\ f_{ci}'$ #A 10.0 N/mm2	$0.50\ f_{ci}'$ #A 10.0 N/mm2	$0.50\ f_{ci}'$ #A 10.0 N/mm2
	Flat Slab (FTW-FS-DS)	$0.50\ f_{ci}'$ #A 10.0 N/mm2	$0.50\ f_{ci}'$ #A 10.0 N/mm2	$0.50\ f_{ci}'$ #A 10.0 N/mm2	$0.50\ f_{ci}'$ #A 10.0 N/mm2	$0.50\ f_{ci}'$ #A 10.0 N/mm2	$0.50\ f_{ci}'$ #A 10.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	$-0.25\ \sqrt{f_{ci}'}$ #B -1.1 N/mm2 No Rebar	$-0.25\ \sqrt{f_{ci}'}$ #B -1.1 N/mm2 No Rebar	$-0.60\ \sqrt{f_{ci}'}$ #B -2.7 N/mm2 With Rebar	$-0.60\ \sqrt{f_{ci}'}$ #B -2.7 N/mm2 With Rebar	$-0.30\ f_{ci}'$ #B1 -6.0 N/mm2 With Rebar	$-0.30\ f_{ci}'$ #B1 -6.0 N/mm2 With Rebar
	Flat Slab (FTW-FS-DS)	$-0.25\ \sqrt{f_{ci}'}$ #B -1.1 N/mm2 No Rebar	$k_\sigma \cdot -0.25\ \sqrt{f_{ci}'}$ #B -0.9 N/mm2 No Rebar	$-0.60\ \sqrt{f_{ci}'}$ #B -2.7 N/mm2 With Rebar	$k_\sigma \cdot -0.60\ \sqrt{f_{ci}'}$ #B -2.1 N/mm2 With Rebar	$-0.60\ \sqrt{f_{ci}'}$ #B2 -2.7 N/mm2 With Rebar	$k_\sigma \cdot -0.60\ \sqrt{f_{ci}'}$ #B2 -2.1 N/mm2 With Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	$0.50\ f_c'$ #C 14.2 N/mm2	$0.50\ f_c'$ #C 14.2 N/mm2	$0.50\ f_c'$ #C 14.2 N/mm2	$0.50\ f_c'$ #C 14.2 N/mm2	$0.50\ f_c'$ #C 14.2 N/mm2	$0.50\ f_c'$ #C 14.2 N/mm2
	Flat Slab (FTW-FS-DS)	$0.50\ f_c'$ #C 14.2 N/mm2	$0.50\ f_c'$ #C 14.2 N/mm2	$0.50\ f_c'$ #C 14.2 N/mm2	$0.50\ f_c'$ #C 14.2 N/mm2	$0.50\ f_c'$ #C 14.2 N/mm2	$0.50\ f_c'$ #C 14.2 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	$-0.25\ \sqrt{f_c'}$ #D -1.3 N/mm2 No Rebar	$-0.25\ \sqrt{f_c'}$ #D -1.3 N/mm2 No Rebar	$-0.60\ \sqrt{f_c'}$ #D -3.2 N/mm2 With Rebar	$-0.60\ \sqrt{f_c'}$ #D -3.2 N/mm2 With Rebar	$-0.30\ f_c'$ #D1 -8.5 N/mm2 With Rebar	$-0.30\ f_c'$ #D1 -8.5 N/mm2 With Rebar
	Flat Slab (FTW-FS-DS)	$k_\sigma \cdot -0.25\ \sqrt{f_c'}$ #D -1.0 N/mm2 With Rebar	$-0.25\ \sqrt{f_c'}$ #D -1.3 N/mm2 No Rebar	$k_\sigma \cdot -0.60\ \sqrt{f_c'}$ #D -2.5 N/mm2 With Rebar	$-0.60\ \sqrt{f_c'}$ #D -3.2 N/mm2 With Rebar	$k_\sigma \cdot -0.60\ \sqrt{f_c'}$ #D2 -2.5 N/mm2 With Rebar	$-0.60\ \sqrt{f_c'}$ #D2 -3.2 N/mm2 With Rebar

#A: Note beam, one-way slab, two-way slab or flat slab option to cl.8.1.6.2 AS3600.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.8.6.2 and cl.9.4.2 AS3600.
#B1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to cl.9.4.2 AS3600.
#C: Note beam, one-way slab, two-way slab or flat slab option to cl.8.1.6.2 AS3600.
#D: Note beam, one-way slab, two-way slab or flat slab option to cl.8.6.2 and cl.9.4.2 AS3600.
#D1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.4.3 BS8110.
#D2: Note flat slab option to cl.9.4.2 AS3600 as an alternative to cl.6.9.5.3 AS3600.

Permissible Stress [N/mm^2] [EC2 and TR.43-2]

		Serviceability Class U Uncracked		Serviceability Class T Transition		Serviceability Class C Cracked	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	$0.50\ f_{ci}'$ #A1 10.0 N/mm2	$0.50\ f_{ci}'$ #A1 10.0 N/mm2	$0.50\ f_{ci}'$ #A1 10.0 N/mm2	$0.50\ f_{ci}'$ #A1 10.0 N/mm2	$0.50\ f_{ci}'$ #A1 10.0 N/mm2	$0.50\ f_{ci}'$ #A1 10.0 N/mm2
	Flat Slab (FTW-FS-DS)	$0.30\ f_{ci}'$ #A2 6.0 N/mm2	$0.40\ f_{ci}'$ #A2 8.0 N/mm2	$0.30\ f_{ci}'$ #A2 6.0 N/mm2	$0.40\ f_{ci}'$ #A2 8.0 N/mm2	$0.30\ f_{ci}'$ #A2 6.0 N/mm2	$0.40\ f_{ci}'$ #A2 8.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	$-0.21\ f_{ci}'^{2/3}$ #B1 -1.5 N/mm2 No Rebar	$-0.21\ f_{ci}'^{2/3}$ #B1 -1.5 N/mm2 No Rebar	$-0.21\ f_{ci}'^{2/3}$ #B1 -1.5 N/mm2 No Rebar	$-0.21\ f_{ci}'^{2/3}$ #B1 -1.5 N/mm2 No Rebar	$-0.30\ f_{ci}'$ #B1 -6.0 N/mm2 With Rebar	$-0.30\ f_{ci}'$ #B1 -6.0 N/mm2 With Rebar
	Flat Slab (FTW-FS-DS)	$-0.09\ f_{ci}'^{2/3}$ #B2 -0.7 N/mm2 No Rebar	$k_\sigma \cdot -0.09\ f_{ci}'^{2/3}$ #B2 -0.7 N/mm2 No Rebar	$-0.09\ f_{ci}'^{2/3}$ #B2 -0.7 N/mm2 No Rebar	$k_\sigma \cdot -0.09\ f_{ci}'^{2/3}$ #B2 -0.7 N/mm2 No Rebar	$-0.27\ f_{ci}'^{2/3}$ #B2 -2.0 N/mm2 With Rebar	$k_\sigma \cdot -0.27\ f_{ci}'^{2/3}$ #B2 -2.0 N/mm2 With Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	$0.60\ f_c'$ #C1 17.0 N/mm2	$0.60\ f_c'$ #C1 17.0 N/mm2	$0.60\ f_c'$ #C1 17.0 N/mm2	$0.60\ f_c'$ #C1 17.0 N/mm2	$0.60\ f_c'$ #C1 17.0 N/mm2	$0.60\ f_c'$ #C1 17.0 N/mm2
	Flat Slab (FTW-FS-DS)	$0.40\ f_c'$ #C2 11.3 N/mm2	$0.30\ f_c'$ #C2 8.5 N/mm2	$0.40\ f_c'$ #C2 11.3 N/mm2	$0.30\ f_c'$ #C2 8.5 N/mm2	$0.40\ f_c'$ #C2 11.3 N/mm2	$0.30\ f_c'$ #C2 8.5 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	$-0.21\ f_c'^{2/3}$ #D1 -2.0 N/mm2 No Rebar	$-0.21\ f_c'^{2/3}$ #D1 -2.0 N/mm2 No Rebar	$-0.21\ f_c'^{2/3}$ #D1 -2.0 N/mm2 No Rebar	$-0.21\ f_c'^{2/3}$ #D1 -2.0 N/mm2 No Rebar	-<.......> #D2 -4.6 N/mm2 With Rebar	-<.......> #D2 -4.6 N/mm2 With Rebar
	Flat Slab (FTW-FS-DS)	$k_\sigma \cdot -0.09\ f_c'^{2/3}$ #D3 -0.8 N/mm2 With Rebar	$-0.09\ f_c'^{2/3}$ #D3 -0.8 N/mm2 No Rebar	$k_\sigma \cdot -0.09\ f_c'^{2/3}$ #D3 -0.8 N/mm2 With Rebar	$-0.09\ f_c'^{2/3}$ #D3 -0.8 N/mm2 No Rebar	$k_\sigma \cdot -0.27\ f_c'^{2/3}$ #D3 -2.5 N/mm2 With Rebar	$-0.27\ f_c'^{2/3}$ #D3 -2.5 N/mm2 No Rebar

#A1: Note beam, one-way slab or two-way slab option to cl.5.8.2 TR.43-2.
#A2: Note flat slab option to T.4 TR.43-2 and cl.5.8.2 TR.43-2.
#B1: Note beam, one-way slab or two-way slab option to cl.5.8.2 TR.43-2 and analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to T.4 TR.43-2 and cl.5.8.2 TR.43-2.
#C1: Note beam, one-way slab or two-way slab option to cl.5.10.2.2 EC2.
#C2: Note flat slab option to T.4 TR.43-2.
#D1: Note beam, one-way slab or two-way slab option analogous to cl.5.8.2 TR.43-2.
#D2: Note beam, one-way slab or two-way slab option to cl.5.8.1 TR.43-2. Note -<.......> = MAX {$-0.30 f_c'$, ($-0.40 f_c'^{2/3}$ to $-0.50 f_c'^{2/3}$)-4N/mm^2/1.0%} as the code allows for an increase in the tensile stress limit from 1% of longitudinal steel (untensioned reinforcement) onwards (-4N/mm^2 for every 1% of longitudinal steel (untensioned reinforcement), increasing proportionally, up to the specified upper limit of $-0.30 f_c'$). Note crack width @ 0.20mm and %rebar 0.15%
#D3: Note flat slab option to T.4 TR.43-2.

Post-Tensioned Member (Bonded Tendons) Permissible Stress BS8110 (TR.43), ACI318, AS3600, EC2 (TR.43-2)			65%FTW-FS-DS	C32/40
Characterictic Strength of Concrete		**Cube**	**Cylinder**	
Characteristic strength of concrete (PT beam and slab), f_{cu} / f_c'		**40**	**32**	N/mm^2
Characteristic strength of concrete at transfer (PT beam and slab), f_{ci} / f_{ci}'		**25**	**20**	N/mm^2
Incorporation of CSTW-FS-DS Approach Within a FTW-FS-DS Approach	**%M_{HOG}**	**%I**	**%f_{min}**	**[1.] %M_{HOG}]. %I. %f_{min}**
ks = 65%MHOG | 0.5I | 1.3fmin [FTW-FS-DS] [BS8110 TR.43, ACI318, EC2 TR	**65%**	**0.5**	**1.3**	**1.00**
ks = 65%MHOG | 0.5I | 1.0fmin [FTW-FS-DS] [AS3600]	**65%**	**0.5**	**1.0**	**0.77**

Permissible Stress [N/mm^2] [BS8110, TR.43]							
		Serviceability Class 1 **No Flexural Tensile Stresses**		**Serviceability Class 2** **Flexural Tensile Stresses, Uncracked (No Visible Cracking)**		**Serviceability Class 3** **Flexural Tensile Stresses, Cracked**	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**
		12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2
	Flat Slab (FTW-FS-DS)	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**
		6.0 N/mm2	8.3 N/mm2	6.0 N/mm2	8.3 N/mm2	6.0 N/mm2	8.3 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-1.0 #B**	**-1.0 #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**-0.25 f_{ci} #B1**	**-0.25 f_{ci} #B1**
		-1.0 N/mm2	-1.0 N/mm2	-1.8 N/mm2	-1.8 N/mm2	-6.3 N/mm2	-6.3 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-1.0 #B**	**k_σ . -1.0 #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**k_σ . -0.36 $\sqrt{f_{ci}}$ #B**	**-0.45 $\sqrt{f_{ci}}$ #B2**	**k_σ . -0.45 $\sqrt{f_{ci}}$ #B2**
		-1.0 N/mm2	-1.0 N/mm2	-1.8 N/mm2	-1.8 N/mm2	-2.3 N/mm2	-2.3 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	No Rebar	No Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**
		13.2 N/mm2	16.0 N/mm2	13.2 N/mm2	16.0 N/mm2	13.2 N/mm2	16.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**
		13.2 N/mm2	9.6 N/mm2	13.2 N/mm2	9.6 N/mm2	13.2 N/mm2	9.6 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.0 #D**	**0.0 #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**-<.....> #D1**	**-<.....> #D1**
		0.0 N/mm2	0.0 N/mm2	-2.3 N/mm2	-2.3 N/mm2	-4.5 N/mm2	-4.5 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . 0.0 #D**	**0.0 #D**	**k_σ . -0.36 $\sqrt{f_{cu}}$ #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**k_σ . -0.45 $\sqrt{f_{cu}}$ #D2**	**-0.45 $\sqrt{f_{cu}}$ #D2**
		0.0 N/mm2	0.0 N/mm2	-2.3 N/mm2	-2.3 N/mm2	-2.8 N/mm2	-2.8 N/mm2
		With Rebar	No Rebar	With Rebar	No Rebar	With Rebar	No Rebar

#A1: Note beam, one-way slab or two-way slab option to cl.4.3.5.1 BS8110.
#A2: Note flat slab option to T.2 TR.43 and cl.6.10.2 TR.43.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.4.3.5.2 BS8110.
#B1: Note beam, one-way slab or two-way slab option to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to T.2 TR.43 and cl.6.10.2 TR.43.
#C1: Note beam, one-way slab or two-way slab option to cl.4.3.4.2 BS8110.
#C2: Note flat slab option to T.2 TR.43.
#D: Note beam, one-way slab, two-way slab or flat slab option to cl.4.3.4.3 BS8110.
#D1: Note beam, one-way slab or two-way slab option to cl.4.3.4.3 BS8110. Note -<.....> = MAX {-0.25f_{cu}, (0.7-1.1).(-0.58$\sqrt{f_{cu}}$ to -0.82$\sqrt{f_{cu}}$)-4N/mm^2/1.0%} as the code allows for an increase in the tensile stress limit from 1% of longitudinal steel (untensioned reinforcement) onwards (-4N/mm^2 for every 1% of longitudinal steel (untensioned reinforcement), increasing proportionally, up to the specified upper limit of -0.25f_{cu}), Note crack width @ 0.20mm, %rebar **0.15%** and overall depth, h **600** mm
#D2: Note flat slab option to T.2 TR.43.

Permissible Stress [N/mm^2] [ACI318]							
		Serviceability Class U **Uncracked**		**Serviceability Class T** **Transition**		**Serviceability Class C** **Cracked**	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**
		12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**
		12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.30 f_{ci}' #B1**	**-0.30 f_{ci}' #B1**
		-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.50 $\sqrt{f_{ci}}$' #B2**	**k_σ . -0.50 $\sqrt{f_{ci}}$' #B2**
		-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-2.2 N/mm2	-2.2 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	No Rebar	No Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**
		19.0 N/mm2	19.0 N/mm2	19.0 N/mm2	19.0 N/mm2	19.0 N/mm2	19.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**
		19.0 N/mm2	19.0 N/mm2	19.0 N/mm2	19.0 N/mm2	19.0 N/mm2	19.0 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.62 $\sqrt{f_c}$' #D1**	**-0.62 $\sqrt{f_c}$' #D1**	**-1.00 $\sqrt{f_c}$' #D1**	**-1.00 $\sqrt{f_c}$' #D1**	**-0.30 f_c' #D1**	**-0.30 f_c' #D1**
		-3.5 N/mm2	-3.5 N/mm2	-5.6 N/mm2	-5.6 N/mm2	-9.5 N/mm2	-9.5 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**
		-2.8 N/mm2	-2.8 N/mm2	-2.8 N/mm2	-2.8 N/mm2	-2.8 N/mm2	-2.8 N/mm2
		With Rebar	With Rebar	With Rebar	With Rebar	With Rebar	With Rebar

#A: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.3.1 ACI318.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.3.2 ACI318.
#B1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to cl.24.5.3.2.1 ACI318.
#C: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.4.1 ACI318.
#D1: Note beam, one-way slab or two-way slab option to cl.24.5.2.1 ACI318 and analogous to cl.4.3.4.3 BS8110.
#D2: Note flat slab option to cl.24.5.2.1 ACI318.

Post-Tensioned Member (Bonded Tendons) Permissible Stress BS8110 (TR.43), ACI318, AS3600, EC2 (TR.43-2)			65%FTW-FS-DS	C32/40
Characterictic Strength of Concrete		**Cube**	**Cylinder**	
Characteristic strength of concrete (PT beam and slab), f_{cu} / f_c'		**40**	**32**	N/mm^2
Characteristic strength of concrete at transfer (PT beam and slab), f_{ci} / f_{ci}'		**25**	**20**	N/mm^2
Incorporation of CSTW-FS-DS Approach Within a FTW-FS-DS Approach	**%M_{HOG}**	**%I**	**%f_{min}**	**[1.] %M_{HOG}]. %I. %f_{mi}**
ks = 65%MHOG | 0.5I | 1.3fmin [FTW-FS-DS] [BS8110 TR.43, ACI318, EC2 TR	**65%**	**0.5**	**1.3**	**1.00**
ks = 65%MHOG | 0.5I | 1.0fmin [FTW-FS-DS] [AS3600]	**65%**	**0.5**	**1.0**	**0.77**

Permissible Stress [N/mm^2] [AS3600]							
		Serviceability Class U Uncracked		**Serviceability Class T Transition**		**Serviceability Class C Cracked**	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B**	**-0.30 f_{ci}' #B1**	**-0.30 f_{ci}' #B1**
		-1.1 N/mm2	-1.1 N/mm2	-2.7 N/mm2	-2.7 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.60 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B2**	**k_σ . -0.60 $\sqrt{f_{ci}}$' #B2**
		-1.1 N/mm2	-0.9 N/mm2	-2.7 N/mm2	-2.1 N/mm2	-2.7 N/mm2	-2.1 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**
		15.8 N/mm2	15.8 N/mm2	15.8 N/mm2	15.8 N/mm2	15.8 N/mm2	15.8 N/mm2
	Flat Slab (FTW-FS-DS)	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**
		15.8 N/mm2	15.8 N/mm2	15.8 N/mm2	15.8 N/mm2	15.8 N/mm2	15.8 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.25 $\sqrt{f_c}$' #D**	**-0.25 $\sqrt{f_c}$' #D**	**-0.60 $\sqrt{f_c}$' #D**	**-0.60 $\sqrt{f_c}$' #D**	**-0.30 f_c' #D1**	**-0.30 f_c' #D1**
		-1.4 N/mm2	-1.4 N/mm2	-3.4 N/mm2	-3.4 N/mm2	-9.5 N/mm2	-9.5 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . -0.25 $\sqrt{f_c}$' #D**	**-0.25 $\sqrt{f_c}$' #D**	**k_σ . -0.60 $\sqrt{f_c}$' #D**	**-0.60 $\sqrt{f_c}$' #D**	**k_σ . -0.60 $\sqrt{f_c}$' #D2**	**-0.60 $\sqrt{f_c}$' #D2**
		-1.1 N/mm2	-1.4 N/mm2	-2.6 N/mm2	-3.4 N/mm2	-2.6 N/mm2	-3.4 N/mm2
		With Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar

#A: Note beam, one-way slab, two-way slab or flat slab option to cl.8.1.6.2 AS3600.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.8.6.2 and cl.9.4.2 AS3600.
#B1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to cl.9.4.2 AS3600.
#C: Note beam, one-way slab, two-way slab or flat slab option to cl.8.1.6.2 AS3600.
#D: Note beam, one-way slab, two-way slab or flat slab option to cl.8.6.2 and cl.9.4.2 AS3600.
#D1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.4.3 BS8110.
#D2: Note flat slab option to cl.9.4.2 AS3600 as an alternative to cl.6.9.5.3 AS3600.

Permissible Stress [N/mm^2] [EC2 and TR.43-2]							
		Serviceability Class U Uncracked		**Serviceability Class T Transition**		**Serviceability Class C Cracked**	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.30 f_{ci}' #A2**	**0.40 f_{ci}' #A2**	**0.30 f_{ci}' #A2**	**0.40 f_{ci}' #A2**	**0.30 f_{ci}' #A2**	**0.40 f_{ci}' #A2**
		6.0 N/mm2	8.0 N/mm2	6.0 N/mm2	8.0 N/mm2	6.0 N/mm2	8.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.30 f_{ci}' #B1**	**-0.30 f_{ci}' #B1**
		-1.5 N/mm2	-1.5 N/mm2	-1.5 N/mm2	-1.5 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-0.09 f_{ci}'$^{2/3}$ #B2**	**k_σ . -0.09 f_{ci}'$^{2/3}$ #B2**	**-0.09 f_{ci}'$^{2/3}$ #B2**	**k_σ . -0.09 f_{ci}'$^{2/3}$ #B2**	**-0.27 f_{ci}'$^{2/3}$ #B2**	**k_σ . -0.27 f_{ci}'$^{2/3}$ #B2**
		-0.7 N/mm2	-0.7 N/mm2	-0.7 N/mm2	-0.7 N/mm2	-2.0 N/mm2	-2.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**
		19.0 N/mm2	19.0 N/mm2	19.0 N/mm2	19.0 N/mm2	19.0 N/mm2	19.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.40 f_c' #C2**	**0.30 f_c' #C2**	**0.40 f_c' #C2**	**0.30 f_c' #C2**	**0.40 f_c' #C2**	**0.30 f_c' #C2**
		12.7 N/mm2	9.5 N/mm2	12.7 N/mm2	9.5 N/mm2	12.7 N/mm2	9.5 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.21 f_c'$^{2/3}$ #D1**	**-0.21 f_c'$^{2/3}$ #D1**	**-0.21 f_c'$^{2/3}$ #D1**	**-0.21 f_c'$^{2/3}$ #D1**	**-<.....> #D2**	**-<.....> #D2**
		-2.1 N/mm2	-2.1 N/mm2	-2.1 N/mm2	-2.1 N/mm2	-5.0 N/mm2	-5.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . -0.09 f_c'$^{2/3}$ #D3**	**-0.09 f_c'$^{2/3}$ #D3**	**k_σ . -0.09 f_c'$^{2/3}$ #D3**	**-0.09 f_c'$^{2/3}$ #D3**	**k_σ . -0.27 f_c'$^{2/3}$ #D3**	**-0.27 f_c'$^{2/3}$ #D3**
		-0.9 N/mm2	-0.9 N/mm2	-0.9 N/mm2	-0.9 N/mm2	-2.7 N/mm2	-2.7 N/mm2
		With Rebar	No Rebar	With Rebar	No Rebar	With Rebar	No Rebar

#A1: Note beam, one-way slab or two-way slab option to cl.5.8.2 TR.43-2.
#A2: Note flat slab option to T.4 TR.43-2 and cl.5.8.2 TR.43-2.
#B1: Note beam, one-way slab or two-way slab option to cl.5.8.2 TR.43-2 and analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to T.4 TR.43-2 and cl.5.8.2 TR.43-2.
#C1: Note beam, one-way slab or two-way slab option to cl.5.10.2.2 EC2.
#C2: Note flat slab option to T.4 TR.43-2.
#D1: Note beam, one-way slab or two-way slab option analogous to cl.5.8.2 TR.43-2.
#D2: Note beam, one-way slab or two-way slab option to cl.5.8.1 TR.43-2. Note -<.....> = MAX {-0.30f_c', (-0.40f_c'$^{2/3}$ to -0.50f_c'$^{2/3}$)-4N/mm^2/1.0%} as the code allows for an increase in the tensile stress limit from 1% of longitudinal steel (untensioned reinforcement) onwards (-4N/mm^2 for every 1% of longitudinal steel (untensioned reinforcement), increasing proportionally, up to the specified upper limit of -0.30f_c'). Note crack width @ 0.20mm and %rebar **0.15%**
#D3: Note flat slab option to T.4 TR.43-2.

Post-Tensioned Member (Bonded Tendons) Permissible Stress BS8110 (TR.43), ACI318, AS3600, EC2 (TR.43-2)			65%FTW-FS-DS	C35/45
Characterictic Strength of Concrete		**Cube**	**Cylinder**	
Characteristic strength of concrete (PT beam and slab), f_{cu} / f_c'		**45**	**35**	N/mm^2
Characteristic strength of concrete at transfer (PT beam and slab), f_{ci} / f_{ci}'		**25**	**20**	N/mm^2
Incorporation of CSTW-FS-DS Approach Within a FTW-FS-DS Approach	**%M_{HOG}**	**%I**	**%f_{min}**	**[1.7 %M_{HOG}]. %I. %f_{min}**
ks = 65%MHOG | 0.5I | 1.3fmin [FTW-FS-DS] [BS8110 TR.43, ACI318, EC2 TR	**65%**	**0.5**	**1.3**	**1.00**
ks = 65%MHOG | 0.5I | 1.0fmin [FTW-FS-DS] [AS3600]	**65%**	**0.5**	**1.0**	**0.77**

Permissible Stress [N/mm^2] [BS8110, TR.43]							
		Serviceability Class 1 **No Flexural Tensile Stresses**		**Serviceability Class 2** **Flexural Tensile Stresses, Uncracked (No Visible Cracking)**		**Serviceability Class 3** **Flexural Tensile Stresses, Cracked**	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**
		12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2
	Flat Slab (FTW-FS-DS)	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**
		6.0 N/mm2	8.3 N/mm2	6.0 N/mm2	8.3 N/mm2	6.0 N/mm2	8.3 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-1.0 #B**	**-1.0 #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**-0.25 f_{ci} #B1**	**-0.25 f_{ci} #B1**
		-1.0 N/mm2	-1.0 N/mm2	-1.8 N/mm2	-1.8 N/mm2	-6.3 N/mm2	-6.3 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-1.0 #B**	**k_σ . -1.0 #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**k_σ . -0.36 $\sqrt{f_{ci}}$ #B**	**-0.45 $\sqrt{f_{ci}}$ #B2**	**k_σ . -0.45 $\sqrt{f_{ci}}$ #B2**
		-1.0 N/mm2	-1.0 N/mm2	-1.8 N/mm2	-1.8 N/mm2	-2.3 N/mm2	-2.3 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	No Rebar	No Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**
		14.9 N/mm2	18.0 N/mm2	14.9 N/mm2	18.0 N/mm2	14.9 N/mm2	18.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**
		14.9 N/mm2	10.8 N/mm2	14.9 N/mm2	10.8 N/mm2	14.9 N/mm2	10.8 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.0 #D**	**0.0 #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**-<.....> #D1**	**-<.....> #D1**
		0.0 N/mm2	0.0 N/mm2	-2.4 N/mm2	-2.4 N/mm2	-4.5 N/mm2	-4.5 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . 0.0 #D**	**0.0 #D**	**k_σ . -0.36 $\sqrt{f_{cu}}$ #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**k_σ . -0.45 $\sqrt{f_{cu}}$ #D2**	**-0.45 $\sqrt{f_{cu}}$ #D2**
		0.0 N/mm2	0.0 N/mm2	-2.4 N/mm2	-2.4 N/mm2	-3.0 N/mm2	-3.0 N/mm2
		With Rebar	No Rebar	With Rebar	No Rebar	With Rebar	No Rebar

#A1: Note beam, one-way slab or two-way slab option to cl.4.3.5.1 BS8110.
#A2: Note flat slab option to T.2 TR.43 and cl.6.10.2 TR.43.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.4.3.5.2 BS8110.
#B1: Note beam, one-way slab or two-way slab option to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to T.2 TR.43 and cl.6.10.2 TR.43.
#C1: Note beam, one-way slab or two-way slab option to cl.4.3.4.2 BS8110.
#C2: Note flat slab option to T.2 TR.43.
#D: Note beam, one-way slab, two-way slab or flat slab option to cl.4.3.4.3 BS8110.
#D1: Note beam, one-way slab or two-way slab option to cl.4.3.4.3 BS8110. Note -<.....> = MAX {-0.25f_{cu}, (0.7-1.1).(-0.58$\sqrt{f_{cu}}$ to -0.82$\sqrt{f_{cu}}$)-4N/mm^2/1.0%} as the code allows for an increase in the tensile stress limit from 1% of longitudinal steel (untensioned reinforcement) onwards (-4N/mm^2 for every 1% of longitudinal steel (untensioned reinforcement), increasing proportionally, up to the specified upper limit of -0.25f_{cu}). Note crack width @ 0.20mm, %rebar **0.15%** and overall depth, h **600** mm
#D2: Note flat slab option to T.2 TR.43.

Permissible Stress [N/mm^2] [ACI318]							
		Serviceability Class U **Uncracked**		**Serviceability Class T** **Transition**		**Serviceability Class C** **Cracked**	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**
		12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**
		12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.30 f_{ci}' #B1**	**-0.30 f_{ci}' #B1**
		-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.50 $\sqrt{f_{ci}}$' #B2**	**k_σ . -0.50 $\sqrt{f_{ci}}$' #B2**
		-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-2.2 N/mm2	-2.2 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	No Rebar	No Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**
		21.0 N/mm2	21.0 N/mm2	21.0 N/mm2	21.0 N/mm2	21.0 N/mm2	21.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**
		21.0 N/mm2	21.0 N/mm2	21.0 N/mm2	21.0 N/mm2	21.0 N/mm2	21.0 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.62 $\sqrt{f_c}$' #D1**	**-0.62 $\sqrt{f_c}$' #D1**	**-1.00 $\sqrt{f_c}$' #D1**	**-1.00 $\sqrt{f_c}$' #D1**	**-0.30 f_c' #D1**	**-0.30 f_c' #D1**
		-3.7 N/mm2	-3.7 N/mm2	-5.9 N/mm2	-5.9 N/mm2	-10.5 N/mm2	-10.5 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**
		-3.0 N/mm2	-3.0 N/mm2	-3.0 N/mm2	-3.0 N/mm2	-3.0 N/mm2	-3.0 N/mm2
		With Rebar	With Rebar	With Rebar	With Rebar	With Rebar	With Rebar

#A: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.3.1 ACI318.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.3.2 ACI318.
#B1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to cl.24.5.3.2.1 ACI318.
#C: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.4.1 ACI318.
#D1: Note beam, one-way slab or two-way slab option to cl.24.5.2.1 ACI318 and analogous to cl.4.3.4.3 BS8110.
#D2: Note flat slab option to cl.24.5.2.1 ACI318.

Post-Tensioned Member (Bonded Tendons) Permissible Stress BS8110 (TR.43), ACI318, AS3600, EC2 (TR.43-2)			65%FTW-FS-DS	C35/45
Characterictic Strength of Concrete		**Cube**	**Cylinder**	
Characteristic strength of concrete (PT beam and slab), f_{cu} / f_c'		**45**	**35**	N/mm^2
Characteristic strength of concrete at transfer (PT beam and slab), f_{ci} / f_{ci}'		**25**	**20**	N/mm^2
Incorporation of CSTW-FS-DS Approach Within a FTW-FS-DS Approach	**%M_{HOG}**	**%I**	**%f_{min}**	**[1.] %M_{HOG}]. %I. %f_{min}**
ks = 65%MHOG | 0.5I | 1.3fmin [FTW-FS-DS] [BS8110 TR.43, ACI318, EC2 TR	**65%**	**0.5**	**1.3**	**1.00**
ks = 65%MHOG | 0.5I | 1.0fmin [FTW-FS-DS] [AS3600]	**65%**	**0.5**	**1.0**	**0.77**

Permissible Stress [N/mm^2] [AS3600]							
		Serviceability Class U Uncracked		**Serviceability Class T Transition**		**Serviceability Class C Cracked**	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B**	**-0.30 f_{ci}' #B1**	**-0.30 f_{ci}' #B1**
		-1.1 N/mm2	-1.1 N/mm2	-2.7 N/mm2	-2.7 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.60 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B2**	**k_σ . -0.60 $\sqrt{f_{ci}}$' #B2**
		-1.1 N/mm2	-0.9 N/mm2	-2.7 N/mm2	-2.1 N/mm2	-2.7 N/mm2	-2.1 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**
		17.5 N/mm2	17.5 N/mm2	17.5 N/mm2	17.5 N/mm2	17.5 N/mm2	17.5 N/mm2
	Flat Slab (FTW-FS-DS)	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**
		17.5 N/mm2	17.5 N/mm2	17.5 N/mm2	17.5 N/mm2	17.5 N/mm2	17.5 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.25 $\sqrt{f_c}$' #D**	**-0.25 $\sqrt{f_c}$' #D**	**-0.60 $\sqrt{f_c}$' #D**	**-0.60 $\sqrt{f_c}$' #D**	**-0.30 f_c' #D1**	**-0.30 f_c' #D1**
		-1.5 N/mm2	-1.5 N/mm2	-3.5 N/mm2	-3.5 N/mm2	-10.5 N/mm2	-10.5 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . -0.25 $\sqrt{f_c}$' #D**	**-0.25 $\sqrt{f_c}$' #D**	**k_σ . -0.60 $\sqrt{f_c}$' #D**	**-0.60 $\sqrt{f_c}$' #D**	**k_σ . -0.60 $\sqrt{f_c}$' #D2**	**-0.60 $\sqrt{f_c}$' #D2**
		-1.1 N/mm2	-1.5 N/mm2	-2.7 N/mm2	-3.5 N/mm2	-2.7 N/mm2	-3.5 N/mm2
		With Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar

#A: Note beam, one-way slab, two-way slab or flat slab option to cl.8.1.6.2 AS3600.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.8.6.2 and cl.9.4.2 AS3600.
#B1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to cl.9.4.2 AS3600.
#C: Note beam, one-way slab, two-way slab or flat slab option to cl.8.1.6.2 AS3600.
#D: Note beam, one-way slab, two-way slab or flat slab option to cl.8.6.2 and cl.9.4.2 AS3600.
#D1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.4.3 BS8110.
#D2: Note flat slab option to cl.9.4.2 AS3600 as an alternative to cl.6.9.5.3 AS3600.

Permissible Stress [N/mm^2] [EC2 and TR.43-2]							
		Serviceability Class U Uncracked		**Serviceability Class T Transition**		**Serviceability Class C Cracked**	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.30 f_{ci}' #A2**	**0.40 f_{ci}' #A2**	**0.30 f_{ci}' #A2**	**0.40 f_{ci}' #A2**	**0.30 f_{ci}' #A2**	**0.40 f_{ci}' #A2**
		6.0 N/mm2	8.0 N/mm2	6.0 N/mm2	8.0 N/mm2	6.0 N/mm2	8.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.30 f_{ci}' #B1**	**-0.30 f_{ci}' #B1**
		-1.5 N/mm2	-1.5 N/mm2	-1.5 N/mm2	-1.5 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-0.09 f_{ci}'$^{2/3}$ #B2**	**k_σ . -0.09 f_{ci}'$^{2/3}$ #B2**	**-0.09 f_{ci}'$^{2/3}$ #B2**	**k_σ . -0.09 f_{ci}'$^{2/3}$ #B2**	**-0.27 f_{ci}'$^{2/3}$ #B2**	**k_σ . -0.27 f_{ci}'$^{2/3}$ #B2**
		-0.7 N/mm2	-0.7 N/mm2	-0.7 N/mm2	-0.7 N/mm2	-2.0 N/mm2	-2.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**
		21.0 N/mm2	21.0 N/mm2	21.0 N/mm2	21.0 N/mm2	21.0 N/mm2	21.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.40 f_c' #C2**	**0.30 f_c' #C2**	**0.40 f_c' #C2**	**0.30 f_c' #C2**	**0.40 f_c' #C2**	**0.30 f_c' #C2**
		14.0 N/mm2	10.5 N/mm2	14.0 N/mm2	10.5 N/mm2	14.0 N/mm2	10.5 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.21 f_c'$^{2/3}$ #D1**	**-0.21 f_c'$^{2/3}$ #D1**	**-0.21 f_c'$^{2/3}$ #D1**	**-0.21 f_c'$^{2/3}$ #D1**	**-<.....> #D2**	**-<.....> #D2**
		-2.2 N/mm2	-2.2 N/mm2	-2.2 N/mm2	-2.2 N/mm2	-5.3 N/mm2	-5.3 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . -0.09 f_c'$^{2/3}$ #D3**	**-0.09 f_c'$^{2/3}$ #D3**	**k_σ . -0.09 f_c'$^{2/3}$ #D3**	**-0.09 f_c'$^{2/3}$ #D3**	**k_σ . -0.27 f_c'$^{2/3}$ #D3**	**-0.27 f_c'$^{2/3}$ #D3**
		-1.0 N/mm2	-1.0 N/mm2	-1.0 N/mm2	-1.0 N/mm2	-2.9 N/mm2	-2.9 N/mm2
		With Rebar	No Rebar	With Rebar	No Rebar	With Rebar	No Rebar

#A1: Note beam, one-way slab or two-way slab option to cl.5.8.2 TR.43-2.
#A2: Note flat slab option to T.4 TR.43-2 and cl.5.8.2 TR.43-2.
#B1: Note beam, one-way slab or two-way slab option to cl.5.8.2 TR.43-2 and analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to T.4 TR.43-2 and cl.5.8.2 TR.43-2.
#C1: Note beam, one-way slab or two-way slab option to cl.5.10.2.2 EC2.
#C2: Note flat slab option to T.4 TR.43-2.
#D1: Note beam, one-way slab or two-way slab option analogous to cl.5.8.2 TR.43-2.
#D2: Note beam, one-way slab or two-way slab option to cl.5.8.1 TR.43-2. Note -<.....> = MAX {-0.30f_c', (-0.40f_c'$^{2/3}$ to -0.50f_c'$^{2/3}$)-4N/mm^2/1.0%} as the code allows for an increase in the tensile stress limit from 1% of longitudinal steel (untensioned reinforcement) onwards (-4N/mm^2 for every 1% of longitudinal steel (untensioned reinforcement), increasing proportionally, up to the specified upper limit of -0.30f_c'). Note crack width @ 0.20mm and %rebar **0.15%**
#D3: Note flat slab option to T.4 TR.43-2.

Post-Tensioned Member (Bonded Tendons) Permissible Stress BS8110 (TR.43), ACI318, AS3600, EC2 (TR.43-2)		65%FTW-FS-DS		C40/50
Characterictic Strength of Concrete		**Cube**	**Cylinder**	
Characteristic strength of concrete (PT beam and slab), f_{cu} / f_c'		50	40	N/mm^2
Characteristic strength of concrete at transfer (PT beam and slab), f_{ci} / f_{ci}'		25	20	N/mm^2
Incorporation of CSTW-FS-DS Approach Within a FTW-FS-DS Approach	**%M_{HOG}**	**%I**	**%f_{min}**	**[1/%M_{HOG}]·%I·%f_{mi}**
ks = 65%MHOG | 0.5I | 1.3fmin [FTW-FS-DS] [BS8110 TR.43, ACI318, EC2 TR	65%	0.5	1.3	1.00
ks = 65%MHOG | 0.5I | 1.0fmin [FTW-FS-DS] [AS3600]	65%	0.5	1.0	0.77

Permissible Stress [N/mm^2] [BS8110, TR.43]							
		Serviceability Class 1 No Flexural Tensile Stresses		Serviceability Class 2 Flexural Tensile Stresses, Uncracked (No Visible Cracking)		Serviceability Class 3 Flexural Tensile Stresses, Cracked	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	$0.50 f_{ci}$ #A1	$0.50 f_{ci}$ #A1	$0.50 f_{ci}$ #A1	$0.50 f_{ci}$ #A1	$0.50 f_{ci}$ #A1	$0.50 f_{ci}$ #A1
		12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2
	Flat Slab (FTW-FS-DS)	$0.24 f_{ci}$ #A2	$0.33 f_{ci}$ #A2	$0.24 f_{ci}$ #A2	$0.33 f_{ci}$ #A2	$0.24 f_{ci}$ #A2	$0.33 f_{ci}$ #A2
		6.0 N/mm2	8.3 N/mm2	6.0 N/mm2	8.3 N/mm2	6.0 N/mm2	8.3 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	-1.0 #B	-1.0 #B	$-0.36 \sqrt{f_{ci}}$ #B	$-0.36 \sqrt{f_{ci}}$ #B	$-0.25 f_{ci}$ #B1	$-0.25 f_{ci}$ #B1
		-1.0 N/mm2	-1.0 N/mm2	-1.8 N/mm2	-1.8 N/mm2	-6.3 N/mm2	-6.3 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	-1.0 #B	k_σ . -1.0 #B	$-0.36 \sqrt{f_{ci}}$ #B	$k_\sigma . -0.36 \sqrt{f_{ci}}$ #B	$-0.45 \sqrt{f_{ci}}$ #B2	$k_\sigma . -0.45 \sqrt{f_{ci}}$ #B2
		-1.0 N/mm2	-1.0 N/mm2	-1.8 N/mm2	-1.8 N/mm2	-2.3 N/mm2	-2.3 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	No Rebar	No Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	$0.33 f_{cu}$ #C1	$0.40 f_{cu}$ #C1	$0.33 f_{cu}$ #C1	$0.40 f_{cu}$ #C1	$0.33 f_{cu}$ #C1	$0.40 f_{cu}$ #C1
		16.5 N/mm2	20.0 N/mm2	16.5 N/mm2	20.0 N/mm2	16.5 N/mm2	20.0 N/mm2
	Flat Slab (FTW-FS-DS)	$0.33 f_{cu}$ #C2	$0.24 f_{cu}$ #C2	$0.33 f_{cu}$ #C2	$0.24 f_{cu}$ #C2	$0.33 f_{cu}$ #C2	$0.24 f_{cu}$ #C2
		16.5 N/mm2	12.0 N/mm2	16.5 N/mm2	12.0 N/mm2	16.5 N/mm2	12.0 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	0.0 #D	0.0 #D	$-0.36 \sqrt{f_{cu}}$ #D	$-0.36 \sqrt{f_{cu}}$ #D	-<.......> #D1	-<.......> #D1
		0.0 N/mm2	0.0 N/mm2	-2.5 N/mm2	-2.5 N/mm2	-5.2 N/mm2	-5.2 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	k_σ . 0.0 #D	0.0 #D	$k_\sigma . -0.36 \sqrt{f_{cu}}$ #D	$-0.36 \sqrt{f_{cu}}$ #D	$k_\sigma . -0.45 \sqrt{f_{cu}}$ #D2	$-0.45 \sqrt{f_{cu}}$ #D2
		0.0 N/mm2	0.0 N/mm2	-2.5 N/mm2	-2.5 N/mm2	-3.2 N/mm2	-3.2 N/mm2
		With Rebar	No Rebar	With Rebar	No Rebar	With Rebar	No Rebar

#A1: Note beam, one-way slab or two-way slab option to cl.4.3.5.1 BS8110.
#A2: Note flat slab option to T.2 TR.43 and cl.6.10.2 TR.43.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.4.3.5.2 BS8110.
#B1: Note beam, one-way slab or two-way slab option to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to T.2 TR.43 and cl.6.10.2 TR.43.
#C1: Note beam, one-way slab or two-way slab option to cl.4.3.4.2 BS8110.
#C2: Note flat slab option to T.2 TR.43.
#D: Note beam, one-way slab, two-way slab or flat slab option to cl.4.3.4.3 BS8110.
#D1: Note beam, one-way slab or two-way slab option to cl.4.3.4.3 BS8110. Note -<.......> = MAX {$-0.25f_{cu}$, (0.7-1.1).($-0.58\sqrt{f_{cu}}$ to $-0.82\sqrt{f_{cu}}$)-4N/mm^2/1.0%} as the code allows for an increase in the tensile stress limit from 1% of longitudinal steel (untensioned reinforcement) onwards (-4N/mm^2 for every 1% of longitudinal steel (untensioned reinforcement), increasing proportionally, up to the specified upper limit of $-0.25f_{cu}$). Note crack width @ 0.20mm, %rebar 0.15% and overall depth, h 600 mm
#D2: Note flat slab option to T.2 TR.43.

Permissible Stress [N/mm^2] [ACI318]							
		Serviceability Class U Uncracked		Serviceability Class T Transition		Serviceability Class C Cracked	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	$0.60 f_{ci}$' #A	$0.60 f_{ci}$' #A	$0.60 f_{ci}$' #A	$0.60 f_{ci}$' #A	$0.60 f_{ci}$' #A	$0.60 f_{ci}$' #A
		12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2
	Flat Slab (FTW-FS-DS)	$0.60 f_{ci}$' #A	$0.60 f_{ci}$' #A	$0.60 f_{ci}$' #A	$0.60 f_{ci}$' #A	$0.60 f_{ci}$' #A	$0.60 f_{ci}$' #A
		12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	$-0.25 \sqrt{f_{ci}'}$ #B	$-0.25 \sqrt{f_{ci}'}$ #B	$-0.25 \sqrt{f_{ci}'}$ #B	$-0.25 \sqrt{f_{ci}'}$ #B	$-0.30 f_{ci}$' #B1	$-0.30 f_{ci}$' #B1
		-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	$-0.25 \sqrt{f_{ci}'}$ #B	$k_\sigma . -0.25 \sqrt{f_{ci}'}$ #B	$-0.25 \sqrt{f_{ci}'}$ #B	$k_\sigma . -0.25 \sqrt{f_{ci}'}$ #B	$-0.50 \sqrt{f_{ci}'}$ #B2	$k_\sigma . -0.50 \sqrt{f_{ci}'}$ #B2
		-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-2.2 N/mm2	-2.2 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	No Rebar	No Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	$0.60 f_c$' #C	$0.60 f_c$' #C	$0.60 f_c$' #C	$0.60 f_c$' #C	$0.60 f_c$' #C	$0.60 f_c$' #C
		24.0 N/mm2	24.0 N/mm2	24.0 N/mm2	24.0 N/mm2	24.0 N/mm2	24.0 N/mm2
	Flat Slab (FTW-FS-DS)	$0.60 f_c$' #C	$0.60 f_c$' #C	$0.60 f_c$' #C	$0.60 f_c$' #C	$0.60 f_c$' #C	$0.60 f_c$' #C
		24.0 N/mm2	24.0 N/mm2	24.0 N/mm2	24.0 N/mm2	24.0 N/mm2	24.0 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	$-0.62 \sqrt{f_c'}$ #D1	$-0.62 \sqrt{f_c'}$ #D1	$-1.00 \sqrt{f_c'}$ #D1	$-1.00 \sqrt{f_c'}$ #D1	$-0.30 f_c$' #D1	$-0.30 f_c$' #D1
		-3.9 N/mm2	-3.9 N/mm2	-6.3 N/mm2	-6.3 N/mm2	-12.0 N/mm2	-12.0 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	$k_\sigma . -0.50 \sqrt{f_c'}$ #D2	$-0.50 \sqrt{f_c'}$ #D2	$k_\sigma . -0.50 \sqrt{f_c'}$ #D2	$-0.50 \sqrt{f_c'}$ #D2	$k_\sigma . -0.50 \sqrt{f_c'}$ #D2	$-0.50 \sqrt{f_c'}$ #D2
		-3.2 N/mm2	-3.2 N/mm2	-3.2 N/mm2	-3.2 N/mm2	-3.2 N/mm2	-3.2 N/mm2
		With Rebar	With Rebar	With Rebar	With Rebar	With Rebar	With Rebar

#A: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.3.1 ACI318.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.3.2 ACI318.
#B1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to cl.24.5.3.2.1 ACI318.
#C: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.4.1 ACI318.
#D1: Note beam, one-way slab or two-way slab option to cl.24.5.2.1 ACI318 and analogous to cl.4.3.4.3 BS8110.
#D2: Note flat slab option to cl.24.5.2.1 ACI318.

Post-Tensioned Member (Bonded Tendons) Permissible Stress BS8110 (TR.43), ACI318, AS3600, EC2 (TR.43-2)			65%FTW-FS-DS	C40/50
Characterictic Strength of Concrete		**Cube**	**Cylinder**	
Characteristic strength of concrete (PT beam and slab), f_{cu} / f_c'		**50**	**40**	N/mm^2
Characteristic strength of concrete at transfer (PT beam and slab), f_{ci} / f_{ci}'		**25**	**20**	N/mm^2
Incorporation of CSTW-FS-DS Approach Within a FTW-FS-DS Approach	**%M_{HOG}**	**%I**	**%f_{min}**	**[1.] %M_{HOG}]. %I. %f_{mi}**
ks = 65%MHOG | 0.5I | 1.3fmin [FTW-FS-DS] [BS8110 TR.43, ACI318, EC2 TR	**65%**	**0.5**	**1.3**	**1.00**
ks = 65%MHOG | 0.5I | 1.0fmin [FTW-FS-DS] [AS3600]	**65%**	**0.5**	**1.0**	**0.77**

Permissible Stress [N/mm^2] [AS3600]							
		Serviceability Class U Uncracked		**Serviceability Class T Transition**		**Serviceability Class C Cracked**	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B**	**-0.30 f_{ci}' #B1**	**-0.30 f_{ci}' #B1**
		-1.1 N/mm2	-1.1 N/mm2	-2.7 N/mm2	-2.7 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.60 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B2**	**k_σ . -0.60 $\sqrt{f_{ci}}$' #B2**
		-1.1 N/mm2	-0.9 N/mm2	-2.7 N/mm2	-2.1 N/mm2	-2.7 N/mm2	-2.1 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**
		20.0 N/mm2	20.0 N/mm2	20.0 N/mm2	20.0 N/mm2	20.0 N/mm2	20.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**
		20.0 N/mm2	20.0 N/mm2	20.0 N/mm2	20.0 N/mm2	20.0 N/mm2	20.0 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.25 $\sqrt{f_c}$' #D**	**-0.25 $\sqrt{f_c}$' #D**	**-0.60 $\sqrt{f_c}$' #D**	**-0.60 $\sqrt{f_c}$' #D**	**-0.30 f_c' #D1**	**-0.30 f_c' #D1**
		-1.6 N/mm2	-1.6 N/mm2	-3.8 N/mm2	-3.8 N/mm2	-12.0 N/mm2	-12.0 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . -0.25 $\sqrt{f_c}$' #D**	**-0.25 $\sqrt{f_c}$' #D**	**k_σ . -0.60 $\sqrt{f_c}$' #D**	**-0.60 $\sqrt{f_c}$' #D**	**k_σ . -0.60 $\sqrt{f_c}$' #D2**	**-0.60 $\sqrt{f_c}$' #D2**
		-1.2 N/mm2	-1.6 N/mm2	-2.9 N/mm2	-3.8 N/mm2	-2.9 N/mm2	-3.8 N/mm2
		With Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar

#A: Note beam, one-way slab, two-way slab or flat slab option to cl.8.1.6.2 AS3600.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.8.6.2 and cl.9.4.2 AS3600.
#B1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to cl.9.4.2 AS3600.
#C: Note beam, one-way slab, two-way slab or flat slab option to cl.8.1.6.2 AS3600.
#D: Note beam, one-way slab, two-way slab or flat slab option to cl.8.6.2 and cl.9.4.2 AS3600.
#D1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.4.3 BS8110.
#D2: Note flat slab option to cl.9.4.2 AS3600 as an alternative to cl.6.9.5.3 AS3600.

Permissible Stress [N/mm^2] [EC2 and TR.43-2]							
		Serviceability Class U Uncracked		**Serviceability Class T Transition**		**Serviceability Class C Cracked**	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.30 f_{ci}' #A2**	**0.40 f_{ci}' #A2**	**0.30 f_{ci}' #A2**	**0.40 f_{ci}' #A2**	**0.30 f_{ci}' #A2**	**0.40 f_{ci}' #A2**
		6.0 N/mm2	8.0 N/mm2	6.0 N/mm2	8.0 N/mm2	6.0 N/mm2	8.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.30 f_{ci}' #B1**	**-0.30 f_{ci}' #B1**
		-1.5 N/mm2	-1.5 N/mm2	-1.5 N/mm2	-1.5 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-0.09 f_{ci}'$^{2/3}$ #B2**	**k_σ . -0.09 f_{ci}'$^{2/3}$ #B2**	**-0.09 f_{ci}'$^{2/3}$ #B2**	**k_σ . -0.09 f_{ci}'$^{2/3}$ #B2**	**-0.27 f_{ci}'$^{2/3}$ #B2**	**k_σ . -0.27 f_{ci}'$^{2/3}$ #B2**
		-0.7 N/mm2	-0.7 N/mm2	-0.7 N/mm2	-0.7 N/mm2	-2.0 N/mm2	-2.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**
		24.0 N/mm2	24.0 N/mm2	24.0 N/mm2	24.0 N/mm2	24.0 N/mm2	24.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.40 f_c' #C2**	**0.30 f_c' #C2**	**0.40 f_c' #C2**	**0.30 f_c' #C2**	**0.40 f_c' #C2**	**0.30 f_c' #C2**
		16.0 N/mm2	12.0 N/mm2	16.0 N/mm2	12.0 N/mm2	16.0 N/mm2	12.0 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.21 f_c'$^{2/3}$ #D1**	**-0.21 f_c'$^{2/3}$ #D1**	**-0.21 f_c'$^{2/3}$ #D1**	**-0.21 f_c'$^{2/3}$ #D1**	**-<.....> #D2**	**-<.....> #D2**
		-2.5 N/mm2	-2.5 N/mm2	-2.5 N/mm2	-2.5 N/mm2	-5.8 N/mm2	-5.8 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . -0.09 f_c'$^{2/3}$ #D3**	**-0.09 f_c'$^{2/3}$ #D3**	**k_σ . -0.09 f_c'$^{2/3}$ #D3**	**-0.09 f_c'$^{2/3}$ #D3**	**k_σ . -0.27 f_c'$^{2/3}$ #D3**	**-0.27 f_c'$^{2/3}$ #D3**
		-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-3.2 N/mm2	-3.2 N/mm2
		With Rebar	No Rebar	With Rebar	No Rebar	With Rebar	No Rebar

#A1: Note beam, one-way slab or two-way slab option to cl.5.8.2 TR.43-2.
#A2: Note flat slab option to T.4 TR.43-2 and cl.5.8.2 TR.43-2.
#B1: Note beam, one-way slab or two-way slab option to cl.5.8.2 TR.43-2 and analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to T.4 TR.43-2 and cl.5.8.2 TR.43-2.
#C1: Note beam, one-way slab or two-way slab option to cl.5.10.2.2 EC2.
#C2: Note flat slab option to T.4 TR.43-2.
#D1: Note beam, one-way slab or two-way slab option analogous to cl.5.8.2 TR.43-2.
#D2: Note beam, one-way slab or two-way slab option to cl.5.8.1 TR.43-2. Note -<.....> = MAX {-0.30f_c', (-0.40f_c'$^{2/3}$ to -0.50f_c'$^{2/3}$)-4N/mm^2/1.0%} as the code allows for an increase in the tensile stress limit from 1% of longitudinal steel (untensioned reinforcement) onwards (-4N/mm^2 for every 1% of longitudinal steel (untensioned reinforcement), increasing proportionally, up to the specified upper limit of -0.30f_c'). Note crack width @ 0.20mm and %rebar **0.15%**
#D3: Note flat slab option to T.4 TR.43-2.

Post-Tensioned Member (Bonded Tendons) Permissible Stress BS8110 (TR.43), ACI318, AS3600, EC2 (TR.43-2)			65%FTW-FS-DS	C45/55
Characterictic Strength of Concrete		**Cube**	**Cylinder**	
Characteristic strength of concrete (PT beam and slab), f_{cu} / f_c'		**55**	**45**	N/mm^2
Characteristic strength of concrete at transfer (PT beam and slab), f_{ci} / f_{ci}'		**25**	**20**	N/mm^2
Incorporation of CSTW-FS-DS Approach Within a FTW-FS-DS Approach	**%M_{HOG}**	**%I**	**%f_{min}**	**[1.7 %M_{HOG}]. %I. %f_{min}**
ks = 65%MHOG | 0.5I | 1.3fmin [FTW-FS-DS] [BS8110 TR.43, ACI318, EC2 TR	**65%**	**0.5**	**1.3**	**1.00**
ks = 65%MHOG | 0.5I | 1.0fmin [FTW-FS-DS] [AS3600]	**65%**	**0.5**	**1.0**	**0.77**

Permissible Stress [N/mm^2] [BS8110, TR.43]							
		Serviceability Class 1 **No Flexural Tensile Stresses**		**Serviceability Class 2** **Flexural Tensile Stresses, Uncracked (No Visible Cracking)**		**Serviceability Class 3** **Flexural Tensile Stresses, Cracked**	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**
		12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2
	Flat Slab (FTW-FS-DS)	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**
		6.0 N/mm2	8.3 N/mm2	6.0 N/mm2	8.3 N/mm2	6.0 N/mm2	8.3 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-1.0 #B**	**-1.0 #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**-0.25 f_{ci} #B1**	**-0.25 f_{ci} #B1**
		-1.0 N/mm2	-1.0 N/mm2	-1.8 N/mm2	-1.8 N/mm2	-6.3 N/mm2	-6.3 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-1.0 #B**	**k_σ . -1.0 #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**k_σ . -0.36 $\sqrt{f_{ci}}$ #B**	**-0.45 $\sqrt{f_{ci}}$ #B2**	**k_σ . -0.45 $\sqrt{f_{ci}}$ #B2**
		-1.0 N/mm2	-1.0 N/mm2	-1.8 N/mm2	-1.8 N/mm2	-2.3 N/mm2	-2.3 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	No Rebar	No Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**
		18.2 N/mm2	22.0 N/mm2	18.2 N/mm2	22.0 N/mm2	18.2 N/mm2	22.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**
		18.2 N/mm2	13.2 N/mm2	18.2 N/mm2	13.2 N/mm2	18.2 N/mm2	13.2 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.0 #D**	**0.0 #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**-<.....> #D1**	**-<.....> #D1**
		0.0 N/mm2	0.0 N/mm2	-2.7 N/mm2	-2.7 N/mm2	-5.2 N/mm2	-5.2 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . 0.0 #D**	**0.0 #D**	**k_σ . -0.36 $\sqrt{f_{cu}}$ #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**k_σ . -0.45 $\sqrt{f_{cu}}$ #D2**	**-0.45 $\sqrt{f_{cu}}$ #D2**
		0.0 N/mm2	0.0 N/mm2	-2.7 N/mm2	-2.7 N/mm2	-3.3 N/mm2	-3.3 N/mm2
		With Rebar	No Rebar	With Rebar	No Rebar	With Rebar	No Rebar

#A1: Note beam, one-way slab or two-way slab option to cl.4.3.5.1 BS8110.
#A2: Note flat slab option to T.2 TR.43 and cl.6.10.2 TR.43.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.4.3.5.2 BS8110.
#B1: Note beam, one-way slab or two-way slab option to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to T.2 TR.43 and cl.6.10.2 TR.43.
#C1: Note beam, one-way slab or two-way slab option to cl.4.3.4.2 BS8110.
#C2: Note flat slab option to T.2 TR.43.
#D: Note beam, one-way slab, two-way slab or flat slab option to cl.4.3.4.3 BS8110.
#D1: Note beam, one-way slab or two-way slab option to cl.4.3.4.3 BS8110. Note -<.....> = MAX {-0.25f_{cu}, (0.7-1.1).(-0.58$\sqrt{f_{cu}}$ to -0.82$\sqrt{f_{cu}}$)-4N/mm^2/1.0%} as the code allows for an increase in the tensile stress limit from 1% of longitudinal steel (untensioned reinforcement) onwards (-4N/mm^2 for every 1% of longitudinal steel (untensioned reinforcement), increasing proportionally, up to the specified upper limit of -0.25f_{cu}). Note crack width @ 0.20mm, %rebar **0.15%** and overall depth, h **600** mm
#D2: Note flat slab option to T.2 TR.43.

Permissible Stress [N/mm^2] [ACI318]							
		Serviceability Class U **Uncracked**		**Serviceability Class T** **Transition**		**Serviceability Class C** **Cracked**	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**
		12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**
		12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.30 f_{ci}' #B1**	**-0.30 f_{ci}' #B1**
		-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.50 $\sqrt{f_{ci}}$' #B2**	**k_σ . -0.50 $\sqrt{f_{ci}}$' #B2**
		-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-2.2 N/mm2	-2.2 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	No Rebar	No Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**
		27.0 N/mm2	27.0 N/mm2	27.0 N/mm2	27.0 N/mm2	27.0 N/mm2	27.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**
		27.0 N/mm2	27.0 N/mm2	27.0 N/mm2	27.0 N/mm2	27.0 N/mm2	27.0 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.62 $\sqrt{f_c}$' #D1**	**-0.62 $\sqrt{f_c}$' #D1**	**-1.00 $\sqrt{f_c}$' #D1**	**-1.00 $\sqrt{f_c}$' #D1**	**-0.30 f_c' #D1**	**-0.30 f_c' #D1**
		-4.2 N/mm2	-4.2 N/mm2	-6.7 N/mm2	-6.7 N/mm2	-13.5 N/mm2	-13.5 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**
		-3.4 N/mm2	-3.4 N/mm2	-3.4 N/mm2	-3.4 N/mm2	-3.4 N/mm2	-3.4 N/mm2
		With Rebar	With Rebar	With Rebar	With Rebar	With Rebar	With Rebar

#A: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.3.1 ACI318.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.3.2 ACI318.
#B1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to cl.24.5.3.2.1 ACI318.
#C: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.4.1 ACI318.
#D1: Note beam, one-way slab or two-way slab option to cl.24.5.2.1 ACI318 and analogous to cl.4.3.4.3 BS8110.
#D2: Note flat slab option to cl.24.5.2.1 ACI318.

Post-Tensioned Member (Bonded Tendons) Permissible Stress BS8110 (TR.43), ACI318, AS3600, EC2 (TR.43-2)			65%FTW-FS-DS	C45/55
Characterictic Strength of Concrete		**Cube**	**Cylinder**	
Characteristic strength of concrete (PT beam and slab), f_{cu} / f_c'		**55**	**45**	N/mm^2
Characteristic strength of concrete at transfer (PT beam and slab), f_{ci} / f_{ci}'		**25**	**20**	N/mm^2
Incorporation of CSTW-FS-DS Approach Within a FTW-FS-DS Approach	**%M_{HOG}**	**%I**	**%f_{min}**	**[1.] %M_{HOG}]. %I. %f_{mi}**
ks = 65%MHOG | 0.5I | 1.3fmin [FTW-FS-DS] [BS8110 TR.43, ACI318, EC2 TR	**65%**	**0.5**	**1.3**	**1.00**
ks = 65%MHOG | 0.5I | 1.0fmin [FTW-FS-DS] [AS3600]	**65%**	**0.5**	**1.0**	**0.77**

Permissible Stress [N/mm^2] [AS3600]							
		Serviceability Class U Uncracked		**Serviceability Class T Transition**		**Serviceability Class C Cracked**	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B**	**-0.30 f_{ci}' #B1**	**-0.30 f_{ci}' #B1**
		-1.1 N/mm2	-1.1 N/mm2	-2.7 N/mm2	-2.7 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.60 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B2**	**k_σ . -0.60 $\sqrt{f_{ci}}$' #B2**
		-1.1 N/mm2	-0.9 N/mm2	-2.7 N/mm2	-2.1 N/mm2	-2.7 N/mm2	-2.1 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**
		22.5 N/mm2	22.5 N/mm2	22.5 N/mm2	22.5 N/mm2	22.5 N/mm2	22.5 N/mm2
	Flat Slab (FTW-FS-DS)	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**
		22.5 N/mm2	22.5 N/mm2	22.5 N/mm2	22.5 N/mm2	22.5 N/mm2	22.5 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.25 $\sqrt{f_c}$' #D**	**-0.25 $\sqrt{f_c}$' #D**	**-0.60 $\sqrt{f_c}$' #D**	**-0.60 $\sqrt{f_c}$' #D**	**-0.30 f_c' #D1**	**-0.30 f_c' #D1**
		-1.7 N/mm2	-1.7 N/mm2	-4.0 N/mm2	-4.0 N/mm2	-13.5 N/mm2	-13.5 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . -0.25 $\sqrt{f_c}$' #D**	**-0.25 $\sqrt{f_c}$' #D**	**k_σ . -0.60 $\sqrt{f_c}$' #D**	**-0.60 $\sqrt{f_c}$' #D**	**k_σ . -0.60 $\sqrt{f_c}$' #D2**	**-0.60 $\sqrt{f_c}$' #D2**
		-1.3 N/mm2	-1.7 N/mm2	-3.1 N/mm2	-4.0 N/mm2	-3.1 N/mm2	-4.0 N/mm2
		With Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar

#A: Note beam, one-way slab, two-way slab or flat slab option to cl.8.1.6.2 AS3600.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.8.6.2 and cl.9.4.2 AS3600.
#B1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to cl.9.4.2 AS3600.
#C: Note beam, one-way slab, two-way slab or flat slab option to cl.8.1.6.2 AS3600.
#D: Note beam, one-way slab, two-way slab or flat slab option to cl.8.6.2 and cl.9.4.2 AS3600.
#D1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.4.3 BS8110.
#D2: Note flat slab option to cl.9.4.2 AS3600 as an alternative to cl.6.9.5.3 AS3600.

Permissible Stress [N/mm^2] [EC2 and TR.43-2]							
		Serviceability Class U Uncracked		**Serviceability Class T Transition**		**Serviceability Class C Cracked**	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.30 f_{ci}' #A2**	**0.40 f_{ci}' #A2**	**0.30 f_{ci}' #A2**	**0.40 f_{ci}' #A2**	**0.30 f_{ci}' #A2**	**0.40 f_{ci}' #A2**
		6.0 N/mm2	8.0 N/mm2	6.0 N/mm2	8.0 N/mm2	6.0 N/mm2	8.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.30 f_{ci}' #B1**	**-0.30 f_{ci}' #B1**
		-1.5 N/mm2	-1.5 N/mm2	-1.5 N/mm2	-1.5 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-0.09 f_{ci}'$^{2/3}$ #B2**	**k_σ . -0.09 f_{ci}'$^{2/3}$ #B2**	**-0.09 f_{ci}'$^{2/3}$ #B2**	**k_σ . -0.09 f_{ci}'$^{2/3}$ #B2**	**-0.27 f_{ci}'$^{2/3}$ #B2**	**k_σ . -0.27 f_{ci}'$^{2/3}$ #B2**
		-0.7 N/mm2	-0.7 N/mm2	-0.7 N/mm2	-0.7 N/mm2	-2.0 N/mm2	-2.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**
		27.0 N/mm2	27.0 N/mm2	27.0 N/mm2	27.0 N/mm2	27.0 N/mm2	27.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.40 f_c' #C2**	**0.30 f_c' #C2**	**0.40 f_c' #C2**	**0.30 f_c' #C2**	**0.40 f_c' #C2**	**0.30 f_c' #C2**
		18.0 N/mm2	13.5 N/mm2	18.0 N/mm2	13.5 N/mm2	18.0 N/mm2	13.5 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.21 f_c'$^{2/3}$ #D1**	**-0.21 f_c'$^{2/3}$ #D1**	**-0.21 f_c'$^{2/3}$ #D1**	**-0.21 f_c'$^{2/3}$ #D1**	**-<.....> #D2**	**-<.....> #D2**
		-2.7 N/mm2	-2.7 N/mm2	-2.7 N/mm2	-2.7 N/mm2	-6.3 N/mm2	-6.3 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . -0.09 f_c'$^{2/3}$ #D3**	**-0.09 f_c'$^{2/3}$ #D3**	**k_σ . -0.09 f_c'$^{2/3}$ #D3**	**-0.09 f_c'$^{2/3}$ #D3**	**k_σ . -0.27 f_c'$^{2/3}$ #D3**	**-0.27 f_c'$^{2/3}$ #D3**
		-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-3.4 N/mm2	-3.4 N/mm2
		With Rebar	No Rebar	With Rebar	No Rebar	With Rebar	No Rebar

#A1: Note beam, one-way slab or two-way slab option to cl.5.8.2 TR.43-2.
#A2: Note flat slab option to T.4 TR.43-2 and cl.5.8.2 TR.43-2.
#B1: Note beam, one-way slab or two-way slab option to cl.5.8.2 TR.43-2 and analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to T.4 TR.43-2 and cl.5.8.2 TR.43-2.
#C1: Note beam, one-way slab or two-way slab option to cl.5.10.2.2 EC2.
#C2: Note flat slab option to T.4 TR.43-2.
#D1: Note beam, one-way slab or two-way slab option analogous to cl.5.8.2 TR.43-2.
#D2: Note beam, one-way slab or two-way slab option to cl.5.8.1 TR.43-2. Note -<.....> = MAX {-0.30f_c', (-0.40f_c'$^{2/3}$ to -0.50f_c'$^{2/3}$)-4N/mm^2/1.0%} as the code allows for an increase in the tensile stress limit from 1% of longitudinal steel (untensioned reinforcement) onwards (-4N/mm^2 for every 1% of longitudinal steel (untensioned reinforcement), increasing proportionally, up to the specified upper limit of -0.30f_c'). Note crack width @ 0.20mm and %rebar **0.15%**
#D3: Note flat slab option to T.4 TR.43-2.

Post-Tensioned Member (Bonded Tendons) Permissible Stress BS8110 (TR.43), ACI318, AS3600, EC2 (TR.43-2)		65%FTW-FS-DS		C50/60
Characterictic Strength of Concrete		**Cube**	**Cylinder**	
Characteristic strength of concrete (PT beam and slab), f_{cu} / f_c'		60	50	N/mm^2
Characteristic strength of concrete at transfer (PT beam and slab), f_{ci} / f_{ci}'		25	20	N/mm^2
Incorporation of CSTW-FS-DS Approach Within a FTW-FS-DS Approach	**%M_{HOG}**	**%I**	**%f_{min}**	**[1/%M_{HOG}]:%I:%f_{mi}**
ks = 65%MHOG | 0.5I | 1.3fmin [FTW-FS-DS] [BS8110 TR.43, ACI318, EC2 TR	65%	0.5	1.3	1.00
ks = 65%MHOG | 0.5I | 1.0fmin [FTW-FS-DS] [AS3600]	65%	0.5	1.0	0.77

Permissible Stress [N/mm^2] [BS8110, TR.43]

		Serviceability Class 1 No Flexural Tensile Stresses		Serviceability Class 2 Flexural Tensile Stresses, Uncracked (No Visible Cracking)		Serviceability Class 3 Flexural Tensile Stresses, Cracked	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	$0.50 f_{ci}$ [#A1]	$0.50 f_{ci}$ [#A1]	$0.50 f_{ci}$ [#A1]	$0.50 f_{ci}$ [#A1]	$0.50 f_{ci}$ [#A1]	$0.50 f_{ci}$ [#A1]
		12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2
	Flat Slab (FTW-FS-DS)	$0.24 f_{ci}$ [#A2]	$0.33 f_{ci}$ [#A2]	$0.24 f_{ci}$ [#A2]	$0.33 f_{ci}$ [#A2]	$0.24 f_{ci}$ [#A2]	$0.33 f_{ci}$ [#A2]
		6.0 N/mm2	8.3 N/mm2	6.0 N/mm2	8.3 N/mm2	6.0 N/mm2	8.3 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	-1.0 [#B]	-1.0 [#B]	$-0.36 \sqrt{f_{ci}}$ [#B]	$-0.36 \sqrt{f_{ci}}$ [#B]	$-0.25 f_{ci}$ [#B1]	$-0.25 f_{ci}$ [#B1]
		-1.0 N/mm2	-1.0 N/mm2	-1.8 N/mm2	-1.8 N/mm2	-6.3 N/mm2	-6.3 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	-1.0 [#B]	k_σ . -1.0 [#B]	$-0.36 \sqrt{f_{ci}}$ [#B]	k_σ . $-0.36 \sqrt{f_{ci}}$ [#B]	$-0.45 \sqrt{f_{ci}}$ [#B2]	k_σ . $-0.45 \sqrt{f_{ci}}$ [#B2]
		-1.0 N/mm2	-1.0 N/mm2	-1.8 N/mm2	-1.8 N/mm2	-2.3 N/mm2	-2.3 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	No Rebar	No Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	$0.33 f_{cu}$ [#C1]	$0.40 f_{cu}$ [#C1]	$0.33 f_{cu}$ [#C1]	$0.40 f_{cu}$ [#C1]	$0.33 f_{cu}$ [#C1]	$0.40 f_{cu}$ [#C1]
		19.8 N/mm2	24.0 N/mm2	19.8 N/mm2	24.0 N/mm2	19.8 N/mm2	24.0 N/mm2
	Flat Slab (FTW-FS-DS)	$0.33 f_{cu}$ [#C2]	$0.24 f_{cu}$ [#C2]	$0.33 f_{cu}$ [#C2]	$0.24 f_{cu}$ [#C2]	$0.33 f_{cu}$ [#C2]	$0.24 f_{cu}$ [#C2]
		19.8 N/mm2	14.4 N/mm2	19.8 N/mm2	14.4 N/mm2	19.8 N/mm2	14.4 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	0.0 [#D]	0.0 [#D]	$-0.36 \sqrt{f_{cu}}$ [#D]	$-0.36 \sqrt{f_{cu}}$ [#D]	-<.......> [#D1]	-<.......> [#D1]
		0.0 N/mm2	0.0 N/mm2	-2.8 N/mm2	-2.8 N/mm2	-5.2 N/mm2	-5.2 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	k_σ . 0.0 [#D]	0.0 [#D]	k_σ . $-0.36 \sqrt{f_{cu}}$ [#D]	$-0.36 \sqrt{f_{cu}}$ [#D]	k_σ . $-0.45 \sqrt{f_{cu}}$ [#D2]	$-0.45 \sqrt{f_{cu}}$ [#D2]
		0.0 N/mm2	0.0 N/mm2	-2.8 N/mm2	-2.8 N/mm2	-3.5 N/mm2	-3.5 N/mm2
		With Rebar	No Rebar	With Rebar	No Rebar	With Rebar	No Rebar

#A1: Note beam, one-way slab or two-way slab option to cl.4.3.5.1 BS8110.
#A2: Note flat slab option to T.2 TR.43 and cl.6.10.2 TR.43.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.4.3.5.2 BS8110.
#B1: Note beam, one-way slab or two-way slab option to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to T.2 TR.43 and cl.6.10.2 TR.43.
#C1: Note beam, one-way slab or two-way slab option to cl.4.3.4.2 BS8110.
#C2: Note flat slab option to T.2 TR.43.
#D: Note beam, one-way slab, two-way slab or flat slab option to cl.4.3.4.3 BS8110.
#D1: Note beam, one-way slab or two-way slab option to cl.4.3.4.3 BS8110. Note -<.......> = MAX {$-0.25 f_{cu}$, (0.7-1.1).($-0.58\sqrt{f_{cu}}$ to $-0.82\sqrt{f_{cu}}$)-4N/mm^2/1.0%} as the code allows for an increase in the tensile stress limit from 1% of longitudinal steel (untensioned reinforcement) onwards (-4N/mm^2 for every 1% of longitudinal steel (untensioned reinforcement), increasing proportionally, up to the specified upper limit of $-0.25 f_{cu}$). Note crack width @ 0.20mm, %rebar 0.15% and overall depth, h 600 mm
#D2: Note flat slab option to T.2 TR.43.

Permissible Stress [N/mm^2] [ACI318]

		Serviceability Class U Uncracked		Serviceability Class T Transition		Serviceability Class C Cracked	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	$0.60 f_{ci}$' [#A]	$0.60 f_{ci}$' [#A]	$0.60 f_{ci}$' [#A]	$0.60 f_{ci}$' [#A]	$0.60 f_{ci}$' [#A]	$0.60 f_{ci}$' [#A]
		12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2
	Flat Slab (FTW-FS-DS)	$0.60 f_{ci}$' [#A]	$0.60 f_{ci}$' [#A]	$0.60 f_{ci}$' [#A]	$0.60 f_{ci}$' [#A]	$0.60 f_{ci}$' [#A]	$0.60 f_{ci}$' [#A]
		12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	$-0.25 \sqrt{f_{ci}'}$ [#B]	$-0.25 \sqrt{f_{ci}'}$ [#B]	$-0.25 \sqrt{f_{ci}'}$ [#B]	$-0.25 \sqrt{f_{ci}'}$ [#B]	$-0.30 f_{ci}$' [#B1]	$-0.30 f_{ci}$' [#B1]
		-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	$-0.25 \sqrt{f_{ci}'}$ [#B]	k_σ . $-0.25 \sqrt{f_{ci}'}$ [#B]	$-0.25 \sqrt{f_{ci}'}$ [#B]	k_σ . $-0.25 \sqrt{f_{ci}'}$ [#B]	$-0.50 \sqrt{f_{ci}'}$ [#B2]	k_σ . $-0.50 \sqrt{f_{ci}'}$ [#B2]
		-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-2.2 N/mm2	-2.2 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	No Rebar	No Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	$0.60 f_c$' [#C]	$0.60 f_c$' [#C]	$0.60 f_c$' [#C]	$0.60 f_c$' [#C]	$0.60 f_c$' [#C]	$0.60 f_c$' [#C]
		30.0 N/mm2	30.0 N/mm2	30.0 N/mm2	30.0 N/mm2	30.0 N/mm2	30.0 N/mm2
	Flat Slab (FTW-FS-DS)	$0.60 f_c$' [#C]	$0.60 f_c$' [#C]	$0.60 f_c$' [#C]	$0.60 f_c$' [#C]	$0.60 f_c$' [#C]	$0.60 f_c$' [#C]
		30.0 N/mm2	30.0 N/mm2	30.0 N/mm2	30.0 N/mm2	30.0 N/mm2	30.0 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	$-0.62 \sqrt{f_c'}$ [#D1]	$-0.62 \sqrt{f_c'}$ [#D1]	$-1.00 \sqrt{f_c'}$ [#D1]	$-1.00 \sqrt{f_c'}$ [#D1]	$-0.30 f_c$' [#D1]	$-0.30 f_c$' [#D1]
		-4.4 N/mm2	-4.4 N/mm2	-7.1 N/mm2	-7.1 N/mm2	-15.0 N/mm2	-15.0 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	k_σ . $-0.50 \sqrt{f_c'}$ [#D2]	$-0.50 \sqrt{f_c'}$ [#D2]	k_σ . $-0.50 \sqrt{f_c'}$ [#D2]	$-0.50 \sqrt{f_c'}$ [#D2]	k_σ . $-0.50 \sqrt{f_c'}$ [#D2]	$-0.50 \sqrt{f_c'}$ [#D2]
		-3.5 N/mm2	-3.5 N/mm2	-3.5 N/mm2	-3.5 N/mm2	-3.5 N/mm2	-3.5 N/mm2
		With Rebar	With Rebar	With Rebar	With Rebar	With Rebar	With Rebar

#A: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.3.1 ACI318.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.3.2 ACI318.
#B1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to cl.24.5.3.2.1 ACI318.
#C: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.4.1 ACI318.
#D1: Note beam, one-way slab or two-way slab option to cl.24.5.2.1 ACI318 and analogous to cl.4.3.4.3 BS8110.
#D2: Note flat slab option to cl.24.5.2.1 ACI318.

Post-Tensioned Member (Bonded Tendons) Permissible Stress BS8110 (TR.43), ACI318, AS3600, EC2 (TR.43-2)			65%FTW-FS-DS	C50/60
Characterictic Strength of Concrete		**Cube**	**Cylinder**	
Characteristic strength of concrete (PT beam and slab), f_{cu} / f_c'		**60**	**50**	N/mm^2
Characteristic strength of concrete at transfer (PT beam and slab), f_{ci} / f_{ci}'		**25**	**20**	N/mm^2
Incorporation of CSTW-FS-DS Approach Within a FTW-FS-DS Approach	**%M_{HOG}**	**%I**	**%f_{min}**	**[1.7%M_{HOG}]: %I: %f_{min}**
ks = 65%MHOG | 0.5I | 1.3fmin [FTW-FS-DS] [BS8110 TR.43, ACI318, EC2 TR	**65%**	**0.5**	**1.3**	**1.00**
ks = 65%MHOG | 0.5I | 1.0fmin [FTW-FS-DS] [AS3600]	**65%**	**0.5**	**1.0**	**0.77**

Permissible Stress [N/mm^2] [AS3600]							
		Serviceability Class U Uncracked		**Serviceability Class T Transition**		**Serviceability Class C Cracked**	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B**	**-0.30 f_{ci}' #B1**	**-0.30 f_{ci}' #B1**
		-1.1 N/mm2	-1.1 N/mm2	-2.7 N/mm2	-2.7 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.60 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B2**	**k_σ . -0.60 $\sqrt{f_{ci}}$' #B2**
		-1.1 N/mm2	-0.9 N/mm2	-2.7 N/mm2	-2.1 N/mm2	-2.7 N/mm2	-2.1 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**
		25.0 N/mm2	25.0 N/mm2	25.0 N/mm2	25.0 N/mm2	25.0 N/mm2	25.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**
		25.0 N/mm2	25.0 N/mm2	25.0 N/mm2	25.0 N/mm2	25.0 N/mm2	25.0 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.25 $\sqrt{f_c}$' #D**	**-0.25 $\sqrt{f_c}$' #D**	**-0.60 $\sqrt{f_c}$' #D**	**-0.60 $\sqrt{f_c}$' #D**	**-0.30 f_c' #D1**	**-0.30 f_c' #D1**
		-1.8 N/mm2	-1.8 N/mm2	-4.2 N/mm2	-4.2 N/mm2	-15.0 N/mm2	-15.0 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . -0.25 $\sqrt{f_c}$' #D**	**-0.25 $\sqrt{f_c}$' #D**	**k_σ . -0.60 $\sqrt{f_c}$' #D**	**-0.60 $\sqrt{f_c}$' #D**	**k_σ . -0.60 $\sqrt{f_c}$' #D2**	**-0.60 $\sqrt{f_c}$' #D2**
		-1.4 N/mm2	-1.8 N/mm2	-3.3 N/mm2	-4.2 N/mm2	-3.3 N/mm2	-4.2 N/mm2
		With Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar

#A: Note beam, one-way slab, two-way slab or flat slab option to cl.8.1.6.2 AS3600.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.8.6.2 and cl.9.4.2 AS3600.
#B1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to cl.9.4.2 AS3600.
#C: Note beam, one-way slab, two-way slab or flat slab option to cl.8.1.6.2 AS3600.
#D: Note beam, one-way slab, two-way slab or flat slab option to cl.8.6.2 and cl.9.4.2 AS3600.
#D1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.4.3 BS8110.
#D2: Note flat slab option to cl.9.4.2 AS3600 as an alternative to cl.6.9.5.3 AS3600.

Permissible Stress [N/mm^2] [EC2 and TR.43-2]							
		Serviceability Class U Uncracked		**Serviceability Class T Transition**		**Serviceability Class C Cracked**	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.30 f_{ci}' #A2**	**0.40 f_{ci}' #A2**	**0.30 f_{ci}' #A2**	**0.40 f_{ci}' #A2**	**0.30 f_{ci}' #A2**	**0.40 f_{ci}' #A2**
		6.0 N/mm2	8.0 N/mm2	6.0 N/mm2	8.0 N/mm2	6.0 N/mm2	8.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.30 f_{ci}' #B1**	**-0.30 f_{ci}' #B1**
		-1.5 N/mm2	-1.5 N/mm2	-1.5 N/mm2	-1.5 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-0.09 f_{ci}'$^{2/3}$ #B2**	**k_σ . -0.09 f_{ci}'$^{2/3}$ #B2**	**-0.09 f_{ci}'$^{2/3}$ #B2**	**k_σ . -0.09 f_{ci}'$^{2/3}$ #B2**	**-0.27 f_{ci}'$^{2/3}$ #B2**	**k_σ . -0.27 f_{ci}'$^{2/3}$ #B2**
		-0.7 N/mm2	-0.7 N/mm2	-0.7 N/mm2	-0.7 N/mm2	-2.0 N/mm2	-2.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**
		30.0 N/mm2	30.0 N/mm2	30.0 N/mm2	30.0 N/mm2	30.0 N/mm2	30.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.40 f_c' #C2**	**0.30 f_c' #C2**	**0.40 f_c' #C2**	**0.30 f_c' #C2**	**0.40 f_c' #C2**	**0.30 f_c' #C2**
		20.0 N/mm2	15.0 N/mm2	20.0 N/mm2	15.0 N/mm2	20.0 N/mm2	15.0 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.21 f_c'$^{2/3}$ #D1**	**-0.21 f_c'$^{2/3}$ #D1**	**-0.21 f_c'$^{2/3}$ #D1**	**-0.21 f_c'$^{2/3}$ #D1**	**-<.....> #D2**	**-<.....> #D2**
		-2.9 N/mm2	-2.9 N/mm2	-2.9 N/mm2	-2.9 N/mm2	-6.8 N/mm2	-6.8 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . -0.09 f_c'$^{2/3}$ #D3**	**-0.09 f_c'$^{2/3}$ #D3**	**k_σ . -0.09 f_c'$^{2/3}$ #D3**	**-0.09 f_c'$^{2/3}$ #D3**	**k_σ . -0.27 f_c'$^{2/3}$ #D3**	**-0.27 f_c'$^{2/3}$ #D3**
		-1.2 N/mm2	-1.2 N/mm2	-1.2 N/mm2	-1.2 N/mm2	-3.7 N/mm2	-3.7 N/mm2
		With Rebar	No Rebar	With Rebar	No Rebar	With Rebar	No Rebar

#A1: Note beam, one-way slab or two-way slab option to cl.5.8.2 TR.43-2.
#A2: Note flat slab option to T.4 TR.43-2 and cl.5.8.2 TR.43-2.
#B1: Note beam, one-way slab or two-way slab option to cl.5.8.2 TR.43-2 and analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to T.4 TR.43-2 and cl.5.8.2 TR.43-2.
#C1: Note beam, one-way slab or two-way slab option to cl.5.10.2.2 EC2.
#C2: Note flat slab option to T.4 TR.43-2.
#D1: Note beam, one-way slab or two-way slab option analogous to cl.5.8.2 TR.43-2.
#D2: Note beam, one-way slab or two-way slab option to cl.5.8.1 TR.43-2. Note -<.....> = MAX {-0.30f_c', (-0.40f_c'$^{2/3}$ to -0.50f_c'$^{2/3}$)-4N/mm^2/1.0%} as the code allows for an increase in the tensile stress limit from 1% of longitudinal steel (untensioned reinforcement) onwards (-4N/mm^2 for every 1% of longitudinal steel (untensioned reinforcement), increasing proportionally, up to the specified upper limit of -0.30f_c'). Note crack width @ 0.20mm and %rebar **0.15%**
#D3: Note flat slab option to T.4 TR.43-2.

Post-Tensioned Member (Bonded Tendons) Permissible Stress BS8110 (TR.43), ACI318, AS3600, EC2 (TR.43-2)			70%FTW-FS-DS	C28/35
Characterictic Strength of Concrete		**Cube**	**Cylinder**	
Characteristic strength of concrete (PT beam and slab), f_{cu} / f_c'		**35**	**28**	N/mm^2
Characteristic strength of concrete at transfer (PT beam and slab), f_{ci} / f_{ci}'		**25**	**20**	N/mm^2
Incorporation of CSTW-FS-DS Approach Within a FTW-FS-DS Approach	**%M_{HOG}**	**%I**	**%f_{min}**	**[1.7 %M_{HOG}]. %I. %f_{min}**
ks = 70%MHOG | 0.5I | 1.3fmin [FTW-FS-DS] [BS8110 TR.43, ACI318, EC2 TR	**70%**	**0.5**	**1.3**	**0.93**
ks = 70%MHOG | 0.5I | 1.0fmin [FTW-FS-DS] [AS3600]	**70%**	**0.5**	**1.0**	**0.71**

Permissible Stress [N/mm^2] [BS8110, TR.43]							
		Serviceability Class 1 **No Flexural Tensile Stresses**		**Serviceability Class 2** **Flexural Tensile Stresses, Uncracked (No Visible Cracking)**		**Serviceability Class 3** **Flexural Tensile Stresses, Cracked**	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**
		12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2
	Flat Slab (FTW-FS-DS)	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**
		6.0 N/mm2	8.3 N/mm2	6.0 N/mm2	8.3 N/mm2	6.0 N/mm2	8.3 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-1.0 #B**	**-1.0 #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**-0.25 f_{ci} #B1**	**-0.25 f_{ci} #B1**
		-1.0 N/mm2	-1.0 N/mm2	-1.8 N/mm2	-1.8 N/mm2	-6.3 N/mm2	-6.3 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-1.0 #B**	**k_σ . -1.0 #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**k_σ . -0.36 $\sqrt{f_{ci}}$ #B**	**-0.45 $\sqrt{f_{ci}}$ #B2**	**k_σ . -0.45 $\sqrt{f_{ci}}$ #B2**
		-1.0 N/mm2	-0.9 N/mm2	-1.8 N/mm2	-1.7 N/mm2	-2.3 N/mm2	-2.1 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	No Rebar	No Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**
		11.6 N/mm2	14.0 N/mm2	11.6 N/mm2	14.0 N/mm2	11.6 N/mm2	14.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**
		11.6 N/mm2	8.4 N/mm2	11.6 N/mm2	8.4 N/mm2	11.6 N/mm2	8.4 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.0 #D**	**0.0 #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**-<.....> #D1**	**-<.....> #D1**
		0.0 N/mm2	0.0 N/mm2	-2.1 N/mm2	-2.1 N/mm2	-3.4 N/mm2	-3.4 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . 0.0 #D**	**0.0 #D**	**k_σ . -0.36 $\sqrt{f_{cu}}$ #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**k_σ . -0.45 $\sqrt{f_{cu}}$ #D2**	**-0.45 $\sqrt{f_{cu}}$ #D2**
		0.0 N/mm2	0.0 N/mm2	-2.0 N/mm2	-2.1 N/mm2	-2.5 N/mm2	-2.7 N/mm2
		With Rebar	No Rebar	With Rebar	No Rebar	With Rebar	No Rebar

#A1: Note beam, one-way slab or two-way slab option to cl.4.3.5.1 BS8110.
#A2: Note flat slab option to T.2 TR.43 and cl.6.10.2 TR.43.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.4.3.5.2 BS8110.
#B1: Note beam, one-way slab or two-way slab option to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to T.2 TR.43 and cl.6.10.2 TR.43.
#C1: Note beam, one-way slab or two-way slab option to cl.4.3.4.2 BS8110.
#C2: Note flat slab option to T.2 TR.43.
#D: Note beam, one-way slab, two-way slab or flat slab option to cl.4.3.4.3 BS8110.
#D1: Note beam, one-way slab or two-way slab option to cl.4.3.4.3 BS8110. Note -<.....> = MAX {-0.25f_{cu}, (0.7-1.1).(-0.58$\sqrt{f_{cu}}$ to -0.82$\sqrt{f_{cu}}$)-4N/mm^2/1.0%} as the code allows for an increase in the tensile stress limit from 1% of longitudinal steel (untensioned reinforcement) onwards (-4N/mm^2 for every 1% of longitudinal steel (untensioned reinforcement), increasing proportionally, up to the specified upper limit of -0.25f_{cu}). Note crack width @ 0.20mm, %rebar **0.15%** and overall depth, h **600** mm
#D2: Note flat slab option to T.2 TR.43.

Permissible Stress [N/mm^2] [ACI318]							
		Serviceability Class U **Uncracked**		**Serviceability Class T** **Transition**		**Serviceability Class C** **Cracked**	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**
		12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**
		12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.30 f_{ci}' #B1**	**-0.30 f_{ci}' #B1**
		-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.50 $\sqrt{f_{ci}}$' #B2**	**k_σ . -0.50 $\sqrt{f_{ci}}$' #B2**
		-1.1 N/mm2	-1.0 N/mm2	-1.1 N/mm2	-1.0 N/mm2	-2.2 N/mm2	-2.1 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	No Rebar	No Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**
		17.0 N/mm2	17.0 N/mm2	17.0 N/mm2	17.0 N/mm2	17.0 N/mm2	17.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**
		17.0 N/mm2	17.0 N/mm2	17.0 N/mm2	17.0 N/mm2	17.0 N/mm2	17.0 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.62 $\sqrt{f_c}$' #D1**	**-0.62 $\sqrt{f_c}$' #D1**	**-1.00 $\sqrt{f_c}$' #D1**	**-1.00 $\sqrt{f_c}$' #D1**	**-0.30 f_c' #D1**	**-0.30 f_c' #D1**
		-3.3 N/mm2	-3.3 N/mm2	-5.3 N/mm2	-5.3 N/mm2	-8.5 N/mm2	-8.5 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**
		-2.5 N/mm2	-2.7 N/mm2	-2.5 N/mm2	-2.7 N/mm2	-2.5 N/mm2	-2.7 N/mm2
		With Rebar	With Rebar	With Rebar	With Rebar	With Rebar	With Rebar

#A: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.3.1 ACI318.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.3.2 ACI318.
#B1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to cl.24.5.3.2.1 ACI318.
#C: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.4.1 ACI318.
#D1: Note beam, one-way slab or two-way slab option to cl.24.5.2.1 ACI318 and analogous to cl.4.3.4.3 BS8110.
#D2: Note flat slab option to cl.24.5.2.1 ACI318.

Post-Tensioned Member (Bonded Tendons) Permissible Stress BS8110 (TR.43), ACI318, AS3600, EC2 (TR.43-2)			70%FTW-FS-DS	C28/35
Characterictic Strength of Concrete		**Cube**	**Cylinder**	
Characteristic strength of concrete (PT beam and slab), f_{cu} / f_c'		**35**	**28**	N/mm^2
Characteristic strength of concrete at transfer (PT beam and slab), f_{ci} / f_{ci}'		**25**	**20**	N/mm^2
Incorporation of CSTW-FS-DS Approach Within a FTW-FS-DS Approach	**$\%M_{HOG}$**	**%I**	**$\%f_{min}$**	**[1.7 %MHOG]: %I: %fmi**
ks = 70%MHOG | 0.5I | 1.3fmin [FTW-FS-DS] [BS8110 TR.43, ACI318, EC2 TR	**70%**	**0.5**	**1.3**	**0.93**
ks = 70%MHOG | 0.5I | 1.0fmin [FTW-FS-DS] [AS3600]	**70%**	**0.5**	**1.0**	**0.71**

Permissible Stress [N/mm^2] [AS3600]							
		Serviceability Class U Uncracked		Serviceability Class T Transition		Serviceability Class C Cracked	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B**	**-0.30 f_{ci}' #B1**	**-0.30 f_{ci}' #B1**
		-1.1 N/mm2	-1.1 N/mm2	-2.7 N/mm2	-2.7 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.60 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B2**	**k_σ . -0.60 $\sqrt{f_{ci}}$' #B2**
		-1.1 N/mm2	-0.8 N/mm2	-2.7 N/mm2	-1.9 N/mm2	-2.7 N/mm2	-1.9 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**
		14.2 N/mm2	14.2 N/mm2	14.2 N/mm2	14.2 N/mm2	14.2 N/mm2	14.2 N/mm2
	Flat Slab (FTW-FS-DS)	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**
		14.2 N/mm2	14.2 N/mm2	14.2 N/mm2	14.2 N/mm2	14.2 N/mm2	14.2 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.25 $\sqrt{f_c}$' #D**	**-0.25 $\sqrt{f_c}$' #D**	**-0.60 $\sqrt{f_c}$' #D**	**-0.60 $\sqrt{f_c}$' #D**	**-0.30 f_c' #D1**	**-0.30 f_c' #D1**
		-1.3 N/mm2	-1.3 N/mm2	-3.2 N/mm2	-3.2 N/mm2	-8.5 N/mm2	-8.5 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . -0.25 $\sqrt{f_c}$' #D**	**-0.25 $\sqrt{f_c}$' #D**	**k_σ . -0.60 $\sqrt{f_c}$' #D**	**-0.60 $\sqrt{f_c}$' #D**	**k_σ . -0.60 $\sqrt{f_c}$' #D2**	**-0.60 $\sqrt{f_c}$' #D2**
		-1.0 N/mm2	-1.3 N/mm2	-2.3 N/mm2	-3.2 N/mm2	-2.3 N/mm2	-3.2 N/mm2
		With Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar

#A: Note beam, one-way slab, two-way slab or flat slab option to cl.8.1.6.2 AS3600.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.8.6.2 and cl.9.4.2 AS3600.
#B1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to cl.9.4.2 AS3600.
#C: Note beam, one-way slab, two-way slab or flat slab option to cl.8.1.6.2 AS3600.
#D: Note beam, one-way slab, two-way slab or flat slab option to cl.8.6.2 and cl.9.4.2 AS3600.
#D1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.4.3 BS8110.
#D2: Note flat slab option to cl.9.4.2 AS3600 as an alternative to cl.6.9.5.3 AS3600.

Permissible Stress [N/mm^2] [EC2 and TR.43-2]							
		Serviceability Class U Uncracked		Serviceability Class T Transition		Serviceability Class C Cracked	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.30 f_{ci}' #A2**	**0.40 f_{ci}' #A2**	**0.30 f_{ci}' #A2**	**0.40 f_{ci}' #A2**	**0.30 f_{ci}' #A2**	**0.40 f_{ci}' #A2**
		6.0 N/mm2	8.0 N/mm2	6.0 N/mm2	8.0 N/mm2	6.0 N/mm2	8.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.30 f_{ci}' #B1**	**-0.30 f_{ci}' #B1**
		-1.5 N/mm2	-1.5 N/mm2	-1.5 N/mm2	-1.5 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-0.09 f_{ci}'$^{2/3}$ #B2**	**k_σ . -0.09 f_{ci}'$^{2/3}$ #B2**	**-0.09 f_{ci}'$^{2/3}$ #B2**	**k_σ . -0.09 f_{ci}'$^{2/3}$ #B2**	**-0.27 f_{ci}'$^{2/3}$ #B2**	**k_σ . -0.27 f_{ci}'$^{2/3}$ #B2**
		-0.7 N/mm2	-0.6 N/mm2	-0.7 N/mm2	-0.6 N/mm2	-2.0 N/mm2	-1.8 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**
		17.0 N/mm2	17.0 N/mm2	17.0 N/mm2	17.0 N/mm2	17.0 N/mm2	17.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.40 f_c' #C2**	**0.30 f_c' #C2**	**0.40 f_c' #C2**	**0.30 f_c' #C2**	**0.40 f_c' #C2**	**0.30 f_c' #C2**
		11.3 N/mm2	8.5 N/mm2	11.3 N/mm2	8.5 N/mm2	11.3 N/mm2	8.5 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.21 f_c'$^{2/3}$ #D1**	**-0.21 f_c'$^{2/3}$ #D1**	**-0.21 f_c'$^{2/3}$ #D1**	**-0.21 f_c'$^{2/3}$ #D1**	**-<.....> #D2**	**-<.....> #D2**
		-2.0 N/mm2	-2.0 N/mm2	-2.0 N/mm2	-2.0 N/mm2	-4.6 N/mm2	-4.6 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . -0.09 f_c'$^{2/3}$ #D3**	**-0.09 f_c'$^{2/3}$ #D3**	**k_σ . -0.09 f_c'$^{2/3}$ #D3**	**-0.09 f_c'$^{2/3}$ #D3**	**k_σ . -0.27 f_c'$^{2/3}$ #D3**	**-0.27 f_c'$^{2/3}$ #D3**
		-0.8 N/mm2	-0.8 N/mm2	-0.8 N/mm2	-0.8 N/mm2	-2.3 N/mm2	-2.5 N/mm2
		With Rebar	No Rebar	With Rebar	No Rebar	With Rebar	No Rebar

#A1: Note beam, one-way slab or two-way slab option to cl.5.8.2 TR.43-2.
#A2: Note flat slab option to T.4 TR.43-2 and cl.5.8.2 TR.43-2.
#B1: Note beam, one-way slab or two-way slab option to cl.5.8.2 TR.43-2 and analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to T.4 TR.43-2 and cl.5.8.2 TR.43-2.
#C1: Note beam, one-way slab or two-way slab option to cl.5.10.2.2 EC2.
#C2: Note flat slab option to T.4 TR.43-2.
#D1: Note beam, one-way slab or two-way slab option analogous to cl.5.8.2 TR.43-2.
#D2: Note beam, one-way slab or two-way slab option to cl.5.8.1 TR.43-2. Note -<.....> = MAX {-0.30f_c', (-0.40f_c'$^{2/3}$ to -0.50f_c'$^{2/3}$)-4N/mm^2/1.0%} as the code allows for an increase in the tensile stress limit from 1% of longitudinal steel (untensioned reinforcement) onwards (-4N/mm^2 for every 1% of longitudinal steel (untensioned reinforcement), increasing proportionally, up to the specified upper limit of -0.30f_c'). Note crack width @ 0.20mm and %rebar **0.15%**
#D3: Note flat slab option to T.4 TR.43-2.

Post-Tensioned Member (Bonded Tendons) Permissible Stress BS8110 (TR.43), ACI318, AS3600, EC2 (TR.43-2)			70%FTW-FS-DS	C32/40
Characterictic Strength of Concrete		**Cube**	**Cylinder**	
Characteristic strength of concrete (PT beam and slab), f_{cu} / f_c'		**40**	**32**	N/mm^2
Characteristic strength of concrete at transfer (PT beam and slab), f_{ci} / f_{ci}'		**25**	**20**	N/mm^2
Incorporation of CSTW-FS-DS Approach Within a FTW-FS-DS Approach	**%M_{HOG}**	**%I**	**%f_{min}**	**[1.7 %M_{HOG}]. %I. %f_{min}**
ks = 70%MHOG | 0.5I | 1.3fmin [FTW-FS-DS] [BS8110 TR.43, ACI318, EC2 TR	**70%**	**0.5**	**1.3**	**0.93**
ks = 70%MHOG | 0.5I | 1.0fmin [FTW-FS-DS] [AS3600]	**70%**	**0.5**	**1.0**	**0.71**

Permissible Stress [N/mm^2] [BS8110, TR.43]							
		Serviceability Class 1 **No Flexural Tensile Stresses**		**Serviceability Class 2** **Flexural Tensile Stresses, Uncracked (No Visible Cracking)**		**Serviceability Class 3** **Flexural Tensile Stresses, Cracked**	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**
		12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2
	Flat Slab (FTW-FS-DS)	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**
		6.0 N/mm2	8.3 N/mm2	6.0 N/mm2	8.3 N/mm2	6.0 N/mm2	8.3 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-1.0 #B**	**-1.0 #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**-0.25 f_{ci} #B1**	**-0.25 f_{ci} #B1**
		-1.0 N/mm2	-1.0 N/mm2	-1.8 N/mm2	-1.8 N/mm2	-6.3 N/mm2	-6.3 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-1.0 #B**	**k_σ . -1.0 #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**k_σ . -0.36 $\sqrt{f_{ci}}$ #B**	**-0.45 $\sqrt{f_{ci}}$ #B2**	**k_σ . -0.45 $\sqrt{f_{ci}}$ #B2**
		-1.0 N/mm2	-0.9 N/mm2	-1.8 N/mm2	-1.7 N/mm2	-2.3 N/mm2	-2.1 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	No Rebar	No Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**
		13.2 N/mm2	16.0 N/mm2	13.2 N/mm2	16.0 N/mm2	13.2 N/mm2	16.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**
		13.2 N/mm2	9.6 N/mm2	13.2 N/mm2	9.6 N/mm2	13.2 N/mm2	9.6 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.0 #D**	**0.0 #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**-<.....> #D1**	**-<.....> #D1**
		0.0 N/mm2	0.0 N/mm2	-2.3 N/mm2	-2.3 N/mm2	-4.5 N/mm2	-4.5 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . 0.0 #D**	**0.0 #D**	**k_σ . -0.36 $\sqrt{f_{cu}}$ #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**k_σ . -0.45 $\sqrt{f_{cu}}$ #D2**	**-0.45 $\sqrt{f_{cu}}$ #D2**
		0.0 N/mm2	0.0 N/mm2	-2.1 N/mm2	-2.3 N/mm2	-2.6 N/mm2	-2.8 N/mm2
		With Rebar	No Rebar	With Rebar	No Rebar	With Rebar	No Rebar

#A1: Note beam, one-way slab or two-way slab option to cl.4.3.5.1 BS8110.
#A2: Note flat slab option to T.2 TR.43 and cl.6.10.2 TR.43.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.4.3.5.2 BS8110.
#B1: Note beam, one-way slab or two-way slab option to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to T.2 TR.43 and cl.6.10.2 TR.43.
#C1: Note beam, one-way slab or two-way slab option to cl.4.3.4.2 BS8110.
#C2: Note flat slab option to T.2 TR.43.
#D: Note beam, one-way slab, two-way slab or flat slab option to cl.4.3.4.3 BS8110.
#D1: Note beam, one-way slab or two-way slab option to cl.4.3.4.3 BS8110. Note -<.....> = MAX {-0.25f_{cu}, (0.7-1.1).(-0.58$\sqrt{f_{cu}}$ to -0.82$\sqrt{f_{cu}}$)-4N/mm^2/1.0%} as the code allows for an increase in the tensile stress limit from 1% of longitudinal steel (untensioned reinforcement) onwards (-4N/mm^2 for every 1% of longitudinal steel (untensioned reinforcement), increasing proportionally, up to the specified upper limit of -0.25f_{cu}). Note crack width @ 0.20mm, %rebar **0.15%** and overall depth, h **600** mm
#D2: Note flat slab option to T.2 TR.43.

Permissible Stress [N/mm^2] [ACI318]							
		Serviceability Class U **Uncracked**		**Serviceability Class T** **Transition**		**Serviceability Class C** **Cracked**	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**
		12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**
		12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.30 f_{ci}' #B1**	**-0.30 f_{ci}' #B1**
		-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.50 $\sqrt{f_{ci}}$' #B2**	**k_σ . -0.50 $\sqrt{f_{ci}}$' #B2**
		-1.1 N/mm2	-1.0 N/mm2	-1.1 N/mm2	-1.0 N/mm2	-2.2 N/mm2	-2.1 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	No Rebar	No Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**
		19.0 N/mm2	19.0 N/mm2	19.0 N/mm2	19.0 N/mm2	19.0 N/mm2	19.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**
		19.0 N/mm2	19.0 N/mm2	19.0 N/mm2	19.0 N/mm2	19.0 N/mm2	19.0 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.62 $\sqrt{f_c}$' #D1**	**-0.62 $\sqrt{f_c}$' #D1**	**-1.00 $\sqrt{f_c}$' #D1**	**-1.00 $\sqrt{f_c}$' #D1**	**-0.30 f_c' #D1**	**-0.30 f_c' #D1**
		-3.5 N/mm2	-3.5 N/mm2	-5.6 N/mm2	-5.6 N/mm2	-9.5 N/mm2	-9.5 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**
		-2.6 N/mm2	-2.8 N/mm2	-2.6 N/mm2	-2.8 N/mm2	-2.6 N/mm2	-2.8 N/mm2
		With Rebar	With Rebar	With Rebar	With Rebar	With Rebar	With Rebar

#A: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.3.1 ACI318.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.3.2 ACI318.
#B1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to cl.24.5.3.2.1 ACI318.
#C: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.4.1 ACI318.
#D1: Note beam, one-way slab or two-way slab option to cl.24.5.2.1 ACI318 and analogous to cl.4.3.4.3 BS8110.
#D2: Note flat slab option to cl.24.5.2.1 ACI318.

Post-Tensioned Member (Bonded Tendons) Permissible Stress BS8110 (TR.43), ACI318, AS3600, EC2 (TR.43-2)		70%FTW-FS-DS	C32/40
Characterictic Strength of Concrete	**Cube**	**Cylinder**	
Characteristic strength of concrete (PT beam and slab), f_{cu} / f_c'	**40**	**32**	N/mm^2
Characteristic strength of concrete at transfer (PT beam and slab), f_{ci} / f_{ci}'	**25**	**20**	N/mm^2

Incorporation of CSTW-FS-DS Approach Within a FTW-FS-DS Approach	**$\%M_{HOG}$**	**%I**	**$\%f_{min}$**	**[1.] $\%M_{HOG}$]. %I. $\%f_{min}$**
ks = 70%MHOG | 0.5I | 1.3fmin [FTW-FS-DS] [BS8110 TR.43, ACI318, EC2 TR	**70%**	**0.5**	**1.3**	**0.93**
ks = 70%MHOG | 0.5I | 1.0fmin [FTW-FS-DS] [AS3600]	**70%**	**0.5**	**1.0**	**0.71**

Permissible Stress [N/mm^2] [AS3600]

		Serviceability Class U Uncracked		Serviceability Class T Transition		Serviceability Class C Cracked	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B**	**-0.30 f_{ci}' #B1**	**-0.30 f_{ci}' #B1**
		-1.1 N/mm2	-1.1 N/mm2	-2.7 N/mm2	-2.7 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.60 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B2**	**k_σ . -0.60 $\sqrt{f_{ci}}$' #B2**
		-1.1 N/mm2	-0.8 N/mm2	-2.7 N/mm2	-1.9 N/mm2	-2.7 N/mm2	-1.9 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**
		15.8 N/mm2	15.8 N/mm2	15.8 N/mm2	15.8 N/mm2	15.8 N/mm2	15.8 N/mm2
	Flat Slab (FTW-FS-DS)	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**
		15.8 N/mm2	15.8 N/mm2	15.8 N/mm2	15.8 N/mm2	15.8 N/mm2	15.8 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.25 $\sqrt{f_c}$' #D**	**-0.25 $\sqrt{f_c}$' #D**	**-0.60 $\sqrt{f_c}$' #D**	**-0.60 $\sqrt{f_c}$' #D**	**-0.30 f_c' #D1**	**-0.30 f_c' #D1**
		-1.4 N/mm2	-1.4 N/mm2	-3.4 N/mm2	-3.4 N/mm2	-9.5 N/mm2	-9.5 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . -0.25 $\sqrt{f_c}$' #D**	**-0.25 $\sqrt{f_c}$' #D**	**k_σ . -0.60 $\sqrt{f_c}$' #D**	**-0.60 $\sqrt{f_c}$' #D**	**k_σ . -0.60 $\sqrt{f_c}$' #D2**	**-0.60 $\sqrt{f_c}$' #D2**
		-1.0 N/mm2	-1.4 N/mm2	-2.4 N/mm2	-3.4 N/mm2	-2.4 N/mm2	-3.4 N/mm2
		With Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar

#A: Note beam, one-way slab, two-way slab or flat slab option to cl.8.1.6.2 AS3600.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.8.6.2 and cl.9.4.2 AS3600.
#B1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to cl.9.4.2 AS3600.
#C: Note beam, one-way slab, two-way slab or flat slab option to cl.8.1.6.2 AS3600.
#D: Note beam, one-way slab, two-way slab or flat slab option to cl.8.6.2 and cl.9.4.2 AS3600.
#D1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.4.3 BS8110.
#D2: Note flat slab option to cl.9.4.2 AS3600 as an alternative to cl.6.9.5.3 AS3600.

Permissible Stress [N/mm^2] [EC2 and TR.43-2]

		Serviceability Class U Uncracked		Serviceability Class T Transition		Serviceability Class C Cracked	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.30 f_{ci}' #A2**	**0.40 f_{ci}' #A2**	**0.30 f_{ci}' #A2**	**0.40 f_{ci}' #A2**	**0.30 f_{ci}' #A2**	**0.40 f_{ci}' #A2**
		6.0 N/mm2	8.0 N/mm2	6.0 N/mm2	8.0 N/mm2	6.0 N/mm2	8.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.30 f_{ci}' #B1**	**-0.30 f_{ci}' #B1**
		-1.5 N/mm2	-1.5 N/mm2	-1.5 N/mm2	-1.5 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-0.09 f_{ci}'$^{2/3}$ #B2**	**k_σ . -0.09 f_{ci}'$^{2/3}$ #B2**	**-0.09 f_{ci}'$^{2/3}$ #B2**	**k_σ . -0.09 f_{ci}'$^{2/3}$ #B2**	**-0.27 f_{ci}'$^{2/3}$ #B2**	**k_σ . -0.27 f_{ci}'$^{2/3}$ #B2**
		-0.7 N/mm2	-0.6 N/mm2	-0.7 N/mm2	-0.6 N/mm2	-2.0 N/mm2	-1.8 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**
		19.0 N/mm2	19.0 N/mm2	19.0 N/mm2	19.0 N/mm2	19.0 N/mm2	19.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.40 f_c' #C2**	**0.30 f_c' #C2**	**0.40 f_c' #C2**	**0.30 f_c' #C2**	**0.40 f_c' #C2**	**0.30 f_c' #C2**
		12.7 N/mm2	9.5 N/mm2	12.7 N/mm2	9.5 N/mm2	12.7 N/mm2	9.5 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.21 f_c'$^{2/3}$ #D1**	**-0.21 f_c'$^{2/3}$ #D1**	**-0.21 f_c'$^{2/3}$ #D1**	**-0.21 f_c'$^{2/3}$ #D1**	**-<.....> #D2**	**-<.....> #D2**
		-2.1 N/mm2	-2.1 N/mm2	-2.1 N/mm2	-2.1 N/mm2	-5.0 N/mm2	-5.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . -0.09 f_c'$^{2/3}$ #D3**	**-0.09 f_c'$^{2/3}$ #D3**	**k_σ . -0.09 f_c'$^{2/3}$ #D3**	**-0.09 f_c'$^{2/3}$ #D3**	**k_σ . -0.27 f_c'$^{2/3}$ #D3**	**-0.27 f_c'$^{2/3}$ #D3**
		-0.8 N/mm2	-0.9 N/mm2	-0.8 N/mm2	-0.9 N/mm2	-2.5 N/mm2	-2.7 N/mm2
		With Rebar	No Rebar	With Rebar	No Rebar	With Rebar	No Rebar

#A1: Note beam, one-way slab or two-way slab option to cl.5.8.2 TR.43-2.
#A2: Note flat slab option to T.4 TR.43-2 and cl.5.8.2 TR.43-2.
#B1: Note beam, one-way slab or two-way slab option to cl.5.8.2 TR.43-2 and analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to T.4 TR.43-2 and cl.5.8.2 TR.43-2.
#C1: Note beam, one-way slab or two-way slab option to cl.5.10.2.2 EC2.
#C2: Note flat slab option to T.4 TR.43-2.
#D1: Note beam, one-way slab or two-way slab option analogous to cl.5.8.2 TR.43-2.
#D2: Note beam, one-way slab or two-way slab option to cl.5.8.1 TR.43-2. Note -<.....> = MAX {-0.30f_c', (-0.40f_c'$^{2/3}$ to -0.50f_c'$^{2/3}$)-4N/mm^2/1.0%} as the code allows for an increase in the tensile stress limit from 1% of longitudinal steel (untensioned reinforcement) onwards (-4N/mm^2 for every 1% of longitudinal steel (untensioned reinforcement), increasing proportionally, up to the specified upper limit of -0.30f_c'). Note crack width @ 0.20mm and %rebar **0.15%**
#D3: Note flat slab option to T.4 TR.43-2.

Post-Tensioned Member (Bonded Tendons) Permissible Stress BS8110 (TR.43), ACI318, AS3600, EC2 (TR.43-2)			70%FTW-FS-DS	C35/45
Characterictic Strength of Concrete		**Cube**	**Cylinder**	
Characteristic strength of concrete (PT beam and slab), f_{cu} / f_c'		**45**	**35**	N/mm^2
Characteristic strength of concrete at transfer (PT beam and slab), f_{ci} / f_{ci}'		**25**	**20**	N/mm^2
Incorporation of CSTW-FS-DS Approach Within a FTW-FS-DS Approach	**%M_{HOG}**	**%I**	**%f_{min}**	**[1.7 %M_{HOG}]. %I. %f_{min}**
ks = 70%MHOG | 0.5I | 1.3fmin [FTW-FS-DS] [BS8110 TR.43, ACI318, EC2 TR	**70%**	**0.5**	**1.3**	**0.93**
ks = 70%MHOG | 0.5I | 1.0fmin [FTW-FS-DS] [AS3600]	**70%**	**0.5**	**1.0**	**0.71**

Permissible Stress [N/mm^2] [BS8110, TR.43]							
		Serviceability Class 1 **No Flexural Tensile Stresses**		**Serviceability Class 2** **Flexural Tensile Stresses, Uncracked (No Visible Cracking)**		**Serviceability Class 3** **Flexural Tensile Stresses, Cracked**	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**
		12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2
	Flat Slab (FTW-FS-DS)	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**
		6.0 N/mm2	8.3 N/mm2	6.0 N/mm2	8.3 N/mm2	6.0 N/mm2	8.3 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-1.0 #B**	**-1.0 #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**-0.25 f_{ci} #B1**	**-0.25 f_{ci} #B1**
		-1.0 N/mm2	-1.0 N/mm2	-1.8 N/mm2	-1.8 N/mm2	-6.3 N/mm2	-6.3 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-1.0 #B**	**k_σ . -1.0 #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**k_σ . -0.36 $\sqrt{f_{ci}}$ #B**	**-0.45 $\sqrt{f_{ci}}$ #B2**	**k_σ . -0.45 $\sqrt{f_{ci}}$ #B2**
		-1.0 N/mm2	-0.9 N/mm2	-1.8 N/mm2	-1.7 N/mm2	-2.3 N/mm2	-2.1 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	No Rebar	No Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**
		14.9 N/mm2	18.0 N/mm2	14.9 N/mm2	18.0 N/mm2	14.9 N/mm2	18.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**
		14.9 N/mm2	10.8 N/mm2	14.9 N/mm2	10.8 N/mm2	14.9 N/mm2	10.8 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.0 #D**	**0.0 #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**-<.....> #D1**	**-<.....> #D1**
		0.0 N/mm2	0.0 N/mm2	-2.4 N/mm2	-2.4 N/mm2	-4.5 N/mm2	-4.5 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . 0.0 #D**	**0.0 #D**	**k_σ . -0.36 $\sqrt{f_{cu}}$ #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**k_σ . -0.45 $\sqrt{f_{cu}}$ #D2**	**-0.45 $\sqrt{f_{cu}}$ #D2**
		0.0 N/mm2	0.0 N/mm2	-2.2 N/mm2	-2.4 N/mm2	-2.8 N/mm2	-3.0 N/mm2
		With Rebar	No Rebar	With Rebar	No Rebar	With Rebar	No Rebar

#A1: Note beam, one-way slab or two-way slab option to cl.4.3.5.1 BS8110.
#A2: Note flat slab option to T.2 TR.43 and cl.6.10.2 TR.43.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.4.3.5.2 BS8110.
#B1: Note beam, one-way slab or two-way slab option to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to T.2 TR.43 and cl.6.10.2 TR.43.
#C1: Note beam, one-way slab or two-way slab option to cl.4.3.4.2 BS8110.
#C2: Note flat slab option to T.2 TR.43.
#D: Note beam, one-way slab, two-way slab or flat slab option to cl.4.3.4.3 BS8110.
#D1: Note beam, one-way slab or two-way slab option to cl.4.3.4.3 BS8110. Note -<.....> = MAX {-0.25f_{cu}, (0.7-1.1).(-0.58$\sqrt{f_{cu}}$ to -0.82$\sqrt{f_{cu}}$)-4N/mm^2/1.0%} as the code allows for an increase in the tensile stress limit from 1% of longitudinal steel (untensioned reinforcement) onwards (-4N/mm^2 for every 1% of longitudinal steel (untensioned reinforcement), increasing proportionally, up to the specified upper limit of -0.25f_{cu}). Note crack width @ 0.20mm, %rebar **0.15%** and overall depth, h **600** mm
#D2: Note flat slab option to T.2 TR.43.

Permissible Stress [N/mm^2] [ACI318]							
		Serviceability Class U **Uncracked**		**Serviceability Class T** **Transition**		**Serviceability Class C** **Cracked**	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**
		12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**
		12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.30 f_{ci}' #B1**	**-0.30 f_{ci}' #B1**
		-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.50 $\sqrt{f_{ci}}$' #B2**	**k_σ . -0.50 $\sqrt{f_{ci}}$' #B2**
		-1.1 N/mm2	-1.0 N/mm2	-1.1 N/mm2	-1.0 N/mm2	-2.2 N/mm2	-2.1 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	No Rebar	No Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**
		21.0 N/mm2	21.0 N/mm2	21.0 N/mm2	21.0 N/mm2	21.0 N/mm2	21.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**
		21.0 N/mm2	21.0 N/mm2	21.0 N/mm2	21.0 N/mm2	21.0 N/mm2	21.0 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.62 $\sqrt{f_c}$' #D1**	**-0.62 $\sqrt{f_c}$' #D1**	**-1.00 $\sqrt{f_c}$' #D1**	**-1.00 $\sqrt{f_c}$' #D1**	**-0.30 f_c' #D1**	**-0.30 f_c' #D1**
		-3.7 N/mm2	-3.7 N/mm2	-5.9 N/mm2	-5.9 N/mm2	-10.5 N/mm2	-10.5 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**
		-2.7 N/mm2	-3.0 N/mm2	-2.7 N/mm2	-3.0 N/mm2	-2.7 N/mm2	-3.0 N/mm2
		With Rebar	With Rebar	With Rebar	With Rebar	With Rebar	With Rebar

#A: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.3.1 ACI318.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.3.2 ACI318.
#B1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to cl.24.5.3.2.1 ACI318.
#C: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.4.1 ACI318.
#D1: Note beam, one-way slab or two-way slab option to cl.24.5.2.1 ACI318 and analogous to cl.4.3.4.3 BS8110.
#D2: Note flat slab option to cl.24.5.2.1 ACI318.

Post-Tensioned Member (Bonded Tendons) Permissible Stress BS8110 (TR.43), ACI318, AS3600, EC2 (TR.43-2)			70%FTW-FS-DS	C35/45
Characterictic Strength of Concrete		**Cube**	**Cylinder**	
Characteristic strength of concrete (PT beam and slab), f_{cu} / f_c'		45	35	N/mm^2
Characteristic strength of concrete at transfer (PT beam and slab), f_{ci} / f_{ci}'		25	20	N/mm^2
Incorporation of CSTW-FS-DS Approach Within a FTW-FS-DS Approach	**$\%M_{HOG}$**	**%l**	**$\%f_{min}$**	**$[1/\%M_{HOG}].\%l.\%f_{mi}$**
ks = 70%MHOG | 0.5l | 1.3fmin [FTW-FS-DS] [BS8110 TR.43, ACI318, EC2 TR	70%	0.5	1.3	0.93
ks = 70%MHOG | 0.5l | 1.0fmin [FTW-FS-DS] [AS3600]	70%	0.5	1.0	0.71

Permissible Stress [N/mm^2] [AS3600]

		Serviceability Class U Uncracked		Serviceability Class T Transition		Serviceability Class C Cracked	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	$0.50 f_{ci}'$ #A	$0.50 f_{ci}'$ #A	$0.50 f_{ci}'$ #A	$0.50 f_{ci}'$ #A	$0.50 f_{ci}'$ #A	$0.50 f_{ci}'$ #A
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
	Flat Slab (FTW-FS-DS)	$0.50 f_{ci}'$ #A	$0.50 f_{ci}'$ #A	$0.50 f_{ci}'$ #A	$0.50 f_{ci}'$ #A	$0.50 f_{ci}'$ #A	$0.50 f_{ci}'$ #A
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	$-0.25 \sqrt{f_{ci}'}$ #B	$-0.25 \sqrt{f_{ci}'}$ #B	$-0.60 \sqrt{f_{ci}'}$ #B	$-0.60 \sqrt{f_{ci}'}$ #B	$-0.30 f_{ci}'$ #B1	$-0.30 f_{ci}'$ #B1
		-1.1 N/mm2	-1.1 N/mm2	-2.7 N/mm2	-2.7 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	$-0.25 \sqrt{f_{ci}'}$ #B	$k_\sigma . -0.25 \sqrt{f_{ci}'}$ #B	$-0.60 \sqrt{f_{ci}'}$ #B	$k_\sigma . -0.60 \sqrt{f_{ci}'}$ #B	$-0.60 \sqrt{f_{ci}'}$ #B2	$k_\sigma . -0.60 \sqrt{f_{ci}'}$ #B2
		-1.1 N/mm2	-0.8 N/mm2	-2.7 N/mm2	-1.9 N/mm2	-2.7 N/mm2	-1.9 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	$0.50 f_c'$ #C	$0.50 f_c'$ #C	$0.50 f_c'$ #C	$0.50 f_c'$ #C	$0.50 f_c'$ #C	$0.50 f_c'$ #C
		17.5 N/mm2	17.5 N/mm2	17.5 N/mm2	17.5 N/mm2	17.5 N/mm2	17.5 N/mm2
	Flat Slab (FTW-FS-DS)	$0.50 f_c'$ #C	$0.50 f_c'$ #C	$0.50 f_c'$ #C	$0.50 f_c'$ #C	$0.50 f_c'$ #C	$0.50 f_c'$ #C
		17.5 N/mm2	17.5 N/mm2	17.5 N/mm2	17.5 N/mm2	17.5 N/mm2	17.5 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	$-0.25 \sqrt{f_c'}$ #D	$-0.25 \sqrt{f_c'}$ #D	$-0.60 \sqrt{f_c'}$ #D	$-0.60 \sqrt{f_c'}$ #D	$-0.30 f_c'$ #D1	$-0.30 f_c'$ #D1
		-1.5 N/mm2	-1.5 N/mm2	-3.5 N/mm2	-3.5 N/mm2	-10.5 N/mm2	-10.5 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	$k_\sigma . -0.25 \sqrt{f_c'}$ #D	$-0.25 \sqrt{f_c'}$ #D	$k_\sigma . -0.60 \sqrt{f_c'}$ #D	$-0.60 \sqrt{f_c'}$ #D	$k_\sigma . -0.60 \sqrt{f_c'}$ #D2	$-0.60 \sqrt{f_c'}$ #D2
		-1.1 N/mm2	-1.5 N/mm2	-2.5 N/mm2	-3.5 N/mm2	-2.5 N/mm2	-3.5 N/mm2
		With Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar

#A: Note beam, one-way slab, two-way slab or flat slab option to cl.8.1.6.2 AS3600.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.8.6.2 and cl.9.4.2 AS3600.
#B1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to cl.9.4.2 AS3600.
#C: Note beam, one-way slab, two-way slab or flat slab option to cl.8.1.6.2 AS3600.
#D: Note beam, one-way slab, two-way slab or flat slab option to cl.8.6.2 and cl.9.4.2 AS3600.
#D1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.4.3 BS8110.
#D2: Note flat slab option to cl.9.4.2 AS3600 as an alternative to cl.6.9.5.3 AS3600.

Permissible Stress [N/mm^2] [EC2 and TR.43-2]

		Serviceability Class U Uncracked		Serviceability Class T Transition		Serviceability Class C Cracked	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	$0.50 f_{ci}'$ #A1	$0.50 f_{ci}'$ #A1	$0.50 f_{ci}'$ #A1	$0.50 f_{ci}'$ #A1	$0.50 f_{ci}'$ #A1	$0.50 f_{ci}'$ #A1
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
	Flat Slab (FTW-FS-DS)	$0.30 f_{ci}'$ #A2	$0.40 f_{ci}'$ #A2	$0.30 f_{ci}'$ #A2	$0.40 f_{ci}'$ #A2	$0.30 f_{ci}'$ #A2	$0.40 f_{ci}'$ #A2
		6.0 N/mm2	8.0 N/mm2	6.0 N/mm2	8.0 N/mm2	6.0 N/mm2	8.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	$-0.21 f_{ci}'^{2/3}$ #B1	$-0.21 f_{ci}'^{2/3}$ #B1	$-0.21 f_{ci}'^{2/3}$ #B1	$-0.21 f_{ci}'^{2/3}$ #B1	$-0.30 f_{ci}'$ #B1	$-0.30 f_{ci}'$ #B1
		-1.5 N/mm2	-1.5 N/mm2	-1.5 N/mm2	-1.5 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	$-0.09 f_{ci}'^{2/3}$ #B2	$k_\sigma . -0.09 f_{ci}'^{2/3}$ #B2	$-0.09 f_{ci}'^{2/3}$ #B2	$k_\sigma . -0.09 f_{ci}'^{2/3}$ #B2	$-0.27 f_{ci}'^{2/3}$ #B2	$k_\sigma . -0.27 f_{ci}'^{2/3}$ #B2
		-0.7 N/mm2	-0.6 N/mm2	-0.7 N/mm2	-0.6 N/mm2	-2.0 N/mm2	-1.8 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	$0.60 f_c'$ #C1	$0.60 f_c'$ #C1	$0.60 f_c'$ #C1	$0.60 f_c'$ #C1	$0.60 f_c'$ #C1	$0.60 f_c'$ #C1
		21.0 N/mm2	21.0 N/mm2	21.0 N/mm2	21.0 N/mm2	21.0 N/mm2	21.0 N/mm2
	Flat Slab (FTW-FS-DS)	$0.40 f_c'$ #C2	$0.30 f_c'$ #C2	$0.40 f_c'$ #C2	$0.30 f_c'$ #C2	$0.40 f_c'$ #C2	$0.30 f_c'$ #C2
		14.0 N/mm2	10.5 N/mm2	14.0 N/mm2	10.5 N/mm2	14.0 N/mm2	10.5 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	$-0.21 f_c'^{2/3}$ #D1	$-0.21 f_c'^{2/3}$ #D1	$-0.21 f_c'^{2/3}$ #D1	$-0.21 f_c'^{2/3}$ #D1	-<.......> #D2	-<.......> #D2
		-2.2 N/mm2	-2.2 N/mm2	-2.2 N/mm2	-2.2 N/mm2	-5.3 N/mm2	-5.3 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	$k_\sigma . -0.09 f_c'^{2/3}$ #D3	$-0.09 f_c'^{2/3}$ #D3	$k_\sigma . -0.09 f_c'^{2/3}$ #D3	$-0.09 f_c'^{2/3}$ #D3	$k_\sigma . -0.27 f_c'^{2/3}$ #D3	$-0.27 f_c'^{2/3}$ #D3
		-0.9 N/mm2	-1.0 N/mm2	-0.9 N/mm2	-1.0 N/mm2	-2.7 N/mm2	-2.9 N/mm2
		With Rebar	No Rebar	With Rebar	No Rebar	With Rebar	No Rebar

#A1: Note beam, one-way slab or two-way slab option to cl.5.8.2 TR.43-2.
#A2: Note flat slab option to T.4 TR.43-2 and cl.5.8.2 TR.43-2.
#B1: Note beam, one-way slab or two-way slab option to cl.5.8.2 TR.43-2 and analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to T.4 TR.43-2 and cl.5.8.2 TR.43-2.
#C1: Note beam, one-way slab or two-way slab option to cl.5.10.2.2 EC2.
#C2: Note flat slab option to T.4 TR.43-2.
#D1: Note beam, one-way slab or two-way slab option analogous to cl.5.8.2 TR.43-2.
#D2: Note beam, one-way slab or two-way slab option to cl.5.8.1 TR.43-2. Note -<.......> = MAX {$-0.30f_c'$, ($-0.40f_c'^{2/3}$ to $-0.50f_c'^{2/3}$)-4N/mm^2/1.0%} as the code allows for an increase in the tensile stress limit from 1% of longitudinal steel (untensioned reinforcement) onwards (-4N/mm^2 for every 1% of longitudinal steel (untensioned reinforcement), increasing proportionally, up to the specified upper limit of $-0.30f_c'$). Note crack width @ 0.20mm and %rebar 0.15%
#D3: Note flat slab option to T.4 TR.43-2.

Post-Tensioned Member (Bonded Tendons) Permissible Stress BS8110 (TR.43), ACI318, AS3600, EC2 (TR.43-2)			70%FTW-FS-DS	C40/50
Characterictic Strength of Concrete		**Cube**	**Cylinder**	
Characteristic strength of concrete (PT beam and slab), f_{cu} / f_c'		**50**	**40**	N/mm^2
Characteristic strength of concrete at transfer (PT beam and slab), f_{ci} / f_{ci}'		**25**	**20**	N/mm^2
Incorporation of CSTW-FS-DS Approach Within a FTW-FS-DS Approach	**%M_{HOG}**	**%I**	**%f_{min}**	**[1.7 %M_{HOG}]. %I. %f_{min}**
ks = 70%MHOG | 0.5I | 1.3fmin [FTW-FS-DS] [BS8110 TR.43, ACI318, EC2 TR	**70%**	**0.5**	**1.3**	**0.93**
ks = 70%MHOG | 0.5I | 1.0fmin [FTW-FS-DS] [AS3600]	**70%**	**0.5**	**1.0**	**0.71**

Permissible Stress [N/mm^2] [BS8110, TR.43]							
		Serviceability Class 1 **No Flexural Tensile Stresses**		**Serviceability Class 2** **Flexural Tensile Stresses, Uncracked (No Visible Cracking)**		**Serviceability Class 3** **Flexural Tensile Stresses, Cracked**	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**
		12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2
	Flat Slab (FTW-FS-DS)	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**
		6.0 N/mm2	8.3 N/mm2	6.0 N/mm2	8.3 N/mm2	6.0 N/mm2	8.3 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-1.0 #B**	**-1.0 #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**-0.25 f_{ci} #B1**	**-0.25 f_{ci} #B1**
		-1.0 N/mm2	-1.0 N/mm2	-1.8 N/mm2	-1.8 N/mm2	-6.3 N/mm2	-6.3 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-1.0 #B**	**k_σ . -1.0 #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**k_σ . -0.36 $\sqrt{f_{ci}}$ #B**	**-0.45 $\sqrt{f_{ci}}$ #B2**	**k_σ . -0.45 $\sqrt{f_{ci}}$ #B2**
		-1.0 N/mm2	-0.9 N/mm2	-1.8 N/mm2	-1.7 N/mm2	-2.3 N/mm2	-2.1 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	No Rebar	No Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**
		16.5 N/mm2	20.0 N/mm2	16.5 N/mm2	20.0 N/mm2	16.5 N/mm2	20.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**
		16.5 N/mm2	12.0 N/mm2	16.5 N/mm2	12.0 N/mm2	16.5 N/mm2	12.0 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.0 #D**	**0.0 #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**-<.....> #D1**	**-<.....> #D1**
		0.0 N/mm2	0.0 N/mm2	-2.5 N/mm2	-2.5 N/mm2	-5.2 N/mm2	-5.2 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . 0.0 #D**	**0.0 #D**	**k_σ . -0.36 $\sqrt{f_{cu}}$ #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**k_σ . -0.45 $\sqrt{f_{cu}}$ #D2**	**-0.45 $\sqrt{f_{cu}}$ #D2**
		0.0 N/mm2	0.0 N/mm2	-2.4 N/mm2	-2.5 N/mm2	-3.0 N/mm2	-3.2 N/mm2
		With Rebar	No Rebar	With Rebar	No Rebar	With Rebar	No Rebar

#A1: Note beam, one-way slab or two-way slab option to cl.4.3.5.1 BS8110.
#A2: Note flat slab option to T.2 TR.43 and cl.6.10.2 TR.43.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.4.3.5.2 BS8110.
#B1: Note beam, one-way slab or two-way slab option to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to T.2 TR.43 and cl.6.10.2 TR.43.
#C1: Note beam, one-way slab or two-way slab option to cl.4.3.4.2 BS8110.
#C2: Note flat slab option to T.2 TR.43.
#D: Note beam, one-way slab, two-way slab or flat slab option to cl.4.3.4.3 BS8110.
#D1: Note beam, one-way slab or two-way slab option to cl.4.3.4.3 BS8110. Note -<.....> = MAX {-0.25f_{cu}, (0.7-1.1).(-0.58$\sqrt{f_{cu}}$ to -0.82$\sqrt{f_{cu}}$)-4N/mm^2/1.0%} as the code allows for an increase in the tensile stress limit from 1% of longitudinal steel (untensioned reinforcement) onwards (-4N/mm^2 for every 1% of longitudinal steel (untensioned reinforcement), increasing proportionally, up to the specified upper limit of -0.25f_{cu}). Note crack width @ 0.20mm, %rebar **0.15%** and overall depth, h **600** mm
#D2: Note flat slab option to T.2 TR.43.

Permissible Stress [N/mm^2] [ACI318]							
		Serviceability Class U **Uncracked**		**Serviceability Class T** **Transition**		**Serviceability Class C** **Cracked**	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**
		12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**
		12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.30 f_{ci}' #B1**	**-0.30 f_{ci}' #B1**
		-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.50 $\sqrt{f_{ci}}$' #B2**	**k_σ . -0.50 $\sqrt{f_{ci}}$' #B2**
		-1.1 N/mm2	-1.0 N/mm2	-1.1 N/mm2	-1.0 N/mm2	-2.2 N/mm2	-2.1 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	No Rebar	No Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**
		24.0 N/mm2	24.0 N/mm2	24.0 N/mm2	24.0 N/mm2	24.0 N/mm2	24.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**
		24.0 N/mm2	24.0 N/mm2	24.0 N/mm2	24.0 N/mm2	24.0 N/mm2	24.0 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.62 $\sqrt{f_c}$' #D1**	**-0.62 $\sqrt{f_c}$' #D1**	**-1.00 $\sqrt{f_c}$' #D1**	**-1.00 $\sqrt{f_c}$' #D1**	**-0.30 f_c' #D1**	**-0.30 f_c' #D1**
		-3.9 N/mm2	-3.9 N/mm2	-6.3 N/mm2	-6.3 N/mm2	-12.0 N/mm2	-12.0 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**
		-2.9 N/mm2	-3.2 N/mm2	-2.9 N/mm2	-3.2 N/mm2	-2.9 N/mm2	-3.2 N/mm2
		With Rebar	With Rebar	With Rebar	With Rebar	With Rebar	With Rebar

#A: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.3.1 ACI318.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.3.2 ACI318.
#B1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to cl.24.5.3.2.1 ACI318.
#C: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.4.1 ACI318.
#D1: Note beam, one-way slab or two-way slab option to cl.24.5.2.1 ACI318 and analogous to cl.4.3.4.3 BS8110.
#D2: Note flat slab option to cl.24.5.2.1 ACI318.

Post-Tensioned Member (Bonded Tendons) Permissible Stress BS8110 (TR.43), ACI318, AS3600, EC2 (TR.43-2)			70%FTW-FS-DS	C40/50
Characterictic Strength of Concrete		**Cube**	**Cylinder**	
Characteristic strength of concrete (PT beam and slab), f_{cu} / f_c'		**50**	**40**	N/mm^2
Characteristic strength of concrete at transfer (PT beam and slab), f_{ci} / f_{ci}'		**25**	**20**	N/mm^2
Incorporation of CSTW-FS-DS Approach Within a FTW-FS-DS Approach	**%M_{HOG}**	**%I**	**%f_{min}**	**[1.7 %M_{HOG}]: %I: %f_{min}**
ks = 70%MHOG | 0.5I | 1.3fmin [FTW-FS-DS] [BS8110 TR.43, ACI318, EC2 TR	**70%**	**0.5**	**1.3**	**0.93**
ks = 70%MHOG | 0.5I | 1.0fmin [FTW-FS-DS] [AS3600]	**70%**	**0.5**	**1.0**	**0.71**

Permissible Stress [N/mm^2] [AS3600]							
		Serviceability Class U Uncracked		**Serviceability Class T Transition**		**Serviceability Class C Cracked**	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B**	**-0.30 f_{ci}' #B1**	**-0.30 f_{ci}' #B1**
		-1.1 N/mm2	-1.1 N/mm2	-2.7 N/mm2	-2.7 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.60 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B2**	**k_σ . -0.60 $\sqrt{f_{ci}}$' #B2**
		-1.1 N/mm2	-0.8 N/mm2	-2.7 N/mm2	-1.9 N/mm2	-2.7 N/mm2	-1.9 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**
		20.0 N/mm2	20.0 N/mm2	20.0 N/mm2	20.0 N/mm2	20.0 N/mm2	20.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**
		20.0 N/mm2	20.0 N/mm2	20.0 N/mm2	20.0 N/mm2	20.0 N/mm2	20.0 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.25 $\sqrt{f_c}$' #D**	**-0.25 $\sqrt{f_c}$' #D**	**-0.60 $\sqrt{f_c}$' #D**	**-0.60 $\sqrt{f_c}$' #D**	**-0.30 f_c' #D1**	**-0.30 f_c' #D1**
		-1.6 N/mm2	-1.6 N/mm2	-3.8 N/mm2	-3.8 N/mm2	-12.0 N/mm2	-12.0 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . -0.25 $\sqrt{f_c}$' #D**	**-0.25 $\sqrt{f_c}$' #D**	**k_σ . -0.60 $\sqrt{f_c}$' #D**	**-0.60 $\sqrt{f_c}$' #D**	**k_σ . -0.60 $\sqrt{f_c}$' #D2**	**-0.60 $\sqrt{f_c}$' #D2**
		-1.1 N/mm2	-1.6 N/mm2	-2.7 N/mm2	-3.8 N/mm2	-2.7 N/mm2	-3.8 N/mm2
		With Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar

#A: Note beam, one-way slab, two-way slab or flat slab option to cl.8.1.6.2 AS3600.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.8.6.2 and cl.9.4.2 AS3600.
#B1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to cl.9.4.2 AS3600.
#C: Note beam, one-way slab, two-way slab or flat slab option to cl.8.1.6.2 AS3600.
#D: Note beam, one-way slab, two-way slab or flat slab option to cl.8.6.2 and cl.9.4.2 AS3600.
#D1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.4.3 BS8110.
#D2: Note flat slab option to cl.9.4.2 AS3600 as an alternative to cl.6.9.5.3 AS3600.

Permissible Stress [N/mm^2] [EC2 and TR.43-2]							
		Serviceability Class U Uncracked		**Serviceability Class T Transition**		**Serviceability Class C Cracked**	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.30 f_{ci}' #A2**	**0.40 f_{ci}' #A2**	**0.30 f_{ci}' #A2**	**0.40 f_{ci}' #A2**	**0.30 f_{ci}' #A2**	**0.40 f_{ci}' #A2**
		6.0 N/mm2	8.0 N/mm2	6.0 N/mm2	8.0 N/mm2	6.0 N/mm2	8.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.30 f_{ci}' #B1**	**-0.30 f_{ci}' #B1**
		-1.5 N/mm2	-1.5 N/mm2	-1.5 N/mm2	-1.5 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-0.09 f_{ci}'$^{2/3}$ #B2**	**k_σ . -0.09 f_{ci}'$^{2/3}$ #B2**	**-0.09 f_{ci}'$^{2/3}$ #B2**	**k_σ . -0.09 f_{ci}'$^{2/3}$ #B2**	**-0.27 f_{ci}'$^{2/3}$ #B2**	**k_σ . -0.27 f_{ci}'$^{2/3}$ #B2**
		-0.7 N/mm2	-0.6 N/mm2	-0.7 N/mm2	-0.6 N/mm2	-2.0 N/mm2	-1.8 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**
		24.0 N/mm2	24.0 N/mm2	24.0 N/mm2	24.0 N/mm2	24.0 N/mm2	24.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.40 f_c' #C2**	**0.30 f_c' #C2**	**0.40 f_c' #C2**	**0.30 f_c' #C2**	**0.40 f_c' #C2**	**0.30 f_c' #C2**
		16.0 N/mm2	12.0 N/mm2	16.0 N/mm2	12.0 N/mm2	16.0 N/mm2	12.0 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.21 f_c'$^{2/3}$ #D1**	**-0.21 f_c'$^{2/3}$ #D1**	**-0.21 f_c'$^{2/3}$ #D1**	**-0.21 f_c'$^{2/3}$ #D1**	**-<.....> #D2**	**-<.....> #D2**
		-2.5 N/mm2	-2.5 N/mm2	-2.5 N/mm2	-2.5 N/mm2	-5.8 N/mm2	-5.8 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . -0.09 f_c'$^{2/3}$ #D3**	**-0.09 f_c'$^{2/3}$ #D3**	**k_σ . -0.09 f_c'$^{2/3}$ #D3**	**-0.09 f_c'$^{2/3}$ #D3**	**k_σ . -0.27 f_c'$^{2/3}$ #D3**	**-0.27 f_c'$^{2/3}$ #D3**
		-1.0 N/mm2	-1.1 N/mm2	-1.0 N/mm2	-1.1 N/mm2	-2.9 N/mm2	-3.2 N/mm2
		With Rebar	No Rebar	With Rebar	No Rebar	With Rebar	No Rebar

#A1: Note beam, one-way slab or two-way slab option to cl.5.8.2 TR.43-2.
#A2: Note flat slab option to T.4 TR.43-2 and cl.5.8.2 TR.43-2.
#B1: Note beam, one-way slab or two-way slab option to cl.5.8.2 TR.43-2 and analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to T.4 TR.43-2 and cl.5.8.2 TR.43-2.
#C1: Note beam, one-way slab or two-way slab option to cl.5.10.2.2 EC2.
#C2: Note flat slab option to T.4 TR.43-2.
#D1: Note beam, one-way slab or two-way slab option analogous to cl.5.8.2 TR.43-2.
#D2: Note beam, one-way slab or two-way slab option to cl.5.8.1 TR.43-2. Note -<.....> = MAX {-0.30f_c', (-0.40f_c'$^{2/3}$ to -0.50f_c'$^{2/3}$)-4N/mm^2/1.0%} as the code allows for an increase in the tensile stress limit from 1% of longitudinal steel (untensioned reinforcement) onwards (-4N/mm^2 for every 1% of longitudinal steel (untensioned reinforcement), increasing proportionally, up to the specified upper limit of -0.30f_c'). Note crack width @ 0.20mm and %rebar **0.15%**
#D3: Note flat slab option to T.4 TR.43-2.

Post-Tensioned Member (Bonded Tendons) Permissible Stress BS8110 (TR.43), ACI318, AS3600, EC2 (TR.43-2)			70%FTW-FS-DS	C45/55
Characterictic Strength of Concrete		**Cube**	**Cylinder**	
Characteristic strength of concrete (PT beam and slab), f_{cu} / f_c'		**55**	**45**	N/mm^2
Characteristic strength of concrete at transfer (PT beam and slab), f_{ci} / f_{ci}'		**25**	**20**	N/mm^2
Incorporation of CSTW-FS-DS Approach Within a FTW-FS-DS Approach	**%M_{HOG}**	**%l**	**%f_{min}**	**[1.7 %M_{HOG}]. %l. %f_{min}**
ks = 70%MHOG | 0.5l | 1.3fmin [FTW-FS-DS] [BS8110 TR.43, ACI318, EC2 TR	**70%**	**0.5**	**1.3**	**0.93**
ks = 70%MHOG | 0.5l | 1.0fmin [FTW-FS-DS] [AS3600]	**70%**	**0.5**	**1.0**	**0.71**

Permissible Stress [N/mm^2] [BS8110, TR.43]							
		Serviceability Class 1 **No Flexural Tensile Stresses**		**Serviceability Class 2** **Flexural Tensile Stresses, Uncracked (No Visible Cracking)**		**Serviceability Class 3** **Flexural Tensile Stresses, Cracked**	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**
		12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2
	Flat Slab (FTW-FS-DS)	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**
		6.0 N/mm2	8.3 N/mm2	6.0 N/mm2	8.3 N/mm2	6.0 N/mm2	8.3 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-1.0 #B**	**-1.0 #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**-0.25 f_{ci} #B1**	**-0.25 f_{ci} #B1**
		-1.0 N/mm2	-1.0 N/mm2	-1.8 N/mm2	-1.8 N/mm2	-6.3 N/mm2	-6.3 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-1.0 #B**	**k_σ . -1.0 #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**k_σ . -0.36 $\sqrt{f_{ci}}$ #B**	**-0.45 $\sqrt{f_{ci}}$ #B2**	**k_σ . -0.45 $\sqrt{f_{ci}}$ #B2**
		-1.0 N/mm2	-0.9 N/mm2	-1.8 N/mm2	-1.7 N/mm2	-2.3 N/mm2	-2.1 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	No Rebar	No Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**
		18.2 N/mm2	22.0 N/mm2	18.2 N/mm2	22.0 N/mm2	18.2 N/mm2	22.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**
		18.2 N/mm2	13.2 N/mm2	18.2 N/mm2	13.2 N/mm2	18.2 N/mm2	13.2 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.0 #D**	**0.0 #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**-<.....> #D1**	**-<.....> #D1**
		0.0 N/mm2	0.0 N/mm2	-2.7 N/mm2	-2.7 N/mm2	-5.2 N/mm2	-5.2 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . 0.0 #D**	**0.0 #D**	**k_σ . -0.36 $\sqrt{f_{cu}}$ #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**k_σ . -0.45 $\sqrt{f_{cu}}$ #D2**	**-0.45 $\sqrt{f_{cu}}$ #D2**
		0.0 N/mm2	0.0 N/mm2	-2.5 N/mm2	-2.7 N/mm2	-3.1 N/mm2	-3.3 N/mm2
		With Rebar	No Rebar	With Rebar	No Rebar	With Rebar	No Rebar

#A1: Note beam, one-way slab or two-way slab option to cl.4.3.5.1 BS8110.
#A2: Note flat slab option to T.2 TR.43 and cl.6.10.2 TR.43.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.4.3.5.2 BS8110.
#B1: Note beam, one-way slab or two-way slab option to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to T.2 TR.43 and cl.6.10.2 TR.43.
#C1: Note beam, one-way slab or two-way slab option to cl.4.3.4.2 BS8110.
#C2: Note flat slab option to T.2 TR.43.
#D: Note beam, one-way slab, two-way slab or flat slab option to cl.4.3.4.3 BS8110.
#D1: Note beam, one-way slab or two-way slab option to cl.4.3.4.3 BS8110. Note -<.....> = MAX {-0.25f_{cu}, (0.7-1.1).(-0.58$\sqrt{f_{cu}}$ to -0.82$\sqrt{f_{cu}}$)-4N/mm^2/1.0%} as the code allows for an increase in the tensile stress limit from 1% of longitudinal steel (untensioned reinforcement) onwards (-4N/mm^2 for every 1% of longitudinal steel (untensioned reinforcement), increasing proportionally, up to the specified upper limit of -0.25f_{cu}). Note crack width @ 0.20mm, %rebar **0.15%** and overall depth, h **600** mm
#D2: Note flat slab option to T.2 TR.43.

Permissible Stress [N/mm^2] [ACI318]							
		Serviceability Class U **Uncracked**		**Serviceability Class T** **Transition**		**Serviceability Class C** **Cracked**	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**
		12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**
		12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.30 f_{ci}' #B1**	**-0.30 f_{ci}' #B1**
		-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.50 $\sqrt{f_{ci}}$' #B2**	**k_σ . -0.50 $\sqrt{f_{ci}}$' #B2**
		-1.1 N/mm2	-1.0 N/mm2	-1.1 N/mm2	-1.0 N/mm2	-2.2 N/mm2	-2.1 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	No Rebar	No Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**
		27.0 N/mm2	27.0 N/mm2	27.0 N/mm2	27.0 N/mm2	27.0 N/mm2	27.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**
		27.0 N/mm2	27.0 N/mm2	27.0 N/mm2	27.0 N/mm2	27.0 N/mm2	27.0 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.62 $\sqrt{f_c}$' #D1**	**-0.62 $\sqrt{f_c}$' #D1**	**-1.00 $\sqrt{f_c}$' #D1**	**-1.00 $\sqrt{f_c}$' #D1**	**-0.30 f_c' #D1**	**-0.30 f_c' #D1**
		-4.2 N/mm2	-4.2 N/mm2	-6.7 N/mm2	-6.7 N/mm2	-13.5 N/mm2	-13.5 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**
		-3.1 N/mm2	-3.4 N/mm2	-3.1 N/mm2	-3.4 N/mm2	-3.1 N/mm2	-3.4 N/mm2
		With Rebar	With Rebar	With Rebar	With Rebar	With Rebar	With Rebar

#A: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.3.1 ACI318.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.3.2 ACI318.
#B1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to cl.24.5.3.2.1 ACI318.
#C: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.4.1 ACI318.
#D1: Note beam, one-way slab or two-way slab option to cl.24.5.2.1 ACI318 and analogous to cl.4.3.4.3 BS8110.
#D2: Note flat slab option to cl.24.5.2.1 ACI318.

Post-Tensioned Member (Bonded Tendons) Permissible Stress BS8110 (TR.43), ACI318, AS3600, EC2 (TR.43-2)			70%FTW-FS-DS	C45/55
Characterictic Strength of Concrete		**Cube**	**Cylinder**	
Characteristic strength of concrete (PT beam and slab), f_{cu} / f_c'		**55**	**45**	N/mm^2
Characteristic strength of concrete at transfer (PT beam and slab), f_{ci} / f_{ci}'		**25**	**20**	N/mm^2
Incorporation of CSTW-FS-DS Approach Within a FTW-FS-DS Approach	**%M_{HOG}**	**%I**	**%f_{min}**	**[1.7 %M_{HOG}]: %I: %f_{min}**
ks = 70%MHOG | 0.5I | 1.3fmin [FTW-FS-DS] [BS8110 TR.43, ACI318, EC2 TR	**70%**	**0.5**	**1.3**	**0.93**
ks = 70%MHOG | 0.5I | 1.0fmin [FTW-FS-DS] [AS3600]	**70%**	**0.5**	**1.0**	**0.71**

Permissible Stress [N/mm^2] [AS3600]							
		Serviceability Class U Uncracked		**Serviceability Class T Transition**		**Serviceability Class C Cracked**	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B**	**-0.30 f_{ci}' #B1**	**-0.30 f_{ci}' #B1**
		-1.1 N/mm2	-1.1 N/mm2	-2.7 N/mm2	-2.7 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.60 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B2**	**k_σ . -0.60 $\sqrt{f_{ci}}$' #B2**
		-1.1 N/mm2	-0.8 N/mm2	-2.7 N/mm2	-1.9 N/mm2	-2.7 N/mm2	-1.9 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**
		22.5 N/mm2	22.5 N/mm2	22.5 N/mm2	22.5 N/mm2	22.5 N/mm2	22.5 N/mm2
	Flat Slab (FTW-FS-DS)	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**
		22.5 N/mm2	22.5 N/mm2	22.5 N/mm2	22.5 N/mm2	22.5 N/mm2	22.5 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.25 $\sqrt{f_c}$' #D**	**-0.25 $\sqrt{f_c}$' #D**	**-0.60 $\sqrt{f_c}$' #D**	**-0.60 $\sqrt{f_c}$' #D**	**-0.30 f_c' #D1**	**-0.30 f_c' #D1**
		-1.7 N/mm2	-1.7 N/mm2	-4.0 N/mm2	-4.0 N/mm2	-13.5 N/mm2	-13.5 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . -0.25 $\sqrt{f_c}$' #D**	**-0.25 $\sqrt{f_c}$' #D**	**k_σ . -0.60 $\sqrt{f_c}$' #D**	**-0.60 $\sqrt{f_c}$' #D**	**k_σ . -0.60 $\sqrt{f_c}$' #D2**	**-0.60 $\sqrt{f_c}$' #D2**
		-1.2 N/mm2	-1.7 N/mm2	-2.9 N/mm2	-4.0 N/mm2	-2.9 N/mm2	-4.0 N/mm2
		With Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar

#A: Note beam, one-way slab, two-way slab or flat slab option to cl.8.1.6.2 AS3600.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.8.6.2 and cl.9.4.2 AS3600.
#B1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to cl.9.4.2 AS3600.
#C: Note beam, one-way slab, two-way slab or flat slab option to cl.8.1.6.2 AS3600.
#D: Note beam, one-way slab, two-way slab or flat slab option to cl.8.6.2 and cl.9.4.2 AS3600.
#D1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.4.3 BS8110.
#D2: Note flat slab option to cl.9.4.2 AS3600 as an alternative to cl.6.9.5.3 AS3600.

Permissible Stress [N/mm^2] [EC2 and TR.43-2]							
		Serviceability Class U Uncracked		**Serviceability Class T Transition**		**Serviceability Class C Cracked**	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.30 f_{ci}' #A2**	**0.40 f_{ci}' #A2**	**0.30 f_{ci}' #A2**	**0.40 f_{ci}' #A2**	**0.30 f_{ci}' #A2**	**0.40 f_{ci}' #A2**
		6.0 N/mm2	8.0 N/mm2	6.0 N/mm2	8.0 N/mm2	6.0 N/mm2	8.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.30 f_{ci}' #B1**	**-0.30 f_{ci}' #B1**
		-1.5 N/mm2	-1.5 N/mm2	-1.5 N/mm2	-1.5 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-0.09 f_{ci}'$^{2/3}$ #B2**	**k_σ . -0.09 f_{ci}'$^{2/3}$ #B2**	**-0.09 f_{ci}'$^{2/3}$ #B2**	**k_σ . -0.09 f_{ci}'$^{2/3}$ #B2**	**-0.27 f_{ci}'$^{2/3}$ #B2**	**k_σ . -0.27 f_{ci}'$^{2/3}$ #B2**
		-0.7 N/mm2	-0.6 N/mm2	-0.7 N/mm2	-0.6 N/mm2	-2.0 N/mm2	-1.8 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**
		27.0 N/mm2	27.0 N/mm2	27.0 N/mm2	27.0 N/mm2	27.0 N/mm2	27.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.40 f_c' #C2**	**0.30 f_c' #C2**	**0.40 f_c' #C2**	**0.30 f_c' #C2**	**0.40 f_c' #C2**	**0.30 f_c' #C2**
		18.0 N/mm2	13.5 N/mm2	18.0 N/mm2	13.5 N/mm2	18.0 N/mm2	13.5 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.21 f_c'$^{2/3}$ #D1**	**-0.21 f_c'$^{2/3}$ #D1**	**-0.21 f_c'$^{2/3}$ #D1**	**-0.21 f_c'$^{2/3}$ #D1**	**-<.....> #D2**	**-<.....> #D2**
		-2.7 N/mm2	-2.7 N/mm2	-2.7 N/mm2	-2.7 N/mm2	-6.3 N/mm2	-6.3 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . -0.09 f_c'$^{2/3}$ #D3**	**-0.09 f_c'$^{2/3}$ #D3**	**k_σ . -0.09 f_c'$^{2/3}$ #D3**	**-0.09 f_c'$^{2/3}$ #D3**	**k_σ . -0.27 f_c'$^{2/3}$ #D3**	**-0.27 f_c'$^{2/3}$ #D3**
		-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-3.2 N/mm2	-3.4 N/mm2
		With Rebar	No Rebar	With Rebar	No Rebar	With Rebar	No Rebar

#A1: Note beam, one-way slab or two-way slab option to cl.5.8.2 TR.43-2.
#A2: Note flat slab option to T.4 TR.43-2 and cl.5.8.2 TR.43-2.
#B1: Note beam, one-way slab or two-way slab option to cl.5.8.2 TR.43-2 and analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to T.4 TR.43-2 and cl.5.8.2 TR.43-2.
#C1: Note beam, one-way slab or two-way slab option to cl.5.10.2.2 EC2.
#C2: Note flat slab option to T.4 TR.43-2.
#D1: Note beam, one-way slab or two-way slab option analogous to cl.5.8.2 TR.43-2.
#D2: Note beam, one-way slab or two-way slab option to cl.5.8.1 TR.43-2. Note -<.....> = MAX {-0.30f_c', (-0.40f_c'$^{2/3}$ to -0.50f_c'$^{2/3}$)-4N/mm^2/1.0%} as the code allows for an increase in the tensile stress limit from 1% of longitudinal steel (untensioned reinforcement) onwards (-4N/mm^2 for every 1% of longitudinal steel (untensioned reinforcement), increasing proportionally, up to the specified upper limit of -0.30f_c'). Note crack width @ 0.20mm and %rebar **0.15%**
#D3: Note flat slab option to T.4 TR.43-2.

Post-Tensioned Member (Bonded Tendons) Permissible Stress BS8110 (TR.43), ACI318, AS3600, EC2 (TR.43-2)			70%FTW-FS-DS	C50/60
Characterictic Strength of Concrete		**Cube**	**Cylinder**	
Characteristic strength of concrete (PT beam and slab), f_{cu} / f_c'		**60**	**50**	N/mm^2
Characteristic strength of concrete at transfer (PT beam and slab), f_{ci} / f_{ci}'		**25**	**20**	N/mm^2
Incorporation of CSTW-FS-DS Approach Within a FTW-FS-DS Approach	**%M_{HOG}**	**%I**	**%f_{min}**	**[1.7 %M_{HOG}]. %I. %f_{min}**
ks = 70%MHOG | 0.5I | 1.3fmin [FTW-FS-DS] [BS8110 TR.43, ACI318, EC2 TR	**70%**	**0.5**	**1.3**	**0.93**
ks = 70%MHOG | 0.5I | 1.0fmin [FTW-FS-DS] [AS3600]	**70%**	**0.5**	**1.0**	**0.71**

Permissible Stress [N/mm^2] [BS8110, TR.43]							
		Serviceability Class 1 **No Flexural Tensile Stresses**		**Serviceability Class 2** **Flexural Tensile Stresses, Uncracked (No Visible Cracking)**		**Serviceability Class 3** **Flexural Tensile Stresses, Cracked**	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**
		12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2
	Flat Slab (FTW-FS-DS)	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**
		6.0 N/mm2	8.3 N/mm2	6.0 N/mm2	8.3 N/mm2	6.0 N/mm2	8.3 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-1.0 #B**	**-1.0 #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**-0.25 f_{ci} #B1**	**-0.25 f_{ci} #B1**
		-1.0 N/mm2	-1.0 N/mm2	-1.8 N/mm2	-1.8 N/mm2	-6.3 N/mm2	-6.3 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-1.0 #B**	**k_σ . -1.0 #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**k_σ . -0.36 $\sqrt{f_{ci}}$ #B**	**-0.45 $\sqrt{f_{ci}}$ #B2**	**k_σ . -0.45 $\sqrt{f_{ci}}$ #B2**
		-1.0 N/mm2	-0.9 N/mm2	-1.8 N/mm2	-1.7 N/mm2	-2.3 N/mm2	-2.1 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	No Rebar	No Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**
		19.8 N/mm2	24.0 N/mm2	19.8 N/mm2	24.0 N/mm2	19.8 N/mm2	24.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**
		19.8 N/mm2	14.4 N/mm2	19.8 N/mm2	14.4 N/mm2	19.8 N/mm2	14.4 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.0 #D**	**0.0 #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**-<.....> #D1**	**-<.....> #D1**
		0.0 N/mm2	0.0 N/mm2	-2.8 N/mm2	-2.8 N/mm2	-5.2 N/mm2	-5.2 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . 0.0 #D**	**0.0 #D**	**k_σ . -0.36 $\sqrt{f_{cu}}$ #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**k_σ . -0.45 $\sqrt{f_{cu}}$ #D2**	**-0.45 $\sqrt{f_{cu}}$ #D2**
		0.0 N/mm2	0.0 N/mm2	-2.6 N/mm2	-2.8 N/mm2	-3.2 N/mm2	-3.5 N/mm2
		With Rebar	No Rebar	With Rebar	No Rebar	With Rebar	No Rebar

#A1: Note beam, one-way slab or two-way slab option to cl.4.3.5.1 BS8110.
#A2: Note flat slab option to T.2 TR.43 and cl.6.10.2 TR.43.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.4.3.5.2 BS8110.
#B1: Note beam, one-way slab or two-way slab option to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to T.2 TR.43 and cl.6.10.2 TR.43.
#C1: Note beam, one-way slab or two-way slab option to cl.4.3.4.2 BS8110.
#C2: Note flat slab option to T.2 TR.43.
#D: Note beam, one-way slab, two-way slab or flat slab option to cl.4.3.4.3 BS8110.
#D1: Note beam, one-way slab or two-way slab option to cl.4.3.4.3 BS8110. Note -<.....> = MAX {-0.25f_{cu}, (0.7-1.1).(-0.58$\sqrt{f_{cu}}$ to -0.82$\sqrt{f_{cu}}$)-4N/mm^2/1.0%} as the code allows for an increase in the tensile stress limit from 1% of longitudinal steel (untensioned reinforcement) onwards (-4N/mm^2 for every 1% of longitudinal steel (untensioned reinforcement), increasing proportionally, up to the specified upper limit of -0.25f_{cu}). Note crack width @ 0.20mm, %rebar **0.15%** and overall depth, h **600** mm
#D2: Note flat slab option to T.2 TR.43.

Permissible Stress [N/mm^2] [ACI318]							
		Serviceability Class U **Uncracked**		**Serviceability Class T** **Transition**		**Serviceability Class C** **Cracked**	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**
		12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**
		12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.30 f_{ci}' #B1**	**-0.30 f_{ci}' #B1**
		-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.50 $\sqrt{f_{ci}}$' #B2**	**k_σ . -0.50 $\sqrt{f_{ci}}$' #B2**
		-1.1 N/mm2	-1.0 N/mm2	-1.1 N/mm2	-1.0 N/mm2	-2.2 N/mm2	-2.1 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	No Rebar	No Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**
		30.0 N/mm2	30.0 N/mm2	30.0 N/mm2	30.0 N/mm2	30.0 N/mm2	30.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**
		30.0 N/mm2	30.0 N/mm2	30.0 N/mm2	30.0 N/mm2	30.0 N/mm2	30.0 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.62 $\sqrt{f_c}$' #D1**	**-0.62 $\sqrt{f_c}$' #D1**	**-1.00 $\sqrt{f_c}$' #D1**	**-1.00 $\sqrt{f_c}$' #D1**	**-0.30 f_c' #D1**	**-0.30 f_c' #D1**
		-4.4 N/mm2	-4.4 N/mm2	-7.1 N/mm2	-7.1 N/mm2	-15.0 N/mm2	-15.0 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**
		-3.3 N/mm2	-3.5 N/mm2	-3.3 N/mm2	-3.5 N/mm2	-3.3 N/mm2	-3.5 N/mm2
		With Rebar	With Rebar	With Rebar	With Rebar	With Rebar	With Rebar

#A: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.3.1 ACI318.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.3.2 ACI318.
#B1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to cl.24.5.3.2.1 ACI318.
#C: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.4.1 ACI318.
#D1: Note beam, one-way slab or two-way slab option to cl.24.5.2.1 ACI318 and analogous to cl.4.3.4.3 BS8110.
#D2: Note flat slab option to cl.24.5.2.1 ACI318.

Post-Tensioned Member (Bonded Tendons) Permissible Stress BS8110 (TR.43), ACI318, AS3600, EC2 (TR.43-2)		70%FTW-FS-DS	C50/60
Characterictic Strength of Concrete	**Cube**	**Cylinder**	
Characteristic strength of concrete (PT beam and slab), f_{cu} / f_c'	**60**	**50**	N/mm^2
Characteristic strength of concrete at transfer (PT beam and slab), f_{ci} / f_{ci}'	**25**	**20**	N/mm^2

Incorporation of CSTW-FS-DS Approach Within a FTW-FS-DS Approach	**$\%M_{HOG}$**	**%I**	**$\%f_{min}$**	**[1.] %M_{HOG}]. %I. %f_{min}**
ks = 70%MHOG | 0.5I | 1.3fmin [FTW-FS-DS] [BS8110 TR.43, ACI318, EC2 TR	**70%**	**0.5**	**1.3**	**0.93**
ks = 70%MHOG | 0.5I | 1.0fmin [FTW-FS-DS] [AS3600]	**70%**	**0.5**	**1.0**	**0.71**

Permissible Stress [N/mm^2] [AS3600]							
		Serviceability Class U Uncracked		**Serviceability Class T Transition**		**Serviceability Class C Cracked**	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B**	**-0.30 f_{ci}' #B1**	**-0.30 f_{ci}' #B1**
		-1.1 N/mm2	-1.1 N/mm2	-2.7 N/mm2	-2.7 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.60 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B2**	**k_σ . -0.60 $\sqrt{f_{ci}}$' #B2**
		-1.1 N/mm2	-0.8 N/mm2	-2.7 N/mm2	-1.9 N/mm2	-2.7 N/mm2	-1.9 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**
		25.0 N/mm2	25.0 N/mm2	25.0 N/mm2	25.0 N/mm2	25.0 N/mm2	25.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**
		25.0 N/mm2	25.0 N/mm2	25.0 N/mm2	25.0 N/mm2	25.0 N/mm2	25.0 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.25 $\sqrt{f_c}$' #D**	**-0.25 $\sqrt{f_c}$' #D**	**-0.60 $\sqrt{f_c}$' #D**	**-0.60 $\sqrt{f_c}$' #D**	**-0.30 f_c' #D1**	**-0.30 f_c' #D1**
		-1.8 N/mm2	-1.8 N/mm2	-4.2 N/mm2	-4.2 N/mm2	-15.0 N/mm2	-15.0 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . -0.25 $\sqrt{f_c}$' #D**	**-0.25 $\sqrt{f_c}$' #D**	**k_σ . -0.60 $\sqrt{f_c}$' #D**	**-0.60 $\sqrt{f_c}$' #D**	**k_σ . -0.60 $\sqrt{f_c}$' #D2**	**-0.60 $\sqrt{f_c}$' #D2**
		-1.3 N/mm2	-1.8 N/mm2	-3.0 N/mm2	-4.2 N/mm2	-3.0 N/mm2	-4.2 N/mm2
		With Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar

#A: Note beam, one-way slab, two-way slab or flat slab option to cl.8.1.6.2 AS3600.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.8.6.2 and cl.9.4.2 AS3600.
#B1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to cl.9.4.2 AS3600.
#C: Note beam, one-way slab, two-way slab or flat slab option to cl.8.1.6.2 AS3600.
#D: Note beam, one-way slab, two-way slab or flat slab option to cl.8.6.2 and cl.9.4.2 AS3600.
#D1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.4.3 BS8110.
#D2: Note flat slab option to cl.9.4.2 AS3600 as an alternative to cl.6.9.5.3 AS3600.

Permissible Stress [N/mm^2] [EC2 and TR.43-2]							
		Serviceability Class U Uncracked		**Serviceability Class T Transition**		**Serviceability Class C Cracked**	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.30 f_{ci}' #A2**	**0.40 f_{ci}' #A2**	**0.30 f_{ci}' #A2**	**0.40 f_{ci}' #A2**	**0.30 f_{ci}' #A2**	**0.40 f_{ci}' #A2**
		6.0 N/mm2	8.0 N/mm2	6.0 N/mm2	8.0 N/mm2	6.0 N/mm2	8.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.30 f_{ci}' #B1**	**-0.30 f_{ci}' #B1**
		-1.5 N/mm2	-1.5 N/mm2	-1.5 N/mm2	-1.5 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-0.09 f_{ci}'$^{2/3}$ #B2**	**k_σ . -0.09 f_{ci}'$^{2/3}$ #B2**	**-0.09 f_{ci}'$^{2/3}$ #B2**	**k_σ . -0.09 f_{ci}'$^{2/3}$ #B2**	**-0.27 f_{ci}'$^{2/3}$ #B2**	**k_σ . -0.27 f_{ci}'$^{2/3}$ #B2**
		-0.7 N/mm2	-0.6 N/mm2	-0.7 N/mm2	-0.6 N/mm2	-2.0 N/mm2	-1.8 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**
		30.0 N/mm2	30.0 N/mm2	30.0 N/mm2	30.0 N/mm2	30.0 N/mm2	30.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.40 f_c' #C2**	**0.30 f_c' #C2**	**0.40 f_c' #C2**	**0.30 f_c' #C2**	**0.40 f_c' #C2**	**0.30 f_c' #C2**
		20.0 N/mm2	15.0 N/mm2	20.0 N/mm2	15.0 N/mm2	20.0 N/mm2	15.0 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.21 f_c'$^{2/3}$ #D1**	**-0.21 f_c'$^{2/3}$ #D1**	**-0.21 f_c'$^{2/3}$ #D1**	**-0.21 f_c'$^{2/3}$ #D1**	**-<.....> #D2**	**-<.....> #D2**
		-2.9 N/mm2	-2.9 N/mm2	-2.9 N/mm2	-2.9 N/mm2	-6.8 N/mm2	-6.8 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . -0.09 f_c'$^{2/3}$ #D3**	**-0.09 f_c'$^{2/3}$ #D3**	**k_σ . -0.09 f_c'$^{2/3}$ #D3**	**-0.09 f_c'$^{2/3}$ #D3**	**k_σ . -0.27 f_c'$^{2/3}$ #D3**	**-0.27 f_c'$^{2/3}$ #D3**
		-1.1 N/mm2	-1.2 N/mm2	-1.1 N/mm2	-1.2 N/mm2	-3.4 N/mm2	-3.7 N/mm2
		With Rebar	No Rebar	With Rebar	No Rebar	With Rebar	No Rebar

#A1: Note beam, one-way slab or two-way slab option to cl.5.8.2 TR.43-2.
#A2: Note flat slab option to T.4 TR.43-2 and cl.5.8.2 TR.43-2.
#B1: Note beam, one-way slab or two-way slab option to cl.5.8.2 TR.43-2 and analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to T.4 TR.43-2 and cl.5.8.2 TR.43-2.
#C1: Note beam, one-way slab or two-way slab option to cl.5.10.2.2 EC2.
#C2: Note flat slab option to T.4 TR.43-2.
#D1: Note beam, one-way slab or two-way slab option analogous to cl.5.8.2 TR.43-2.
#D2: Note beam, one-way slab or two-way slab option to cl.5.8.1 TR.43-2. Note -<.....> = MAX {-0.30f_c', (-0.40f_c'$^{2/3}$ to -0.50f_c'$^{2/3}$)-4N/mm^2/1.0%} as the code allows for an increase in the tensile stress limit from 1% of longitudinal steel (untensioned reinforcement) onwards (-4N/mm^2 for every 1% of longitudinal steel (untensioned reinforcement), increasing proportionally, up to the specified upper limit of -0.30f_c'). Note crack width @ 0.20mm and %rebar **0.15%**
#D3: Note flat slab option to T.4 TR.43-2.

Post-Tensioned Member (Bonded Tendons) Permissible Stress BS8110 (TR.43), ACI318, AS3600, EC2 (TR.43-2)			75%FTW-FS-DS	C28/35
Characterictic Strength of Concrete		**Cube**	**Cylinder**	
Characteristic strength of concrete (PT beam and slab), f_{cu} / f_c'		**35**	**28**	N/mm^2
Characteristic strength of concrete at transfer (PT beam and slab), f_{ci} / f_{ci}'		**25**	**20**	N/mm^2
Incorporation of CSTW-FS-DS Approach Within a FTW-FS-DS Approach	**%M_{HOG}**	**%I**	**%f_{min}**	**[1.7 %M_{HOG}]. %I. %f_{min}**
ks = 75%MHOG | 0.5I | 1.3fmin [FTW-FS-DS] [BS8110 TR.43, ACI318, EC2 TR	**75%**	**0.5**	**1.3**	**0.87**
ks = 75%MHOG | 0.5I | 1.0fmin [FTW-FS-DS] [AS3600]	**75%**	**0.5**	**1.0**	**0.67**

Permissible Stress [N/mm^2] [BS8110, TR.43]							
		Serviceability Class 1 **No Flexural Tensile Stresses**		**Serviceability Class 2** **Flexural Tensile Stresses, Uncracked (No Visible Cracking)**		**Serviceability Class 3** **Flexural Tensile Stresses, Cracked**	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**
		12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2
	Flat Slab (FTW-FS-DS)	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**
		6.0 N/mm2	8.3 N/mm2	6.0 N/mm2	8.3 N/mm2	6.0 N/mm2	8.3 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-1.0 #B**	**-1.0 #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**-0.25 f_{ci} #B1**	**-0.25 f_{ci} #B1**
		-1.0 N/mm2	-1.0 N/mm2	-1.8 N/mm2	-1.8 N/mm2	-6.3 N/mm2	-6.3 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-1.0 #B**	**k_σ . -1.0 #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**k_σ . -0.36 $\sqrt{f_{ci}}$ #B**	**-0.45 $\sqrt{f_{ci}}$ #B2**	**k_σ . -0.45 $\sqrt{f_{ci}}$ #B2**
		-1.0 N/mm2	-0.9 N/mm2	-1.8 N/mm2	-1.6 N/mm2	-2.3 N/mm2	-2.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	No Rebar	No Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**
		11.6 N/mm2	14.0 N/mm2	11.6 N/mm2	14.0 N/mm2	11.6 N/mm2	14.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**
		11.6 N/mm2	8.4 N/mm2	11.6 N/mm2	8.4 N/mm2	11.6 N/mm2	8.4 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.0 #D**	**0.0 #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**-<.....> #D1**	**-<.....> #D1**
		0.0 N/mm2	0.0 N/mm2	-2.1 N/mm2	-2.1 N/mm2	-3.4 N/mm2	-3.4 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . 0.0 #D**	**0.0 #D**	**k_σ . -0.36 $\sqrt{f_{cu}}$ #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**k_σ . -0.45 $\sqrt{f_{cu}}$ #D2**	**-0.45 $\sqrt{f_{cu}}$ #D2**
		0.0 N/mm2	0.0 N/mm2	-1.8 N/mm2	-2.1 N/mm2	-2.3 N/mm2	-2.7 N/mm2
		With Rebar	No Rebar	With Rebar	No Rebar	With Rebar	No Rebar

#A1: Note beam, one-way slab or two-way slab option to cl.4.3.5.1 BS8110.
#A2: Note flat slab option to T.2 TR.43 and cl.6.10.2 TR.43.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.4.3.5.2 BS8110.
#B1: Note beam, one-way slab or two-way slab option to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to T.2 TR.43 and cl.6.10.2 TR.43.
#C1: Note beam, one-way slab or two-way slab option to cl.4.3.4.2 BS8110.
#C2: Note flat slab option to T.2 TR.43.
#D: Note beam, one-way slab, two-way slab or flat slab option to cl.4.3.4.3 BS8110.
#D1: Note beam, one-way slab or two-way slab option to cl.4.3.4.3 BS8110. Note -<.....> = MAX {-0.25f_{cu}, (0.7-1.1).(-0.58$\sqrt{f_{cu}}$ to -0.82$\sqrt{f_{cu}}$)-4N/mm^2/1.0%} as the code allows for an increase in the tensile stress limit from 1% of longitudinal steel (untensioned reinforcement) onwards (-4N/mm^2 for every 1% of longitudinal steel (untensioned reinforcement), increasing proportionally, up to the specified upper limit of -0.25f_{cu}). Note crack width @ 0.20mm, %rebar **0.15%** and overall depth, h **600** mm
#D2: Note flat slab option to T.2 TR.43.

Permissible Stress [N/mm^2] [ACI318]							
		Serviceability Class U **Uncracked**		**Serviceability Class T** **Transition**		**Serviceability Class C** **Cracked**	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**
		12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**
		12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.30 f_{ci}' #B1**	**-0.30 f_{ci}' #B1**
		-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.50 $\sqrt{f_{ci}}$' #B2**	**k_σ . -0.50 $\sqrt{f_{ci}}$' #B2**
		-1.1 N/mm2	-1.0 N/mm2	-1.1 N/mm2	-1.0 N/mm2	-2.2 N/mm2	-1.9 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	No Rebar	No Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**
		17.0 N/mm2	17.0 N/mm2	17.0 N/mm2	17.0 N/mm2	17.0 N/mm2	17.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**
		17.0 N/mm2	17.0 N/mm2	17.0 N/mm2	17.0 N/mm2	17.0 N/mm2	17.0 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.62 $\sqrt{f_c}$' #D1**	**-0.62 $\sqrt{f_c}$' #D1**	**-1.00 $\sqrt{f_c}$' #D1**	**-1.00 $\sqrt{f_c}$' #D1**	**-0.30 f_c' #D1**	**-0.30 f_c' #D1**
		-3.3 N/mm2	-3.3 N/mm2	-5.3 N/mm2	-5.3 N/mm2	-8.5 N/mm2	-8.5 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**
		-2.3 N/mm2	-2.7 N/mm2	-2.3 N/mm2	-2.7 N/mm2	-2.3 N/mm2	-2.7 N/mm2
		With Rebar	With Rebar	With Rebar	With Rebar	With Rebar	With Rebar

#A: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.3.1 ACI318.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.3.2 ACI318.
#B1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to cl.24.5.3.2.1 ACI318.
#C: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.4.1 ACI318.
#D1: Note beam, one-way slab or two-way slab option to cl.24.5.2.1 ACI318 and analogous to cl.4.3.4.3 BS8110.
#D2: Note flat slab option to cl.24.5.2.1 ACI318.

Post-Tensioned Member (Bonded Tendons) Permissible Stress BS8110 (TR.43), ACI318, AS3600, EC2 (TR.43-2)		75%FTW-FS-DS		C28/35
Characterictic Strength of Concrete		**Cube**	**Cylinder**	
Characteristic strength of concrete (PT beam and slab), f_{cu} / f_c'		35	28	N/mm^2
Characteristic strength of concrete at transfer (PT beam and slab), f_{ci} / f_{ci}'		25	20	N/mm^2
Incorporation of CSTW-FS-DS Approach Within a FTW-FS-DS Approach	**%M_{HOG}**	**%I**	**%f_{min}**	**[1/%M_{HOG}].%I.%f_{mi}**
ks = 75%MHOG | 0.5I | 1.3fmin [FTW-FS-DS] [BS8110 TR.43, ACI318, EC2 TR	75%	0.5	1.3	0.87
ks = 75%MHOG | 0.5I | 1.0fmin [FTW-FS-DS] [AS3600]	75%	0.5	1.0	0.67

Permissible Stress [N/mm^2] [AS3600]

		Serviceability Class U Uncracked		Serviceability Class T Transition		Serviceability Class C Cracked	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	0.50 f_{ci}' [#A]	0.50 f_{ci}' [#A]	0.50 f_{ci}' [#A]	0.50 f_{ci}' [#A]	0.50 f_{ci}' [#A]	0.50 f_{ci}' [#A]
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
	Flat Slab (FTW-FS-DS)	0.50 f_{ci}' [#A]	0.50 f_{ci}' [#A]	0.50 f_{ci}' [#A]	0.50 f_{ci}' [#A]	0.50 f_{ci}' [#A]	0.50 f_{ci}' [#A]
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	-0.25 $\sqrt{f_{ci}'}$ [#B]	-0.25 $\sqrt{f_{ci}'}$ [#B]	-0.60 $\sqrt{f_{ci}'}$ [#B]	-0.60 $\sqrt{f_{ci}'}$ [#B]	-0.30 f_{ci}' [#B1]	-0.30 f_{ci}' [#B1]
		-1.1 N/mm2	-1.1 N/mm2	-2.7 N/mm2	-2.7 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	-0.25 $\sqrt{f_{ci}'}$ [#B]	k_σ . -0.25 $\sqrt{f_{ci}'}$ [#B]	-0.60 $\sqrt{f_{ci}'}$ [#B]	k_σ . -0.60 $\sqrt{f_{ci}'}$ [#B]	-0.60 $\sqrt{f_{ci}'}$ [#B2]	k_σ . -0.60 $\sqrt{f_{ci}'}$ [#B2]
		-1.1 N/mm2	-0.7 N/mm2	-2.7 N/mm2	-1.8 N/mm2	-2.7 N/mm2	-1.8 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	0.50 f_c' [#C]	0.50 f_c' [#C]	0.50 f_c' [#C]	0.50 f_c' [#C]	0.50 f_c' [#C]	0.50 f_c' [#C]
		14.2 N/mm2	14.2 N/mm2	14.2 N/mm2	14.2 N/mm2	14.2 N/mm2	14.2 N/mm2
	Flat Slab (FTW-FS-DS)	0.50 f_c' [#C]	0.50 f_c' [#C]	0.50 f_c' [#C]	0.50 f_c' [#C]	0.50 f_c' [#C]	0.50 f_c' [#C]
		14.2 N/mm2	14.2 N/mm2	14.2 N/mm2	14.2 N/mm2	14.2 N/mm2	14.2 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	-0.25 $\sqrt{f_c'}$ [#D]	-0.25 $\sqrt{f_c'}$ [#D]	-0.60 $\sqrt{f_c'}$ [#D]	-0.60 $\sqrt{f_c'}$ [#D]	-0.30 f_c' [#D1]	-0.30 f_c' [#D1]
		-1.3 N/mm2	-1.3 N/mm2	-3.2 N/mm2	-3.2 N/mm2	-8.5 N/mm2	-8.5 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	k_σ . -0.25 $\sqrt{f_c'}$ [#D]	-0.25 $\sqrt{f_c'}$ [#D]	k_σ . -0.60 $\sqrt{f_c'}$ [#D]	-0.60 $\sqrt{f_c'}$ [#D]	k_σ . -0.60 $\sqrt{f_c'}$ [#D2]	-0.60 $\sqrt{f_c'}$ [#D2]
		-0.9 N/mm2	-1.3 N/mm2	-2.1 N/mm2	-3.2 N/mm2	-2.1 N/mm2	-3.2 N/mm2
		With Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar

#A: Note beam, one-way slab, two-way slab or flat slab option to cl.8.1.6.2 AS3600.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.8.6.2 and cl.9.4.2 AS3600.
#B1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to cl.9.4.2 AS3600.
#C: Note beam, one-way slab, two-way slab or flat slab option to cl.8.1.6.2 AS3600.
#D: Note beam, one-way slab, two-way slab or flat slab option to cl.8.6.2 and cl.9.4.2 AS3600.
#D1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.4.3 BS8110.
#D2: Note flat slab option to cl.9.4.2 AS3600 as an alternative to cl.6.9.5.3 AS3600.

Permissible Stress [N/mm^2] [EC2 and TR.43-2]

		Serviceability Class U Uncracked		Serviceability Class T Transition		Serviceability Class C Cracked	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	0.50 f_{ci}' [#A1]	0.50 f_{ci}' [#A1]	0.50 f_{ci}' [#A1]	0.50 f_{ci}' [#A1]	0.50 f_{ci}' [#A1]	0.50 f_{ci}' [#A1]
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
	Flat Slab (FTW-FS-DS)	0.30 f_{ci}' [#A2]	0.40 f_{ci}' [#A2]	0.30 f_{ci}' [#A2]	0.40 f_{ci}' [#A2]	0.30 f_{ci}' [#A2]	0.40 f_{ci}' [#A2]
		6.0 N/mm2	8.0 N/mm2	6.0 N/mm2	8.0 N/mm2	6.0 N/mm2	8.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	-0.21 $f_{ci}'^{2/3}$ [#B1]	-0.21 $f_{ci}'^{2/3}$ [#B1]	-0.21 $f_{ci}'^{2/3}$ [#B1]	-0.21 $f_{ci}'^{2/3}$ [#B1]	-0.30 f_{ci}' [#B1]	-0.30 f_{ci}' [#B1]
		-1.5 N/mm2	-1.5 N/mm2	-1.5 N/mm2	-1.5 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	-0.09 $f_{ci}'^{2/3}$ [#B2]	k_σ . -0.09 $f_{ci}'^{2/3}$ [#B2]	-0.09 $f_{ci}'^{2/3}$ [#B2]	k_σ . -0.09 $f_{ci}'^{2/3}$ [#B2]	-0.27 $f_{ci}'^{2/3}$ [#B2]	k_σ . -0.27 $f_{ci}'^{2/3}$ [#B2]
		-0.7 N/mm2	-0.6 N/mm2	-0.7 N/mm2	-0.6 N/mm2	-2.0 N/mm2	-1.7 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	0.60 f_c' [#C1]	0.60 f_c' [#C1]	0.60 f_c' [#C1]	0.60 f_c' [#C1]	0.60 f_c' [#C1]	0.60 f_c' [#C1]
		17.0 N/mm2	17.0 N/mm2	17.0 N/mm2	17.0 N/mm2	17.0 N/mm2	17.0 N/mm2
	Flat Slab (FTW-FS-DS)	0.40 f_c' [#C2]	0.30 f_c' [#C2]	0.40 f_c' [#C2]	0.30 f_c' [#C2]	0.40 f_c' [#C2]	0.30 f_c' [#C2]
		11.3 N/mm2	8.5 N/mm2	11.3 N/mm2	8.5 N/mm2	11.3 N/mm2	8.5 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	-0.21 $f_c'^{2/3}$ [#D1]	-0.21 $f_c'^{2/3}$ [#D1]	-0.21 $f_c'^{2/3}$ [#D1]	-0.21 $f_c'^{2/3}$ [#D1]	-<.......> [#D2]	-<.......> [#D2]
		-2.0 N/mm2	-2.0 N/mm2	-2.0 N/mm2	-2.0 N/mm2	-4.6 N/mm2	-4.6 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	k_σ . -0.09 $f_c'^{2/3}$ [#D3]	-0.09 $f_c'^{2/3}$ [#D3]	k_σ . -0.09 $f_c'^{2/3}$ [#D3]	-0.09 $f_c'^{2/3}$ [#D3]	k_σ . -0.27 $f_c'^{2/3}$ [#D3]	-0.27 $f_c'^{2/3}$ [#D3]
		-0.7 N/mm2	-0.8 N/mm2	-0.7 N/mm2	-0.8 N/mm2	-2.2 N/mm2	-2.5 N/mm2
		With Rebar	No Rebar	With Rebar	No Rebar	With Rebar	No Rebar

#A1: Note beam, one-way slab or two-way slab option to cl.5.8.2 TR.43-2.
#A2: Note flat slab option to T.4 TR.43-2 and cl.5.8.2 TR.43-2.
#B1: Note beam, one-way slab or two-way slab option to cl.5.8.2 TR.43-2 and analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to T.4 TR.43-2 and cl.5.8.2 TR.43-2.
#C1: Note beam, one-way slab or two-way slab option to cl.5.10.2.2 EC2.
#C2: Note flat slab option to T.4 TR.43-2.
#D1: Note beam, one-way slab or two-way slab option analogous to cl.5.8.2 TR.43-2.
#D2: Note beam, one-way slab or two-way slab option to cl.5.8.1 TR.43-2. Note -<.......> = MAX {-0.30f_c', (-0.40$f_c'^{2/3}$ to -0.50$f_c'^{2/3}$)-4N/mm^2/1.0%} as the code allows for an increase in the tensile stress limit from 1% of longitudinal steel (untensioned reinforcement) onwards (-4N/mm^2 for every 1% of longitudinal steel (untensioned reinforcement), increasing proportionally, up to the specified upper limit of -0.30f_c'). Note crack width @ 0.20mm and %rebar 0.15%
#D3: Note flat slab option to T.4 TR.43-2.

Post-Tensioned Member (Bonded Tendons) Permissible Stress BS8110 (TR.43), ACI318, AS3600, EC2 (TR.43-2)			75%FTW-FS-DS	C32/40
Characterictic Strength of Concrete		**Cube**	**Cylinder**	
Characteristic strength of concrete (PT beam and slab), f_{cu} / f_c'		**40**	**32**	N/mm^2
Characteristic strength of concrete at transfer (PT beam and slab), f_{ci} / f_{ci}'		**25**	**20**	N/mm^2
Incorporation of CSTW-FS-DS Approach Within a FTW-FS-DS Approach	**%M_{HOG}**	**%I**	**%f_{min}**	**[1.7 %M_{HOG}]. %I. %f_{min}**
ks = 75%MHOG | 0.5I | 1.3fmin [FTW-FS-DS] [BS8110 TR.43, ACI318, EC2 TR	**75%**	**0.5**	**1.3**	**0.87**
ks = 75%MHOG | 0.5I | 1.0fmin [FTW-FS-DS] [AS3600]	**75%**	**0.5**	**1.0**	**0.67**

Permissible Stress [N/mm^2] [BS8110, TR.43]							
		Serviceability Class 1 **No Flexural Tensile Stresses**		**Serviceability Class 2** **Flexural Tensile Stresses, Uncracked (No Visible Cracking)**		**Serviceability Class 3** **Flexural Tensile Stresses, Cracked**	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**
		12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2
	Flat Slab (FTW-FS-DS)	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**
		6.0 N/mm2	8.3 N/mm2	6.0 N/mm2	8.3 N/mm2	6.0 N/mm2	8.3 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-1.0 #B**	**-1.0 #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**-0.25 f_{ci} #B1**	**-0.25 f_{ci} #B1**
		-1.0 N/mm2	-1.0 N/mm2	-1.8 N/mm2	-1.8 N/mm2	-6.3 N/mm2	-6.3 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-1.0 #B**	**k_σ . -1.0 #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**k_σ . -0.36 $\sqrt{f_{ci}}$ #B**	**-0.45 $\sqrt{f_{ci}}$ #B2**	**k_σ . -0.45 $\sqrt{f_{ci}}$ #B2**
		-1.0 N/mm2	-0.9 N/mm2	-1.8 N/mm2	-1.6 N/mm2	-2.3 N/mm2	-2.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	No Rebar	No Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**
		13.2 N/mm2	16.0 N/mm2	13.2 N/mm2	16.0 N/mm2	13.2 N/mm2	16.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**
		13.2 N/mm2	9.6 N/mm2	13.2 N/mm2	9.6 N/mm2	13.2 N/mm2	9.6 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.0 #D**	**0.0 #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**-<.....> #D1**	**-<.....> #D1**
		0.0 N/mm2	0.0 N/mm2	-2.3 N/mm2	-2.3 N/mm2	-4.5 N/mm2	-4.5 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . 0.0 #D**	**0.0 #D**	**k_σ . -0.36 $\sqrt{f_{cu}}$ #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**k_σ . -0.45 $\sqrt{f_{cu}}$ #D2**	**-0.45 $\sqrt{f_{cu}}$ #D2**
		0.0 N/mm2	0.0 N/mm2	-2.0 N/mm2	-2.3 N/mm2	-2.5 N/mm2	-2.8 N/mm2
		With Rebar	No Rebar	With Rebar	No Rebar	With Rebar	No Rebar

#A1: Note beam, one-way slab or two-way slab option to cl.4.3.5.1 BS8110.
#A2: Note flat slab option to T.2 TR.43 and cl.6.10.2 TR.43.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.4.3.5.2 BS8110.
#B1: Note beam, one-way slab or two-way slab option to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to T.2 TR.43 and cl.6.10.2 TR.43.
#C1: Note beam, one-way slab or two-way slab option to cl.4.3.4.2 BS8110.
#C2: Note flat slab option to T.2 TR.43.
#D: Note beam, one-way slab, two-way slab or flat slab option to cl.4.3.4.3 BS8110.
#D1: Note beam, one-way slab or two-way slab option to cl.4.3.4.3 BS8110. Note -<.....> = MAX {-0.25f_{cu}, (0.7-1.1).(-0.58$\sqrt{f_{cu}}$ to -0.82$\sqrt{f_{cu}}$)-4N/mm^2/1.0%} as the code allows for an increase in the tensile stress limit from 1% of longitudinal steel (untensioned reinforcement) onwards (-4N/mm^2 for every 1% of longitudinal steel (untensioned reinforcement), increasing proportionally, up to the specified upper limit of -0.25f_{cu}). Note crack width @ 0.20mm, %rebar **0.15%** and overall depth, h **600** mm
#D2: Note flat slab option to T.2 TR.43.

Permissible Stress [N/mm^2] [ACI318]							
		Serviceability Class U **Uncracked**		**Serviceability Class T** **Transition**		**Serviceability Class C** **Cracked**	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**
		12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**
		12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.30 f_{ci}' #B1**	**-0.30 f_{ci}' #B1**
		-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.50 $\sqrt{f_{ci}}$' #B2**	**k_σ . -0.50 $\sqrt{f_{ci}}$' #B2**
		-1.1 N/mm2	-1.0 N/mm2	-1.1 N/mm2	-1.0 N/mm2	-2.2 N/mm2	-1.9 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	No Rebar	No Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**
		19.0 N/mm2	19.0 N/mm2	19.0 N/mm2	19.0 N/mm2	19.0 N/mm2	19.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**
		19.0 N/mm2	19.0 N/mm2	19.0 N/mm2	19.0 N/mm2	19.0 N/mm2	19.0 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.62 $\sqrt{f_c}$' #D1**	**-0.62 $\sqrt{f_c}$' #D1**	**-1.00 $\sqrt{f_c}$' #D1**	**-1.00 $\sqrt{f_c}$' #D1**	**-0.30 f_c' #D1**	**-0.30 f_c' #D1**
		-3.5 N/mm2	-3.5 N/mm2	-5.6 N/mm2	-5.6 N/mm2	-9.5 N/mm2	-9.5 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**
		-2.4 N/mm2	-2.8 N/mm2	-2.4 N/mm2	-2.8 N/mm2	-2.4 N/mm2	-2.8 N/mm2
		With Rebar	With Rebar	With Rebar	With Rebar	With Rebar	With Rebar

#A: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.3.1 ACI318.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.3.2 ACI318.
#B1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to cl.24.5.3.2.1 ACI318.
#C: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.4.1 ACI318.
#D1: Note beam, one-way slab or two-way slab option to cl.24.5.2.1 ACI318 and analogous to cl.4.3.4.3 BS8110.
#D2: Note flat slab option to cl.24.5.2.1 ACI318.

Post-Tensioned Member (Bonded Tendons) Permissible Stress BS8110 (TR.43), ACI318, AS3600, EC2 (TR.43-2)		75%FTW-FS-DS	C32/40
Characterictic Strength of Concrete	**Cube**	**Cylinder**	
Characteristic strength of concrete (PT beam and slab), f_{cu} / f_c'	**40**	**32**	N/mm^2
Characteristic strength of concrete at transfer (PT beam and slab), f_{ci} / f_{ci}'	**25**	**20**	N/mm^2

Incorporation of CSTW-FS-DS Approach Within a FTW-FS-DS Approach	**$\%M_{HOG}$**	**%I**	**$\%f_{min}$**	**[1.] %MHOG]. %I. %fmi**
ks = 75%MHOG | 0.5I | 1.3fmin [FTW-FS-DS] [BS8110 TR.43, ACI318, EC2 TR	**75%**	**0.5**	**1.3**	**0.87**
ks = 75%MHOG | 0.5I | 1.0fmin [FTW-FS-DS] [AS3600]	**75%**	**0.5**	**1.0**	**0.67**

Permissible Stress [N/mm^2] [AS3600]							
		Serviceability Class U Uncracked		Serviceability Class T Transition		Serviceability Class C Cracked	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B**	**-0.30 f_{ci}' #B1**	**-0.30 f_{ci}' #B1**
		-1.1 N/mm2	-1.1 N/mm2	-2.7 N/mm2	-2.7 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.60 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B2**	**k_σ . -0.60 $\sqrt{f_{ci}}$' #B2**
		-1.1 N/mm2	-0.7 N/mm2	-2.7 N/mm2	-1.8 N/mm2	-2.7 N/mm2	-1.8 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**
		15.8 N/mm2	15.8 N/mm2	15.8 N/mm2	15.8 N/mm2	15.8 N/mm2	15.8 N/mm2
	Flat Slab (FTW-FS-DS)	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**
		15.8 N/mm2	15.8 N/mm2	15.8 N/mm2	15.8 N/mm2	15.8 N/mm2	15.8 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.25 $\sqrt{f_c}$' #D**	**-0.25 $\sqrt{f_c}$' #D**	**-0.60 $\sqrt{f_c}$' #D**	**-0.60 $\sqrt{f_c}$' #D**	**-0.30 f_c' #D1**	**-0.30 f_c' #D1**
		-1.4 N/mm2	-1.4 N/mm2	-3.4 N/mm2	-3.4 N/mm2	-9.5 N/mm2	-9.5 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . -0.25 $\sqrt{f_c}$' #D**	**-0.25 $\sqrt{f_c}$' #D**	**k_σ . -0.60 $\sqrt{f_c}$' #D**	**-0.60 $\sqrt{f_c}$' #D**	**k_σ . -0.60 $\sqrt{f_c}$' #D2**	**-0.60 $\sqrt{f_c}$' #D2**
		-0.9 N/mm2	-1.4 N/mm2	-2.3 N/mm2	-3.4 N/mm2	-2.3 N/mm2	-3.4 N/mm2
		With Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar

#A: Note beam, one-way slab, two-way slab or flat slab option to cl.8.1.6.2 AS3600.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.8.6.2 and cl.9.4.2 AS3600.
#B1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to cl.9.4.2 AS3600.
#C: Note beam, one-way slab, two-way slab or flat slab option to cl.8.1.6.2 AS3600.
#D: Note beam, one-way slab, two-way slab or flat slab option to cl.8.6.2 and cl.9.4.2 AS3600.
#D1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.4.3 BS8110.
#D2: Note flat slab option to cl.9.4.2 AS3600 as an alternative to cl.6.9.5.3 AS3600.

Permissible Stress [N/mm^2] [EC2 and TR.43-2]							
		Serviceability Class U Uncracked		Serviceability Class T Transition		Serviceability Class C Cracked	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.30 f_{ci}' #A2**	**0.40 f_{ci}' #A2**	**0.30 f_{ci}' #A2**	**0.40 f_{ci}' #A2**	**0.30 f_{ci}' #A2**	**0.40 f_{ci}' #A2**
		6.0 N/mm2	8.0 N/mm2	6.0 N/mm2	8.0 N/mm2	6.0 N/mm2	8.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.30 f_{ci}' #B1**	**-0.30 f_{ci}' #B1**
		-1.5 N/mm2	-1.5 N/mm2	-1.5 N/mm2	-1.5 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-0.09 f_{ci}'$^{2/3}$ #B2**	**k_σ . -0.09 f_{ci}'$^{2/3}$ #B2**	**-0.09 f_{ci}'$^{2/3}$ #B2**	**k_σ . -0.09 f_{ci}'$^{2/3}$ #B2**	**-0.27 f_{ci}'$^{2/3}$ #B2**	**k_σ . -0.27 f_{ci}'$^{2/3}$ #B2**
		-0.7 N/mm2	-0.6 N/mm2	-0.7 N/mm2	-0.6 N/mm2	-2.0 N/mm2	-1.7 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**
		19.0 N/mm2	19.0 N/mm2	19.0 N/mm2	19.0 N/mm2	19.0 N/mm2	19.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.40 f_c' #C2**	**0.30 f_c' #C2**	**0.40 f_c' #C2**	**0.30 f_c' #C2**	**0.40 f_c' #C2**	**0.30 f_c' #C2**
		12.7 N/mm2	9.5 N/mm2	12.7 N/mm2	9.5 N/mm2	12.7 N/mm2	9.5 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.21 f_c'$^{2/3}$ #D1**	**-0.21 f_c'$^{2/3}$ #D1**	**-0.21 f_c'$^{2/3}$ #D1**	**-0.21 f_c'$^{2/3}$ #D1**	**-<.....> #D2**	**-<.....> #D2**
		-2.1 N/mm2	-2.1 N/mm2	-2.1 N/mm2	-2.1 N/mm2	-5.0 N/mm2	-5.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . -0.09 f_c'$^{2/3}$ #D3**	**-0.09 f_c'$^{2/3}$ #D3**	**k_σ . -0.09 f_c'$^{2/3}$ #D3**	**-0.09 f_c'$^{2/3}$ #D3**	**k_σ . -0.27 f_c'$^{2/3}$ #D3**	**-0.27 f_c'$^{2/3}$ #D3**
		-0.8 N/mm2	-0.9 N/mm2	-0.8 N/mm2	-0.9 N/mm2	-2.3 N/mm2	-2.7 N/mm2
		With Rebar	No Rebar	With Rebar	No Rebar	With Rebar	No Rebar

#A1: Note beam, one-way slab or two-way slab option to cl.5.8.2 TR.43-2.
#A2: Note flat slab option to T.4 TR.43-2 and cl.5.8.2 TR.43-2.
#B1: Note beam, one-way slab or two-way slab option to cl.5.8.2 TR.43-2 and analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to T.4 TR.43-2 and cl.5.8.2 TR.43-2.
#C1: Note beam, one-way slab or two-way slab option to cl.5.10.2.2 EC2.
#C2: Note flat slab option to T.4 TR.43-2.
#D1: Note beam, one-way slab or two-way slab option analogous to cl.5.8.2 TR.43-2.
#D2: Note beam, one-way slab or two-way slab option to cl.5.8.1 TR.43-2. Note -<.....> = MAX {-0.30f_c', (-0.40f_c'$^{2/3}$ to -0.50f_c'$^{2/3}$)-4N/mm^2/1.0%} as the code allows for an increase in the tensile stress limit from 1% of longitudinal steel (untensioned reinforcement) onwards (-4N/mm^2 for every 1% of longitudinal steel (untensioned reinforcement), increasing proportionally, up to the specified upper limit of -0.30f_c'). Note crack width @ 0.20mm and %rebar **0.15%**
#D3: Note flat slab option to T.4 TR.43-2.

Post-Tensioned Member (Bonded Tendons) Permissible Stress BS8110 (TR.43), ACI318, AS3600, EC2 (TR.43-2)			75%FTW-FS-DS	C35/45
Characterictic Strength of Concrete		**Cube**	**Cylinder**	
Characteristic strength of concrete (PT beam and slab), f_{cu} / f_c'		**45**	**35**	N/mm^2
Characteristic strength of concrete at transfer (PT beam and slab), f_{ci} / f_{ci}'		**25**	**20**	N/mm^2
Incorporation of CSTW-FS-DS Approach Within a FTW-FS-DS Approach	**%M_{HOG}**	**%I**	**%f_{min}**	**[1/ %M_{HOG}]. %I. %f_{min}**
ks = 75%MHOG | 0.5I | 1.3fmin [FTW-FS-DS] [BS8110 TR.43, ACI318, EC2 TR	**75%**	**0.5**	**1.3**	**0.87**
ks = 75%MHOG | 0.5I | 1.0fmin [FTW-FS-DS] [AS3600]	**75%**	**0.5**	**1.0**	**0.67**

Permissible Stress [N/mm^2] [BS8110, TR.43]							
		Serviceability Class 1 **No Flexural Tensile Stresses**		**Serviceability Class 2** **Flexural Tensile Stresses, Uncracked (No Visible Cracking)**		**Serviceability Class 3** **Flexural Tensile Stresses, Cracked**	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**
		12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2
	Flat Slab (FTW-FS-DS)	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**
		6.0 N/mm2	8.3 N/mm2	6.0 N/mm2	8.3 N/mm2	6.0 N/mm2	8.3 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-1.0 #B**	**-1.0 #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**-0.25 f_{ci} #B1**	**-0.25 f_{ci} #B1**
		-1.0 N/mm2	-1.0 N/mm2	-1.8 N/mm2	-1.8 N/mm2	-6.3 N/mm2	-6.3 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-1.0 #B**	**k_σ . -1.0 #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**k_σ . -0.36 $\sqrt{f_{ci}}$ #B**	**-0.45 $\sqrt{f_{ci}}$ #B2**	**k_σ . -0.45 $\sqrt{f_{ci}}$ #B2**
		-1.0 N/mm2	-0.9 N/mm2	-1.8 N/mm2	-1.6 N/mm2	-2.3 N/mm2	-2.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	No Rebar	No Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**
		14.9 N/mm2	18.0 N/mm2	14.9 N/mm2	18.0 N/mm2	14.9 N/mm2	18.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**
		14.9 N/mm2	10.8 N/mm2	14.9 N/mm2	10.8 N/mm2	14.9 N/mm2	10.8 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.0 #D**	**0.0 #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**-<.....> #D1**	**-<.....> #D1**
		0.0 N/mm2	0.0 N/mm2	-2.4 N/mm2	-2.4 N/mm2	-4.5 N/mm2	-4.5 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . 0.0 #D**	**0.0 #D**	**k_σ . -0.36 $\sqrt{f_{cu}}$ #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**k_σ . -0.45 $\sqrt{f_{cu}}$ #D2**	**-0.45 $\sqrt{f_{cu}}$ #D2**
		0.0 N/mm2	0.0 N/mm2	-2.1 N/mm2	-2.4 N/mm2	-2.6 N/mm2	-3.0 N/mm2
		With Rebar	No Rebar	With Rebar	No Rebar	With Rebar	No Rebar

#A1: Note beam, one-way slab or two-way slab option to cl.4.3.5.1 BS8110.
#A2: Note flat slab option to T.2 TR.43 and cl.6.10.2 TR.43.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.4.3.5.2 BS8110.
#B1: Note beam, one-way slab or two-way slab option to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to T.2 TR.43 and cl.6.10.2 TR.43.
#C1: Note beam, one-way slab or two-way slab option to cl.4.3.4.2 BS8110.
#C2: Note flat slab option to T.2 TR.43.
#D: Note beam, one-way slab, two-way slab or flat slab option to cl.4.3.4.3 BS8110.
#D1: Note beam, one-way slab or two-way slab option to cl.4.3.4.3 BS8110. Note -<.....> = MAX {-0.25f_{cu}, (0.7-1.1).(-0.58$\sqrt{f_{cu}}$ to -0.82$\sqrt{f_{cu}}$)-4N/mm^2/1.0%} as the code allows for an increase in the tensile stress limit from 1% of longitudinal steel (untensioned reinforcement) onwards (-4N/mm^2 for every 1% of longitudinal steel (untensioned reinforcement), increasing proportionally, up to the specified upper limit of -0.25f_{cu}). Note crack width @ 0.20mm, %rebar **0.15%** and overall depth, h **600** mm
#D2: Note flat slab option to T.2 TR.43.

Permissible Stress [N/mm^2] [ACI318]							
		Serviceability Class U **Uncracked**		**Serviceability Class T** **Transition**		**Serviceability Class C** **Cracked**	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**
		12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**
		12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.30 f_{ci}' #B1**	**-0.30 f_{ci}' #B1**
		-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.50 $\sqrt{f_{ci}}$' #B2**	**k_σ . -0.50 $\sqrt{f_{ci}}$' #B2**
		-1.1 N/mm2	-1.0 N/mm2	-1.1 N/mm2	-1.0 N/mm2	-2.2 N/mm2	-1.9 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	No Rebar	No Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**
		21.0 N/mm2	21.0 N/mm2	21.0 N/mm2	21.0 N/mm2	21.0 N/mm2	21.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**
		21.0 N/mm2	21.0 N/mm2	21.0 N/mm2	21.0 N/mm2	21.0 N/mm2	21.0 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.62 $\sqrt{f_c}$' #D1**	**-0.62 $\sqrt{f_c}$' #D1**	**-1.00 $\sqrt{f_c}$' #D1**	**-1.00 $\sqrt{f_c}$' #D1**	**-0.30 f_c' #D1**	**-0.30 f_c' #D1**
		-3.7 N/mm2	-3.7 N/mm2	-5.9 N/mm2	-5.9 N/mm2	-10.5 N/mm2	-10.5 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**
		-2.6 N/mm2	-3.0 N/mm2	-2.6 N/mm2	-3.0 N/mm2	-2.6 N/mm2	-3.0 N/mm2
		With Rebar	With Rebar	With Rebar	With Rebar	With Rebar	With Rebar

#A: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.3.1 ACI318.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.3.2 ACI318.
#B1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to cl.24.5.3.2.1 ACI318.
#C: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.4.1 ACI318.
#D1: Note beam, one-way slab or two-way slab option to cl.24.5.2.1 ACI318 and analogous to cl.4.3.4.3 BS8110.
#D2: Note flat slab option to cl.24.5.2.1 ACI318.

Post-Tensioned Member (Bonded Tendons) Permissible Stress BS8110 (TR.43), ACI318, AS3600, EC2 (TR.43-2)		75%FTW-FS-DS	C35/45
Characterictic Strength of Concrete	**Cube**	**Cylinder**	
Characteristic strength of concrete (PT beam and slab), f_{cu} / f_c'	**45**	**35**	N/mm^2
Characteristic strength of concrete at transfer (PT beam and slab), f_{ci} / f_{ci}'	**25**	**20**	N/mm^2

Incorporation of CSTW-FS-DS Approach Within a FTW-FS-DS Approach	$\%M_{HOG}$	%I	$\%f_{min}$	[1.2*%MHOG]. %I. %fmin
ks = 75%MHOG | 0.5I | 1.3fmin [FTW-FS-DS] [BS8110 TR.43, ACI318, EC2 TR	**75%**	**0.5**	**1.3**	**0.87**
ks = 75%MHOG | 0.5I | 1.0fmin [FTW-FS-DS] [AS3600]	**75%**	**0.5**	**1.0**	**0.67**

Permissible Stress [N/mm^2] [AS3600]

		Serviceability Class U Uncracked		Serviceability Class T Transition		Serviceability Class C Cracked	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B**	**-0.30 f_{ci}' #B1**	**-0.30 f_{ci}' #B1**
		-1.1 N/mm2	-1.1 N/mm2	-2.7 N/mm2	-2.7 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.60 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B2**	**k_σ . -0.60 $\sqrt{f_{ci}}$' #B2**
		-1.1 N/mm2	-0.7 N/mm2	-2.7 N/mm2	-1.8 N/mm2	-2.7 N/mm2	-1.8 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**
		17.5 N/mm2	17.5 N/mm2	17.5 N/mm2	17.5 N/mm2	17.5 N/mm2	17.5 N/mm2
	Flat Slab (FTW-FS-DS)	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**
		17.5 N/mm2	17.5 N/mm2	17.5 N/mm2	17.5 N/mm2	17.5 N/mm2	17.5 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.25 $\sqrt{f_c}$' #D**	**-0.25 $\sqrt{f_c}$' #D**	**-0.60 $\sqrt{f_c}$' #D**	**-0.60 $\sqrt{f_c}$' #D**	**-0.30 f_c' #D1**	**-0.30 f_c' #D1**
		-1.5 N/mm2	-1.5 N/mm2	-3.5 N/mm2	-3.5 N/mm2	-10.5 N/mm2	-10.5 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . -0.25 $\sqrt{f_c}$' #D**	**-0.25 $\sqrt{f_c}$' #D**	**k_σ . -0.60 $\sqrt{f_c}$' #D**	**-0.60 $\sqrt{f_c}$' #D**	**k_σ . -0.60 $\sqrt{f_c}$' #D2**	**-0.60 $\sqrt{f_c}$' #D2**
		-1.0 N/mm2	-1.5 N/mm2	-2.4 N/mm2	-3.5 N/mm2	-2.4 N/mm2	-3.5 N/mm2
		With Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar

#A: Note beam, one-way slab, two-way slab or flat slab option to cl.8.1.6.2 AS3600.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.8.6.2 and cl.9.4.2 AS3600.
#B1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to cl.9.4.2 AS3600.
#C: Note beam, one-way slab, two-way slab or flat slab option to cl.8.1.6.2 AS3600.
#D: Note beam, one-way slab, two-way slab or flat slab option to cl.8.6.2 and cl.9.4.2 AS3600.
#D1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.4.3 BS8110.
#D2: Note flat slab option to cl.9.4.2 AS3600 as an alternative to cl.6.9.5.3 AS3600.

Permissible Stress [N/mm^2] [EC2 and TR.43-2]

		Serviceability Class U Uncracked		Serviceability Class T Transition		Serviceability Class C Cracked	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.30 f_{ci}' #A2**	**0.40 f_{ci}' #A2**	**0.30 f_{ci}' #A2**	**0.40 f_{ci}' #A2**	**0.30 f_{ci}' #A2**	**0.40 f_{ci}' #A2**
		6.0 N/mm2	8.0 N/mm2	6.0 N/mm2	8.0 N/mm2	6.0 N/mm2	8.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.30 f_{ci}' #B1**	**-0.30 f_{ci}' #B1**
		-1.5 N/mm2	-1.5 N/mm2	-1.5 N/mm2	-1.5 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-0.09 f_{ci}'$^{2/3}$ #B2**	**k_σ . -0.09 f_{ci}'$^{2/3}$ #B2**	**-0.09 f_{ci}'$^{2/3}$ #B2**	**k_σ . -0.09 f_{ci}'$^{2/3}$ #B2**	**-0.27 f_{ci}'$^{2/3}$ #B2**	**k_σ . -0.27 f_{ci}'$^{2/3}$ #B2**
		-0.7 N/mm2	-0.6 N/mm2	-0.7 N/mm2	-0.6 N/mm2	-2.0 N/mm2	-1.7 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**
		21.0 N/mm2	21.0 N/mm2	21.0 N/mm2	21.0 N/mm2	21.0 N/mm2	21.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.40 f_c' #C2**	**0.30 f_c' #C2**	**0.40 f_c' #C2**	**0.30 f_c' #C2**	**0.40 f_c' #C2**	**0.30 f_c' #C2**
		14.0 N/mm2	10.5 N/mm2	14.0 N/mm2	10.5 N/mm2	14.0 N/mm2	10.5 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.21 f_c'$^{2/3}$ #D1**	**-0.21 f_c'$^{2/3}$ #D1**	**-0.21 f_c'$^{2/3}$ #D1**	**-0.21 f_c'$^{2/3}$ #D1**	**-<.....> #D2**	**-<.....> #D2**
		-2.2 N/mm2	-2.2 N/mm2	-2.2 N/mm2	-2.2 N/mm2	-5.3 N/mm2	-5.3 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . -0.09 f_c'$^{2/3}$ #D3**	**-0.09 f_c'$^{2/3}$ #D3**	**k_σ . -0.09 f_c'$^{2/3}$ #D3**	**-0.09 f_c'$^{2/3}$ #D3**	**k_σ . -0.27 f_c'$^{2/3}$ #D3**	**-0.27 f_c'$^{2/3}$ #D3**
		-0.8 N/mm2	-1.0 N/mm2	-0.8 N/mm2	-1.0 N/mm2	-2.5 N/mm2	-2.9 N/mm2
		With Rebar	No Rebar	With Rebar	No Rebar	With Rebar	No Rebar

#A1: Note beam, one-way slab or two-way slab option to cl.5.8.2 TR.43-2.
#A2: Note flat slab option to T.4 TR.43-2 and cl.5.8.2 TR.43-2.
#B1: Note beam, one-way slab or two-way slab option to cl.5.8.2 TR.43-2 and analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to T.4 TR.43-2 and cl.5.8.2 TR.43-2.
#C1: Note beam, one-way slab or two-way slab option to cl.5.10.2.2 EC2.
#C2: Note flat slab option to T.4 TR.43-2.
#D1: Note beam, one-way slab or two-way slab option analogous to cl.5.8.2 TR.43-2.
#D2: Note beam, one-way slab or two-way slab option to cl.5.8.1 TR.43-2. Note -<.....> = MAX {-0.30f_c', (-0.40f_c'$^{2/3}$ to -0.50f_c'$^{2/3}$)-4N/mm^2/1.0%} as the code allows for an increase in the tensile stress limit from 1% of longitudinal steel (untensioned reinforcement) onwards (-4N/mm^2 for every 1% of longitudinal steel (untensioned reinforcement), increasing proportionally, up to the specified upper limit of -0.30f_c'). Note crack width @ 0.20mm and %rebar **0.15%**
#D3: Note flat slab option to T.4 TR.43-2.

Post-Tensioned Member (Bonded Tendons) Permissible Stress BS8110 (TR.43), ACI318, AS3600, EC2 (TR.43-2)			75%FTW-FS-DS	C40/50
Characterictic Strength of Concrete		**Cube**	**Cylinder**	
Characteristic strength of concrete (PT beam and slab), f_{cu} / f_c'		**50**	**40**	N/mm^2
Characteristic strength of concrete at transfer (PT beam and slab), f_{ci} / f_{ci}'		**25**	**20**	N/mm^2
Incorporation of CSTW-FS-DS Approach Within a FTW-FS-DS Approach	**%M_{HOG}**	**%I**	**%f_{min}**	**[1.7 %M_{HOG}]. %I. %f_{min}**
ks = 75%MHOG | 0.5I | 1.3fmin [FTW-FS-DS] [BS8110 TR.43, ACI318, EC2 TR	**75%**	**0.5**	**1.3**	**0.87**
ks = 75%MHOG | 0.5I | 1.0fmin [FTW-FS-DS] [AS3600]	**75%**	**0.5**	**1.0**	**0.67**

Permissible Stress [N/mm^2] [BS8110, TR.43]							
		Serviceability Class 1 **No Flexural Tensile Stresses**		**Serviceability Class 2** **Flexural Tensile Stresses, Uncracked (No Visible Cracking)**		**Serviceability Class 3** **Flexural Tensile Stresses, Cracked**	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**
		12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2
	Flat Slab (FTW-FS-DS)	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**
		6.0 N/mm2	8.3 N/mm2	6.0 N/mm2	8.3 N/mm2	6.0 N/mm2	8.3 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-1.0 #B**	**-1.0 #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**-0.25 f_{ci} #B1**	**-0.25 f_{ci} #B1**
		-1.0 N/mm2	-1.0 N/mm2	-1.8 N/mm2	-1.8 N/mm2	-6.3 N/mm2	-6.3 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-1.0 #B**	**k_σ . -1.0 #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**k_σ . -0.36 $\sqrt{f_{ci}}$ #B**	**-0.45 $\sqrt{f_{ci}}$ #B2**	**k_σ . -0.45 $\sqrt{f_{ci}}$ #B2**
		-1.0 N/mm2	-0.9 N/mm2	-1.8 N/mm2	-1.6 N/mm2	-2.3 N/mm2	-2.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	No Rebar	No Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**
		16.5 N/mm2	20.0 N/mm2	16.5 N/mm2	20.0 N/mm2	16.5 N/mm2	20.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**
		16.5 N/mm2	12.0 N/mm2	16.5 N/mm2	12.0 N/mm2	16.5 N/mm2	12.0 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.0 #D**	**0.0 #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**-<.....> #D1**	**-<.....> #D1**
		0.0 N/mm2	0.0 N/mm2	-2.5 N/mm2	-2.5 N/mm2	-5.2 N/mm2	-5.2 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . 0.0 #D**	**0.0 #D**	**k_σ . -0.36 $\sqrt{f_{cu}}$ #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**k_σ . -0.45 $\sqrt{f_{cu}}$ #D2**	**-0.45 $\sqrt{f_{cu}}$ #D2**
		0.0 N/mm2	0.0 N/mm2	-2.2 N/mm2	-2.5 N/mm2	-2.8 N/mm2	-3.2 N/mm2
		With Rebar	No Rebar	With Rebar	No Rebar	With Rebar	No Rebar

#A1: Note beam, one-way slab or two-way slab option to cl.4.3.5.1 BS8110.
#A2: Note flat slab option to T.2 TR.43 and cl.6.10.2 TR.43.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.4.3.5.2 BS8110.
#B1: Note beam, one-way slab or two-way slab option to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to T.2 TR.43 and cl.6.10.2 TR.43.
#C1: Note beam, one-way slab or two-way slab option to cl.4.3.4.2 BS8110.
#C2: Note flat slab option to T.2 TR.43.
#D: Note beam, one-way slab, two-way slab or flat slab option to cl.4.3.4.3 BS8110.
#D1: Note beam, one-way slab or two-way slab option to cl.4.3.4.3 BS8110. Note -<.....> = MAX {-0.25f_{cu}, (0.7-1.1).(-0.58$\sqrt{f_{cu}}$ to -0.82$\sqrt{f_{cu}}$)-4N/mm^2/1.0%} as the code allows for an increase in the tensile stress limit from 1% of longitudinal steel (untensioned reinforcement) onwards (-4N/mm^2 for every 1% of longitudinal steel (untensioned reinforcement), increasing proportionally, up to the specified upper limit of -0.25f_{cu}). Note crack width @ 0.20mm, %rebar **0.15%** and overall depth, h **600** mm
#D2: Note flat slab option to T.2 TR.43.

Permissible Stress [N/mm^2] [ACI318]							
		Serviceability Class U **Uncracked**		**Serviceability Class T** **Transition**		**Serviceability Class C** **Cracked**	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**
		12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**
		12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.30 f_{ci}' #B1**	**-0.30 f_{ci}' #B1**
		-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.50 $\sqrt{f_{ci}}$' #B2**	**k_σ . -0.50 $\sqrt{f_{ci}}$' #B2**
		-1.1 N/mm2	-1.0 N/mm2	-1.1 N/mm2	-1.0 N/mm2	-2.2 N/mm2	-1.9 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	No Rebar	No Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**
		24.0 N/mm2	24.0 N/mm2	24.0 N/mm2	24.0 N/mm2	24.0 N/mm2	24.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**
		24.0 N/mm2	24.0 N/mm2	24.0 N/mm2	24.0 N/mm2	24.0 N/mm2	24.0 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.62 $\sqrt{f_c}$' #D1**	**-0.62 $\sqrt{f_c}$' #D1**	**-1.00 $\sqrt{f_c}$' #D1**	**-1.00 $\sqrt{f_c}$' #D1**	**-0.30 f_c' #D1**	**-0.30 f_c' #D1**
		-3.9 N/mm2	-3.9 N/mm2	-6.3 N/mm2	-6.3 N/mm2	-12.0 N/mm2	-12.0 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**
		-2.7 N/mm2	-3.2 N/mm2	-2.7 N/mm2	-3.2 N/mm2	-2.7 N/mm2	-3.2 N/mm2
		With Rebar	With Rebar	With Rebar	With Rebar	With Rebar	With Rebar

#A: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.3.1 ACI318.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.3.2 ACI318.
#B1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to cl.24.5.3.2.1 ACI318.
#C: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.4.1 ACI318.
#D1: Note beam, one-way slab or two-way slab option to cl.24.5.2.1 ACI318 and analogous to cl.4.3.4.3 BS8110.
#D2: Note flat slab option to cl.24.5.2.1 ACI318.

Post-Tensioned Member (Bonded Tendons) Permissible Stress BS8110 (TR.43), ACI318, AS3600, EC2 (TR.43-2)		75%FTW-FS-DS	C40/50
Characterictic Strength of Concrete	**Cube**	**Cylinder**	
Characteristic strength of concrete (PT beam and slab), f_{cu} / f_c'	**50**	**40**	N/mm^2
Characteristic strength of concrete at transfer (PT beam and slab), f_{ci} / f_{ci}'	**25**	**20**	N/mm^2
Incorporation of CSTW-FS-DS Approach Within a FTW-FS-DS Approach	**$\%M_{HOG}$**	**%I**	**$\%f_{min}$**
ks = 75%MHOG | 0.5I | 1.3fmin [FTW-FS-DS] [BS8110 TR.43, ACI318, EC2 TR	**75%**	**0.5**	**1.3**
ks = 75%MHOG | 0.5I | 1.0fmin [FTW-FS-DS] [AS3600]	**75%**	**0.5**	**1.0**

Permissible Stress [N/mm^2] [AS3600]							
		Serviceability Class U Uncracked		Serviceability Class T Transition		Serviceability Class C Cracked	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	Beam, One-Way or Two-Way Slab	$0.50\ f_{ci}'$ #A	$0.50\ f_{ci}'$ #A	$0.50\ f_{ci}'$ #A	$0.50\ f_{ci}'$ #A	$0.50\ f_{ci}'$ #A	$0.50\ f_{ci}'$ #A
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
	Flat Slab (FTW-FS-DS)	$0.50\ f_{ci}'$ #A	$0.50\ f_{ci}'$ #A	$0.50\ f_{ci}'$ #A	$0.50\ f_{ci}'$ #A	$0.50\ f_{ci}'$ #A	$0.50\ f_{ci}'$ #A
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
TLS tensile $f'_{min,t/b}$	Beam, One-Way or Two-Way Slab	$-0.25\ \sqrt{f_{ci}'}$ #B	$-0.25\ \sqrt{f_{ci}'}$ #B	$-0.60\ \sqrt{f_{ci}'}$ #B	$-0.60\ \sqrt{f_{ci}'}$ #B	$-0.30\ f_{ci}'$ #B1	$-0.30\ f_{ci}'$ #B1
		-1.1 N/mm2	-1.1 N/mm2	-2.7 N/mm2	-2.7 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	$-0.25\ \sqrt{f_{ci}'}$ #B	$k_\sigma\ .\ -0.25\ \sqrt{f_{ci}'}$ #B	$-0.60\ \sqrt{f_{ci}'}$ #B	$k_\sigma\ .\ -0.60\ \sqrt{f_{ci}'}$ #B	$-0.60\ \sqrt{f_{ci}'}$ #B2	$k_\sigma\ .\ -0.60\ \sqrt{f_{ci}'}$ #B2
		-1.1 N/mm2	-0.7 N/mm2	-2.7 N/mm2	-1.8 N/mm2	-2.7 N/mm2	-1.8 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
SLS compressive $f_{max,t/b}$	Beam, One-Way or Two-Way Slab	$0.50\ f_c'$ #C	$0.50\ f_c'$ #C	$0.50\ f_c'$ #C	$0.50\ f_c'$ #C	$0.50\ f_c'$ #C	$0.50\ f_c'$ #C
		20.0 N/mm2	20.0 N/mm2	20.0 N/mm2	20.0 N/mm2	20.0 N/mm2	20.0 N/mm2
	Flat Slab (FTW-FS-DS)	$0.50\ f_c'$ #C	$0.50\ f_c'$ #C	$0.50\ f_c'$ #C	$0.50\ f_c'$ #C	$0.50\ f_c'$ #C	$0.50\ f_c'$ #C
		20.0 N/mm2	20.0 N/mm2	20.0 N/mm2	20.0 N/mm2	20.0 N/mm2	20.0 N/mm2
SLS tensile $f_{min,t/b}$	Beam, One-Way or Two-Way Slab	$-0.25\ \sqrt{f_c'}$ #D	$-0.25\ \sqrt{f_c'}$ #D	$-0.60\ \sqrt{f_c'}$ #D	$-0.60\ \sqrt{f_c'}$ #D	$-0.30\ f_c'$ #D1	$-0.30\ f_c'$ #D1
		-1.6 N/mm2	-1.6 N/mm2	-3.8 N/mm2	-3.8 N/mm2	-12.0 N/mm2	-12.0 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	$k_\sigma\ .\ -0.25\ \sqrt{f_c'}$ #D	$-0.25\ \sqrt{f_c'}$ #D	$k_\sigma\ .\ -0.60\ \sqrt{f_c'}$ #D	$-0.60\ \sqrt{f_c'}$ #D	$k_\sigma\ .\ -0.60\ \sqrt{f_c'}$ #D2	$-0.60\ \sqrt{f_c'}$ #D2
		-1.1 N/mm2	-1.6 N/mm2	-2.5 N/mm2	-3.8 N/mm2	-2.5 N/mm2	-3.8 N/mm2
		With Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar

#A: Note beam, one-way slab, two-way slab or flat slab option to cl.8.1.6.2 AS3600.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.8.6.2 and cl.9.4.2 AS3600.
#B1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to cl.9.4.2 AS3600.
#C: Note beam, one-way slab, two-way slab or flat slab option to cl.8.1.6.2 AS3600.
#D: Note beam, one-way slab, two-way slab or flat slab option to cl.8.6.2 and cl.9.4.2 AS3600.
#D1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.4.3 BS8110.
#D2: Note flat slab option to cl.9.4.2 AS3600 as an alternative to cl.6.9.5.3 AS3600.

Permissible Stress [N/mm^2] [EC2 and TR.43-2]							
		Serviceability Class U Uncracked		Serviceability Class T Transition		Serviceability Class C Cracked	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	Beam, One-Way or Two-Way Slab	$0.50\ f_{ci}'$ #A1	$0.50\ f_{ci}'$ #A1	$0.50\ f_{ci}'$ #A1	$0.50\ f_{ci}'$ #A1	$0.50\ f_{ci}'$ #A1	$0.50\ f_{ci}'$ #A1
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
	Flat Slab (FTW-FS-DS)	$0.30\ f_{ci}'$ #A2	$0.40\ f_{ci}'$ #A2	$0.30\ f_{ci}'$ #A2	$0.40\ f_{ci}'$ #A2	$0.30\ f_{ci}'$ #A2	$0.40\ f_{ci}'$ #A2
		6.0 N/mm2	8.0 N/mm2	6.0 N/mm2	8.0 N/mm2	6.0 N/mm2	8.0 N/mm2
TLS tensile $f'_{min,t/b}$	Beam, One-Way or Two-Way Slab	$-0.21\ f_{ci}'^{2/3}$ #B1	$-0.21\ f_{ci}'^{2/3}$ #B1	$-0.21\ f_{ci}'^{2/3}$ #B1	$-0.21\ f_{ci}'^{2/3}$ #B1	$-0.30\ f_{ci}'$ #B1	$-0.30\ f_{ci}'$ #B1
		-1.5 N/mm2	-1.5 N/mm2	-1.5 N/mm2	-1.5 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	$-0.09\ f_{ci}'^{2/3}$ #B2	$k_\sigma\ .\ -0.09\ f_{ci}'^{2/3}$ #B2	$-0.09\ f_{ci}'^{2/3}$ #B2	$k_\sigma\ .\ -0.09\ f_{ci}'^{2/3}$ #B2	$-0.27\ f_{ci}'^{2/3}$ #B2	$k_\sigma\ .\ -0.27\ f_{ci}'^{2/3}$ #B2
		-0.7 N/mm2	-0.6 N/mm2	-0.7 N/mm2	-0.6 N/mm2	-2.0 N/mm2	-1.7 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
SLS compressive $f_{max,t/b}$	Beam, One-Way or Two-Way Slab	$0.60\ f_c'$ #C1	$0.60\ f_c'$ #C1	$0.60\ f_c'$ #C1	$0.60\ f_c'$ #C1	$0.60\ f_c'$ #C1	$0.60\ f_c'$ #C1
		24.0 N/mm2	24.0 N/mm2	24.0 N/mm2	24.0 N/mm2	24.0 N/mm2	24.0 N/mm2
	Flat Slab (FTW-FS-DS)	$0.40\ f_c'$ #C2	$0.30\ f_c'$ #C2	$0.40\ f_c'$ #C2	$0.30\ f_c'$ #C2	$0.40\ f_c'$ #C2	$0.30\ f_c'$ #C2
		16.0 N/mm2	12.0 N/mm2	16.0 N/mm2	12.0 N/mm2	16.0 N/mm2	12.0 N/mm2
SLS tensile $f_{min,t/b}$	Beam, One-Way or Two-Way Slab	$-0.21\ f_c'^{2/3}$ #D1	$-0.21\ f_c'^{2/3}$ #D1	$-0.21\ f_c'^{2/3}$ #D1	$-0.21\ f_c'^{2/3}$ #D1	-<.....> #D2	-<.....> #D2
		-2.5 N/mm2	-2.5 N/mm2	-2.5 N/mm2	-2.5 N/mm2	-5.8 N/mm2	-5.8 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	$k_\sigma\ .\ -0.09\ f_c'^{2/3}$ #D3	$-0.09\ f_c'^{2/3}$ #D3	$k_\sigma\ .\ -0.09\ f_c'^{2/3}$ #D3	$-0.09\ f_c'^{2/3}$ #D3	$k_\sigma\ .\ -0.27\ f_c'^{2/3}$ #D3	$-0.27\ f_c'^{2/3}$ #D3
		-0.9 N/mm2	-1.1 N/mm2	-0.9 N/mm2	-1.1 N/mm2	-2.7 N/mm2	-3.2 N/mm2
		With Rebar	No Rebar	With Rebar	No Rebar	With Rebar	No Rebar

#A1: Note beam, one-way slab or two-way slab option to cl.5.8.2 TR.43-2.
#A2: Note flat slab option to T.4 TR.43-2 and cl.5.8.2 TR.43-2.
#B1: Note beam, one-way slab or two-way slab option to cl.5.8.2 TR.43-2 and analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to T.4 TR.43-2 and cl.5.8.2 TR.43-2.
#C1: Note beam, one-way slab or two-way slab option to cl.5.10.2.2 EC2.
#C2: Note flat slab option to T.4 TR.43-2.
#D1: Note beam, one-way slab or two-way slab option analogous to cl.5.8.2 TR.43-2.
#D2: Note beam, one-way slab or two-way slab option to cl.5.8.1 TR.43-2. Note -<.....> = MAX {$-0.30f_c'$, ($-0.40f_c'^{2/3}$ to $-0.50f_c'^{2/3}$)$-4N/mm^2$/1.0%} as the code allows for an increase in the tensile stress limit from 1% of longitudinal steel (untensioned reinforcement) onwards ($-4N/mm^2$ for every 1% of longitudinal steel (untensioned reinforcement), increasing proportionally, up to the specified upper limit of $-0.30f_c'$). Note crack width @ 0.20mm and %rebar **0.15%**
#D3: Note flat slab option to T.4 TR.43-2.

Post-Tensioned Member (Bonded Tendons) Permissible Stress BS8110 (TR.43), ACI318, AS3600, EC2 (TR.43-2)			75%FTW-FS-DS	C45/55
Characterictic Strength of Concrete		**Cube**	**Cylinder**	
Characteristic strength of concrete (PT beam and slab), f_{cu} / f_c'		**55**	**45**	N/mm^2
Characteristic strength of concrete at transfer (PT beam and slab), f_{ci} / f_{ci}'		**25**	**20**	N/mm^2
Incorporation of CSTW-FS-DS Approach Within a FTW-FS-DS Approach	**%M_{HOG}**	**%I**	**%f_{min}**	**[1.7 %M_{HOG}]. %I. %f_{min}**
ks = 75%MHOG | 0.5I | 1.3fmin [FTW-FS-DS] [BS8110 TR.43, ACI318, EC2 TR	**75%**	**0.5**	**1.3**	**0.87**
ks = 75%MHOG | 0.5I | 1.0fmin [FTW-FS-DS] [AS3600]	**75%**	**0.5**	**1.0**	**0.67**

Permissible Stress [N/mm^2] [BS8110, TR.43]							
		Serviceability Class 1 **No Flexural Tensile Stresses**		**Serviceability Class 2** **Flexural Tensile Stresses, Uncracked (No Visible Cracking)**		**Serviceability Class 3** **Flexural Tensile Stresses, Cracked**	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**
		12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2
	Flat Slab (FTW-FS-DS)	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**
		6.0 N/mm2	8.3 N/mm2	6.0 N/mm2	8.3 N/mm2	6.0 N/mm2	8.3 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-1.0 #B**	**-1.0 #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**-0.25 f_{ci} #B1**	**-0.25 f_{ci} #B1**
		-1.0 N/mm2	-1.0 N/mm2	-1.8 N/mm2	-1.8 N/mm2	-6.3 N/mm2	-6.3 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-1.0 #B**	**k_σ . -1.0 #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**k_σ . -0.36 $\sqrt{f_{ci}}$ #B**	**-0.45 $\sqrt{f_{ci}}$ #B2**	**k_σ . -0.45 $\sqrt{f_{ci}}$ #B2**
		-1.0 N/mm2	-0.9 N/mm2	-1.8 N/mm2	-1.6 N/mm2	-2.3 N/mm2	-2.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	No Rebar	No Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**
		18.2 N/mm2	22.0 N/mm2	18.2 N/mm2	22.0 N/mm2	18.2 N/mm2	22.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**
		18.2 N/mm2	13.2 N/mm2	18.2 N/mm2	13.2 N/mm2	18.2 N/mm2	13.2 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.0 #D**	**0.0 #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**-<.....> #D1**	**-<.....> #D1**
		0.0 N/mm2	0.0 N/mm2	-2.7 N/mm2	-2.7 N/mm2	-5.2 N/mm2	-5.2 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . 0.0 #D**	**0.0 #D**	**k_σ . -0.36 $\sqrt{f_{cu}}$ #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**k_σ . -0.45 $\sqrt{f_{cu}}$ #D2**	**-0.45 $\sqrt{f_{cu}}$ #D2**
		0.0 N/mm2	0.0 N/mm2	-2.3 N/mm2	-2.7 N/mm2	-2.9 N/mm2	-3.3 N/mm2
		With Rebar	No Rebar	With Rebar	No Rebar	With Rebar	No Rebar

#A1: Note beam, one-way slab or two-way slab option to cl.4.3.5.1 BS8110.
#A2: Note flat slab option to T.2 TR.43 and cl.6.10.2 TR.43.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.4.3.5.2 BS8110.
#B1: Note beam, one-way slab or two-way slab option to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to T.2 TR.43 and cl.6.10.2 TR.43.
#C1: Note beam, one-way slab or two-way slab option to cl.4.3.4.2 BS8110.
#C2: Note flat slab option to T.2 TR.43.
#D: Note beam, one-way slab, two-way slab or flat slab option to cl.4.3.4.3 BS8110.
#D1: Note beam, one-way slab or two-way slab option to cl.4.3.4.3 BS8110. Note -<.....> = MAX {-0.25f_{cu}, (0.7-1.1).(-0.58$\sqrt{f_{cu}}$ to -0.82$\sqrt{f_{cu}}$)-4N/mm^2/1.0%} as the code allows for an increase in the tensile stress limit from 1% of longitudinal steel (untensioned reinforcement) onwards (-4N/mm^2 for every 1% of longitudinal steel (untensioned reinforcement), increasing proportionally, up to the specified upper limit of -0.25f_{cu}), Note crack width @ 0.20mm, %rebar **0.15%** and overall depth, h **600** mm
#D2: Note flat slab option to T.2 TR.43.

Permissible Stress [N/mm^2] [ACI318]							
		Serviceability Class U **Uncracked**		**Serviceability Class T** **Transition**		**Serviceability Class C** **Cracked**	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**
		12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**
		12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.30 f_{ci}' #B1**	**-0.30 f_{ci}' #B1**
		-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.50 $\sqrt{f_{ci}}$' #B2**	**k_σ . -0.50 $\sqrt{f_{ci}}$' #B2**
		-1.1 N/mm2	-1.0 N/mm2	-1.1 N/mm2	-1.0 N/mm2	-2.2 N/mm2	-1.9 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	No Rebar	No Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**
		27.0 N/mm2	27.0 N/mm2	27.0 N/mm2	27.0 N/mm2	27.0 N/mm2	27.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**
		27.0 N/mm2	27.0 N/mm2	27.0 N/mm2	27.0 N/mm2	27.0 N/mm2	27.0 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.62 $\sqrt{f_c}$' #D1**	**-0.62 $\sqrt{f_c}$' #D1**	**-1.00 $\sqrt{f_c}$' #D1**	**-1.00 $\sqrt{f_c}$' #D1**	**-0.30 f_c' #D1**	**-0.30 f_c' #D1**
		-4.2 N/mm2	-4.2 N/mm2	-6.7 N/mm2	-6.7 N/mm2	-13.5 N/mm2	-13.5 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**
		-2.9 N/mm2	-3.4 N/mm2	-2.9 N/mm2	-3.4 N/mm2	-2.9 N/mm2	-3.4 N/mm2
		With Rebar	With Rebar	With Rebar	With Rebar	With Rebar	With Rebar

#A: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.3.1 ACI318.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.3.2 ACI318.
#B1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to cl.24.5.3.2.1 ACI318.
#C: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.4.1 ACI318.
#D1: Note beam, one-way slab or two-way slab option to cl.24.5.2.1 ACI318 and analogous to cl.4.3.4.3 BS8110.
#D2: Note flat slab option to cl.24.5.2.1 ACI318.

Post-Tensioned Member (Bonded Tendons) Permissible Stress BS8110 (TR.43), ACI318, AS3600, EC2 (TR.43-2)			75%FTW-FS-DS	C45/55
Characterictic Strength of Concrete		**Cube**	**Cylinder**	
Characteristic strength of concrete (PT beam and slab), f_{cu} / f_c'		55	45	N/mm^2
Characteristic strength of concrete at transfer (PT beam and slab), f_{ci} / f_{ci}'		25	20	N/mm^2
Incorporation of CSTW-FS-DS Approach Within a FTW-FS-DS Approach	**%M_{HOG}**	**%I**	**%f_{min}**	**[1-%M_{HOG}].%I.%f_{min}**
ks = 75%MHOG | 0.5I | 1.3fmin [FTW-FS-DS] [BS8110 TR.43, ACI318, EC2 TR	75%	0.5	1.3	0.87
ks = 75%MHOG | 0.5I | 1.0fmin [FTW-FS-DS] [AS3600]	75%	0.5	1.0	0.67

Permissible Stress [N/mm^2] [AS3600]

		Serviceability Class U Uncracked		Serviceability Class T Transition		Serviceability Class C Cracked	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	Beam, One-Way or Two-Way Slab	$0.50 f_{ci}'$ #A	$0.50 f_{ci}'$ #A	$0.50 f_{ci}'$ #A	$0.50 f_{ci}'$ #A	$0.50 f_{ci}'$ #A	$0.50 f_{ci}'$ #A
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
	Flat Slab (FTW-FS-DS)	$0.50 f_{ci}'$ #A	$0.50 f_{ci}'$ #A	$0.50 f_{ci}'$ #A	$0.50 f_{ci}'$ #A	$0.50 f_{ci}'$ #A	$0.50 f_{ci}'$ #A
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
TLS tensile $f'_{min,t/b}$	Beam, One-Way or Two-Way Slab	$-0.25 \sqrt{f_{ci}'}$ #B	$-0.25 \sqrt{f_{ci}'}$ #B	$-0.60 \sqrt{f_{ci}'}$ #B	$-0.60 \sqrt{f_{ci}'}$ #B	$-0.30 f_{ci}'$ #B1	$-0.30 f_{ci}'$ #B1
		-1.1 N/mm2	-1.1 N/mm2	-2.7 N/mm2	-2.7 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	$-0.25 \sqrt{f_{ci}'}$ #B	$k_\sigma . -0.25 \sqrt{f_{ci}'}$ #B	$-0.60 \sqrt{f_{ci}'}$ #B	$k_\sigma . -0.60 \sqrt{f_{ci}'}$ #B	$-0.60 \sqrt{f_{ci}'}$ #B2	$k_\sigma . -0.60 \sqrt{f_{ci}'}$ #B2
		-1.1 N/mm2	-0.7 N/mm2	-2.7 N/mm2	-1.8 N/mm2	-2.7 N/mm2	-1.8 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
SLS compressive $f_{max,t/b}$	Beam, One-Way or Two-Way Slab	$0.50 f_c'$ #C	$0.50 f_c'$ #C	$0.50 f_c'$ #C	$0.50 f_c'$ #C	$0.50 f_c'$ #C	$0.50 f_c'$ #C
		22.5 N/mm2	22.5 N/mm2	22.5 N/mm2	22.5 N/mm2	22.5 N/mm2	22.5 N/mm2
	Flat Slab (FTW-FS-DS)	$0.50 f_c'$ #C	$0.50 f_c'$ #C	$0.50 f_c'$ #C	$0.50 f_c'$ #C	$0.50 f_c'$ #C	$0.50 f_c'$ #C
		22.5 N/mm2	22.5 N/mm2	22.5 N/mm2	22.5 N/mm2	22.5 N/mm2	22.5 N/mm2
SLS tensile $f_{min,t/b}$	Beam, One-Way or Two-Way Slab	$-0.25 \sqrt{f_c'}$ #D	$-0.25 \sqrt{f_c'}$ #D	$-0.60 \sqrt{f_c'}$ #D	$-0.60 \sqrt{f_c'}$ #D	$-0.30 f_c'$ #D1	$-0.30 f_c'$ #D1
		-1.7 N/mm2	-1.7 N/mm2	-4.0 N/mm2	-4.0 N/mm2	-13.5 N/mm2	-13.5 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	$k_\sigma . -0.25 \sqrt{f_c'}$ #D	$-0.25 \sqrt{f_c'}$ #D	$k_\sigma . -0.60 \sqrt{f_c'}$ #D	$-0.60 \sqrt{f_c'}$ #D	$k_\sigma . -0.60 \sqrt{f_c'}$ #D2	$-0.60 \sqrt{f_c'}$ #D2
		-1.1 N/mm2	-1.7 N/mm2	-2.7 N/mm2	-4.0 N/mm2	-2.7 N/mm2	-4.0 N/mm2
		With Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar

#A: Note beam, one-way slab, two-way slab or flat slab option to cl.8.1.6.2 AS3600.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.8.6.2 and cl.9.4.2 AS3600.
#B1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to cl.9.4.2 AS3600.
#C: Note beam, one-way slab, two-way slab or flat slab option to cl.8.1.6.2 AS3600.
#D: Note beam, one-way slab, two-way slab or flat slab option to cl.8.6.2 and cl.9.4.2 AS3600.
#D1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.4.3 BS8110.
#D2: Note flat slab option to cl.9.4.2 AS3600 as an alternative to cl.6.9.5.3 AS3600.

Permissible Stress [N/mm^2] [EC2 and TR.43-2]

		Serviceability Class U Uncracked		Serviceability Class T Transition		Serviceability Class C Cracked	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	Beam, One-Way or Two-Way Slab	$0.50 f_{ci}'$ #A1	$0.50 f_{ci}'$ #A1	$0.50 f_{ci}'$ #A1	$0.50 f_{ci}'$ #A1	$0.50 f_{ci}'$ #A1	$0.50 f_{ci}'$ #A1
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
	Flat Slab (FTW-FS-DS)	$0.30 f_{ci}'$ #A2	$0.40 f_{ci}'$ #A2	$0.30 f_{ci}'$ #A2	$0.40 f_{ci}'$ #A2	$0.30 f_{ci}'$ #A2	$0.40 f_{ci}'$ #A2
		6.0 N/mm2	8.0 N/mm2	6.0 N/mm2	8.0 N/mm2	6.0 N/mm2	8.0 N/mm2
TLS tensile $f'_{min,t/b}$	Beam, One-Way or Two-Way Slab	$-0.21 f_{ci}'^{2/3}$ #B1	$-0.21 f_{ci}'^{2/3}$ #B1	$-0.21 f_{ci}'^{2/3}$ #B1	$-0.21 f_{ci}'^{2/3}$ #B1	$-0.30 f_{ci}'$ #B1	$-0.30 f_{ci}'$ #B1
		-1.5 N/mm2	-1.5 N/mm2	-1.5 N/mm2	-1.5 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	$-0.09 f_{ci}'^{2/3}$ #B2	$k_\sigma . -0.09 f_{ci}'^{2/3}$ #B2	$-0.09 f_{ci}'^{2/3}$ #B2	$k_\sigma . -0.09 f_{ci}'^{2/3}$ #B2	$-0.27 f_{ci}'^{2/3}$ #B2	$k_\sigma . -0.27 f_{ci}'^{2/3}$ #B2
		-0.7 N/mm2	-0.6 N/mm2	-0.7 N/mm2	-0.6 N/mm2	-2.0 N/mm2	-1.7 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
SLS compressive $f_{max,t/b}$	Beam, One-Way or Two-Way Slab	$0.60 f_c'$ #C1	$0.60 f_c'$ #C1	$0.60 f_c'$ #C1	$0.60 f_c'$ #C1	$0.60 f_c'$ #C1	$0.60 f_c'$ #C1
		27.0 N/mm2	27.0 N/mm2	27.0 N/mm2	27.0 N/mm2	27.0 N/mm2	27.0 N/mm2
	Flat Slab (FTW-FS-DS)	$0.40 f_c'$ #C2	$0.30 f_c'$ #C2	$0.40 f_c'$ #C2	$0.30 f_c'$ #C2	$0.40 f_c'$ #C2	$0.30 f_c'$ #C2
		18.0 N/mm2	13.5 N/mm2	18.0 N/mm2	13.5 N/mm2	18.0 N/mm2	13.5 N/mm2
SLS tensile $f_{min,t/b}$	Beam, One-Way or Two-Way Slab	$-0.21 f_c'^{2/3}$ #D1	$-0.21 f_c'^{2/3}$ #D1	$-0.21 f_c'^{2/3}$ #D1	$-0.21 f_c'^{2/3}$ #D1	-<.......> #D2	-<.......> #D2
		-2.7 N/mm2	-2.7 N/mm2	-2.7 N/mm2	-2.7 N/mm2	-6.3 N/mm2	-6.3 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	$k_\sigma . -0.09 f_c'^{2/3}$ #D3	$-0.09 f_c'^{2/3}$ #D3	$k_\sigma . -0.09 f_c'^{2/3}$ #D3	$-0.09 f_c'^{2/3}$ #D3	$k_\sigma . -0.27 f_c'^{2/3}$ #D3	$-0.27 f_c'^{2/3}$ #D3
		-1.0 N/mm2	-1.1 N/mm2	-1.0 N/mm2	-1.1 N/mm2	-3.0 N/mm2	-3.4 N/mm2
		With Rebar	No Rebar	With Rebar	No Rebar	With Rebar	No Rebar

#A1: Note beam, one-way slab or two-way slab option to cl.5.8.2 TR.43-2.
#A2: Note flat slab option to T.4 TR.43-2 and cl.5.8.2 TR.43-2.
#B1: Note beam, one-way slab or two-way slab option to cl.5.8.2 TR.43-2 and analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to T.4 TR.43-2 and cl.5.8.2 TR.43-2.
#C1: Note beam, one-way slab or two-way slab option to cl.5.10.2.2 EC2.
#C2: Note flat slab option to T.4 TR.43-2.
#D1: Note beam, one-way slab or two-way slab option analogous to cl.5.8.2 TR.43-2.
#D2: Note beam, one-way slab or two-way slab option to cl.5.8.1 TR.43-2. Note -<.......> = MAX {$-0.30 f_c'$, ($-0.40 f_c'^{2/3}$ to $-0.50 f_c'^{2/3}$)-4N/mm^2/1.0%} as the code allows for an increase in the tensile stress limit from 1% of longitudinal steel (untensioned reinforcement) onwards (-4N/mm^2 for every 1% of longitudinal steel (untensioned reinforcement), increasing proportionally, up to the specified upper limit of $-0.30 f_c'$). Note crack width @ 0.20mm and %rebar 0.15%
#D3: Note flat slab option to T.4 TR.43-2.

Post-Tensioned Member (Bonded Tendons) Permissible Stress BS8110 (TR.43), ACI318, AS3600, EC2 (TR.43-2)			75%FTW-FS-DS	C50/60
Characterictic Strength of Concrete		**Cube**	**Cylinder**	
Characteristic strength of concrete (PT beam and slab), f_{cu} / f_c'		**60**	**50**	N/mm^2
Characteristic strength of concrete at transfer (PT beam and slab), f_{ci} / f_{ci}'		**25**	**20**	N/mm^2
Incorporation of CSTW-FS-DS Approach Within a FTW-FS-DS Approach	**%M_{HOG}**	**%I**	**%f_{min}**	**[1.7 %M_{HOG}]. %I. %f_{min}**
ks = 75%MHOG | 0.5I | 1.3fmin [FTW-FS-DS] [BS8110 TR.43, ACI318, EC2 TR	**75%**	**0.5**	**1.3**	**0.87**
ks = 75%MHOG | 0.5I | 1.0fmin [FTW-FS-DS] [AS3600]	**75%**	**0.5**	**1.0**	**0.67**

Permissible Stress [N/mm^2] [BS8110, TR.43]							
		Serviceability Class 1 **No Flexural Tensile Stresses**		**Serviceability Class 2** **Flexural Tensile Stresses, Uncracked (No Visible Cracking)**		**Serviceability Class 3** **Flexural Tensile Stresses, Cracked**	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**
		12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2
	Flat Slab (FTW-FS-DS)	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**
		6.0 N/mm2	8.3 N/mm2	6.0 N/mm2	8.3 N/mm2	6.0 N/mm2	8.3 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-1.0 #B**	**-1.0 #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**-0.25 f_{ci} #B1**	**-0.25 f_{ci} #B1**
		-1.0 N/mm2	-1.0 N/mm2	-1.8 N/mm2	-1.8 N/mm2	-6.3 N/mm2	-6.3 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-1.0 #B**	**k_σ . -1.0 #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**k_σ . -0.36 $\sqrt{f_{ci}}$ #B**	**-0.45 $\sqrt{f_{ci}}$ #B2**	**k_σ . -0.45 $\sqrt{f_{ci}}$ #B2**
		-1.0 N/mm2	-0.9 N/mm2	-1.8 N/mm2	-1.6 N/mm2	-2.3 N/mm2	-2.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	No Rebar	No Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**
		19.8 N/mm2	24.0 N/mm2	19.8 N/mm2	24.0 N/mm2	19.8 N/mm2	24.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**
		19.8 N/mm2	14.4 N/mm2	19.8 N/mm2	14.4 N/mm2	19.8 N/mm2	14.4 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.0 #D**	**0.0 #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**-<.....> #D1**	**-<.....> #D1**
		0.0 N/mm2	0.0 N/mm2	-2.8 N/mm2	-2.8 N/mm2	-5.2 N/mm2	-5.2 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . 0.0 #D**	**0.0 #D**	**k_σ . -0.36 $\sqrt{f_{cu}}$ #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**k_σ . -0.45 $\sqrt{f_{cu}}$ #D2**	**-0.45 $\sqrt{f_{cu}}$ #D2**
		0.0 N/mm2	0.0 N/mm2	-2.4 N/mm2	-2.8 N/mm2	-3.0 N/mm2	-3.5 N/mm2
		With Rebar	No Rebar	With Rebar	No Rebar	With Rebar	No Rebar

#A1: Note beam, one-way slab or two-way slab option to cl.4.3.5.1 BS8110.
#A2: Note flat slab option to T.2 TR.43 and cl.6.10.2 TR.43.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.4.3.5.2 BS8110.
#B1: Note beam, one-way slab or two-way slab option to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to T.2 TR.43 and cl.6.10.2 TR.43.
#C1: Note beam, one-way slab or two-way slab option to cl.4.3.4.2 BS8110.
#C2: Note flat slab option to T.2 TR.43.
#D: Note beam, one-way slab, two-way slab or flat slab option to cl.4.3.4.3 BS8110.
#D1: Note beam, one-way slab or two-way slab option to cl.4.3.4.3 BS8110. Note -<.....> = MAX {-0.25f_{cu}, (0.7-1.1).(-0.58$\sqrt{f_{cu}}$ to -0.82$\sqrt{f_{cu}}$)-4N/mm^2/1.0%} as the code allows for an increase in the tensile stress limit from 1% of longitudinal steel (untensioned reinforcement) onwards (-4N/mm^2 for every 1% of longitudinal steel (untensioned reinforcement), increasing proportionally, up to the specified upper limit of -0.25f_{cu}). Note crack width @ 0.20mm, %rebar **0.15%** and overall depth, h **600** mm
#D2: Note flat slab option to T.2 TR.43.

Permissible Stress [N/mm^2] [ACI318]							
		Serviceability Class U **Uncracked**		**Serviceability Class T** **Transition**		**Serviceability Class C** **Cracked**	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**
		12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**
		12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.30 f_{ci}' #B1**	**-0.30 f_{ci}' #B1**
		-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.50 $\sqrt{f_{ci}}$' #B2**	**k_σ . -0.50 $\sqrt{f_{ci}}$' #B2**
		-1.1 N/mm2	-1.0 N/mm2	-1.1 N/mm2	-1.0 N/mm2	-2.2 N/mm2	-1.9 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	No Rebar	No Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**
		30.0 N/mm2	30.0 N/mm2	30.0 N/mm2	30.0 N/mm2	30.0 N/mm2	30.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**
		30.0 N/mm2	30.0 N/mm2	30.0 N/mm2	30.0 N/mm2	30.0 N/mm2	30.0 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.62 $\sqrt{f_c}$' #D1**	**-0.62 $\sqrt{f_c}$' #D1**	**-1.00 $\sqrt{f_c}$' #D1**	**-1.00 $\sqrt{f_c}$' #D1**	**-0.30 f_c' #D1**	**-0.30 f_c' #D1**
		-4.4 N/mm2	-4.4 N/mm2	-7.1 N/mm2	-7.1 N/mm2	-15.0 N/mm2	-15.0 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**
		-3.1 N/mm2	-3.5 N/mm2	-3.1 N/mm2	-3.5 N/mm2	-3.1 N/mm2	-3.5 N/mm2
		With Rebar	With Rebar	With Rebar	With Rebar	With Rebar	With Rebar

#A: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.3.1 ACI318.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.3.2 ACI318.
#B1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to cl.24.5.3.2.1 ACI318.
#C: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.4.1 ACI318.
#D1: Note beam, one-way slab or two-way slab option to cl.24.5.2.1 ACI318 and analogous to cl.4.3.4.3 BS8110.
#D2: Note flat slab option to cl.24.5.2.1 ACI318.

Post-Tensioned Member (Bonded Tendons) Permissible Stress BS8110 (TR.43), ACI318, AS3600, EC2 (TR.43-2)			75%FTW-FS-DS	C50/60
Characterictic Strength of Concrete		**Cube**	**Cylinder**	
Characteristic strength of concrete (PT beam and slab), f_{cu} / f_c'		60	50	N/mm^2
Characteristic strength of concrete at transfer (PT beam and slab), f_{ci} / f_{ci}'		25	20	N/mm^2
Incorporation of CSTW-FS-DS Approach Within a FTW-FS-DS Approach	**%M_{HOG}**	**%I**	**%f_{min}**	**[1/%M_{HOG}].%I.%f_{mi}**
ks = 75%MHOG | 0.5I | 1.3fmin [FTW-FS-DS] [BS8110 TR.43, ACI318, EC2 TR	75%	0.5	1.3	0.87
ks = 75%MHOG | 0.5I | 1.0fmin [FTW-FS-DS] [AS3600]	75%	0.5	1.0	0.67

Permissible Stress [N/mm^2] [AS3600]

		Serviceability Class U Uncracked		Serviceability Class T Transition		Serviceability Class C Cracked	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	$0.50 f_{ci}'$ #A 10.0 N/mm2	$0.50 f_{ci}'$ #A 10.0 N/mm2	$0.50 f_{ci}'$ #A 10.0 N/mm2	$0.50 f_{ci}'$ #A 10.0 N/mm2	$0.50 f_{ci}'$ #A 10.0 N/mm2	$0.50 f_{ci}'$ #A 10.0 N/mm2
	Flat Slab (FTW-FS-DS)	$0.50 f_{ci}'$ #A 10.0 N/mm2	$0.50 f_{ci}'$ #A 10.0 N/mm2	$0.50 f_{ci}'$ #A 10.0 N/mm2	$0.50 f_{ci}'$ #A 10.0 N/mm2	$0.50 f_{ci}'$ #A 10.0 N/mm2	$0.50 f_{ci}'$ #A 10.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	$-0.25 \sqrt{f_{ci}'}$ #B -1.1 N/mm2 No Rebar	$-0.25 \sqrt{f_{ci}'}$ #B -1.1 N/mm2 No Rebar	$-0.60 \sqrt{f_{ci}'}$ #B -2.7 N/mm2 With Rebar	$-0.60 \sqrt{f_{ci}'}$ #B -2.7 N/mm2 With Rebar	$-0.30 f_{ci}'$ #B1 -6.0 N/mm2 With Rebar	$-0.30 f_{ci}'$ #B1 -6.0 N/mm2 With Rebar
	Flat Slab (FTW-FS-DS)	$-0.25 \sqrt{f_{ci}'}$ #B -1.1 N/mm2 No Rebar	$k_\sigma \cdot -0.25 \sqrt{f_{ci}'}$ #B -0.7 N/mm2 No Rebar	$-0.60 \sqrt{f_{ci}'}$ #B -2.7 N/mm2 With Rebar	$k_\sigma \cdot -0.60 \sqrt{f_{ci}'}$ #B -1.8 N/mm2 With Rebar	$-0.60 \sqrt{f_{ci}'}$ #B2 -2.7 N/mm2 With Rebar	$k_\sigma \cdot -0.60 \sqrt{f_{ci}'}$ #B2 -1.8 N/mm2 With Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	$0.50 f_c'$ #C 25.0 N/mm2	$0.50 f_c'$ #C 25.0 N/mm2	$0.50 f_c'$ #C 25.0 N/mm2	$0.50 f_c'$ #C 25.0 N/mm2	$0.50 f_c'$ #C 25.0 N/mm2	$0.50 f_c'$ #C 25.0 N/mm2
	Flat Slab (FTW-FS-DS)	$0.50 f_c'$ #C 25.0 N/mm2	$0.50 f_c'$ #C 25.0 N/mm2	$0.50 f_c'$ #C 25.0 N/mm2	$0.50 f_c'$ #C 25.0 N/mm2	$0.50 f_c'$ #C 25.0 N/mm2	$0.50 f_c'$ #C 25.0 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	$-0.25 \sqrt{f_c'}$ #D -1.8 N/mm2 No Rebar	$-0.25 \sqrt{f_c'}$ #D -1.8 N/mm2 No Rebar	$-0.60 \sqrt{f_c'}$ #D -4.2 N/mm2 With Rebar	$-0.60 \sqrt{f_c'}$ #D -4.2 N/mm2 With Rebar	$-0.30 f_c'$ #D1 -15.0 N/mm2 With Rebar	$-0.30 f_c'$ #D1 -15.0 N/mm2 With Rebar
	Flat Slab (FTW-FS-DS)	$k_\sigma \cdot -0.25 \sqrt{f_c'}$ #D -1.2 N/mm2 With Rebar	$-0.25 \sqrt{f_c'}$ #D -1.8 N/mm2 No Rebar	$k_\sigma \cdot -0.60 \sqrt{f_c'}$ #D -2.8 N/mm2 With Rebar	$-0.60 \sqrt{f_c'}$ #D -4.2 N/mm2 With Rebar	$k_\sigma \cdot -0.60 \sqrt{f_c'}$ #D2 -2.8 N/mm2 With Rebar	$-0.60 \sqrt{f_c'}$ #D2 -4.2 N/mm2 With Rebar

#A: Note beam, one-way slab, two-way slab or flat slab option to cl.8.1.6.2 AS3600.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.8.6.2 and cl.9.4.2 AS3600.
#B1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to cl.9.4.2 AS3600.
#C: Note beam, one-way slab, two-way slab or flat slab option to cl.8.1.6.2 AS3600.
#D: Note beam, one-way slab, two-way slab or flat slab option to cl.8.6.2 and cl.9.4.2 AS3600.
#D1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.4.3 BS8110.
#D2: Note flat slab option to cl.9.4.2 AS3600 as an alternative to cl.6.9.5.3 AS3600.

Permissible Stress [N/mm^2] [EC2 and TR.43-2]

		Serviceability Class U Uncracked		Serviceability Class T Transition		Serviceability Class C Cracked	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	$0.50 f_{ci}'$ #A1 10.0 N/mm2	$0.50 f_{ci}'$ #A1 10.0 N/mm2	$0.50 f_{ci}'$ #A1 10.0 N/mm2	$0.50 f_{ci}'$ #A1 10.0 N/mm2	$0.50 f_{ci}'$ #A1 10.0 N/mm2	$0.50 f_{ci}'$ #A1 10.0 N/mm2
	Flat Slab (FTW-FS-DS)	$0.30 f_{ci}'$ #A2 6.0 N/mm2	$0.40 f_{ci}'$ #A2 8.0 N/mm2	$0.30 f_{ci}'$ #A2 6.0 N/mm2	$0.40 f_{ci}'$ #A2 8.0 N/mm2	$0.30 f_{ci}'$ #A2 6.0 N/mm2	$0.40 f_{ci}'$ #A2 8.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	$-0.21 f_{ci}'^{2/3}$ #B1 -1.5 N/mm2 No Rebar	$-0.21 f_{ci}'^{2/3}$ #B1 -1.5 N/mm2 No Rebar	$-0.21 f_{ci}'^{2/3}$ #B1 -1.5 N/mm2 No Rebar	$-0.21 f_{ci}'^{2/3}$ #B1 -1.5 N/mm2 No Rebar	$-0.30 f_{ci}'$ #B1 -6.0 N/mm2 With Rebar	$-0.30 f_{ci}'$ #B1 -6.0 N/mm2 With Rebar
	Flat Slab (FTW-FS-DS)	$-0.09 f_{ci}'^{2/3}$ #B2 -0.7 N/mm2 No Rebar	$k_\sigma \cdot -0.09 f_{ci}'^{2/3}$ #B2 -0.6 N/mm2 No Rebar	$-0.09 f_{ci}'^{2/3}$ #B2 -0.7 N/mm2 No Rebar	$k_\sigma \cdot -0.09 f_{ci}'^{2/3}$ #B2 -0.6 N/mm2 No Rebar	$-0.27 f_{ci}'^{2/3}$ #B2 -2.0 N/mm2 With Rebar	$k_\sigma \cdot -0.27 f_{ci}'^{2/3}$ #B2 -1.7 N/mm2 With Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	$0.60 f_c'$ #C1 30.0 N/mm2	$0.60 f_c'$ #C1 30.0 N/mm2	$0.60 f_c'$ #C1 30.0 N/mm2	$0.60 f_c'$ #C1 30.0 N/mm2	$0.60 f_c'$ #C1 30.0 N/mm2	$0.60 f_c'$ #C1 30.0 N/mm2
	Flat Slab (FTW-FS-DS)	$0.40 f_c'$ #C2 20.0 N/mm2	$0.30 f_c'$ #C2 15.0 N/mm2	$0.40 f_c'$ #C2 20.0 N/mm2	$0.30 f_c'$ #C2 15.0 N/mm2	$0.40 f_c'$ #C2 20.0 N/mm2	$0.30 f_c'$ #C2 15.0 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	$-0.21 f_c'^{2/3}$ #D1 -2.9 N/mm2 No Rebar	$-0.21 f_c'^{2/3}$ #D1 -2.9 N/mm2 No Rebar	$-0.21 f_c'^{2/3}$ #D1 -2.9 N/mm2 No Rebar	$-0.21 f_c'^{2/3}$ #D1 -2.9 N/mm2 No Rebar	-<.......> #D2 -6.8 N/mm2 With Rebar	-<.......> #D2 -6.8 N/mm2 With Rebar
	Flat Slab (FTW-FS-DS)	$k_\sigma \cdot -0.09 f_c'^{2/3}$ #D3 -1.1 N/mm2 With Rebar	$-0.09 f_c'^{2/3}$ #D3 -1.2 N/mm2 No Rebar	$k_\sigma \cdot -0.09 f_c'^{2/3}$ #D3 -1.1 N/mm2 With Rebar	$-0.09 f_c'^{2/3}$ #D3 -1.2 N/mm2 No Rebar	$k_\sigma \cdot -0.27 f_c'^{2/3}$ #D3 -3.2 N/mm2 With Rebar	$-0.27 f_c'^{2/3}$ #D3 -3.7 N/mm2 No Rebar

#A1: Note beam, one-way slab or two-way slab option to cl.5.8.2 TR.43-2.
#A2: Note flat slab option to T.4 TR.43-2 and cl.5.8.2 TR.43-2.
#B1: Note beam, one-way slab or two-way slab option to cl.5.8.2 TR.43-2 and analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to T.4 TR.43-2 and cl.5.8.2 TR.43-2.
#C1: Note beam, one-way slab or two-way slab option to cl.5.10.2.2 EC2.
#C2: Note flat slab option to T.4 TR.43-2.
#D1: Note beam, one-way slab or two-way slab option analogous to cl.5.8.2 TR.43-2.
#D2: Note beam, one-way slab or two-way slab option to cl.5.8.1 TR.43-2. Note -<.......> = MAX {$-0.30 f_c'$, ($-0.40 f_c'^{2/3}$ to $-0.50 f_c'^{2/3}$)-4N/mm^2/1.0%} as the code allows for an increase in the tensile stress limit from 1% of longitudinal steel (untensioned reinforcement) onwards (-4N/mm^2 for every 1% of longitudinal steel (untensioned reinforcement), increasing proportionally, up to the specified upper limit of $-0.30 f_c'$). Note crack width @ 0.20mm and %rebar 0.15%
#D3: Note flat slab option to T.4 TR.43-2.

Post-Tensioned Member (Bonded Tendons) Permissible Stress BS8110 (TR.43), ACI318, AS3600, EC2 (TR.43-2)			80%FTW-FS-DS	C28/35
Characterictic Strength of Concrete		**Cube**	**Cylinder**	
Characteristic strength of concrete (PT beam and slab), f_{cu} / f_c'		**35**	**28**	N/mm^2
Characteristic strength of concrete at transfer (PT beam and slab), f_{ci} / f_{ci}'		**25**	**20**	N/mm^2
Incorporation of CSTW-FS-DS Approach Within a FTW-FS-DS Approach	**%M_{HOG}**	**%I**	**%f_{min}**	**[1.7 %M_{HOG}]. %I. %f_{min}**
ks = 80%MHOG | 0.5I | 1.3fmin [FTW-FS-DS] [BS8110 TR.43, ACI318, EC2 TR	**80%**	**0.5**	**1.3**	**0.81**
ks = 80%MHOG | 0.5I | 1.0fmin [FTW-FS-DS] [AS3600]	**80%**	**0.5**	**1.0**	**0.63**

Permissible Stress [N/mm^2] [BS8110, TR.43]							
		Serviceability Class 1 **No Flexural Tensile Stresses**		**Serviceability Class 2** **Flexural Tensile Stresses, Uncracked (No Visible Cracking)**		**Serviceability Class 3** **Flexural Tensile Stresses, Cracked**	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**
		12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2
	Flat Slab (FTW-FS-DS)	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**
		6.0 N/mm2	8.3 N/mm2	6.0 N/mm2	8.3 N/mm2	6.0 N/mm2	8.3 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-1.0 #B**	**-1.0 #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**-0.25 f_{ci} #B1**	**-0.25 f_{ci} #B1**
		-1.0 N/mm2	-1.0 N/mm2	-1.8 N/mm2	-1.8 N/mm2	-6.3 N/mm2	-6.3 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-1.0 #B**	**k_σ . -1.0 #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**k_σ . -0.36 $\sqrt{f_{ci}}$ #B**	**-0.45 $\sqrt{f_{ci}}$ #B2**	**k_σ . -0.45 $\sqrt{f_{ci}}$ #B2**
		-1.0 N/mm2	-0.8 N/mm2	-1.8 N/mm2	-1.5 N/mm2	-2.3 N/mm2	-1.8 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	No Rebar	No Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**
		11.6 N/mm2	14.0 N/mm2	11.6 N/mm2	14.0 N/mm2	11.6 N/mm2	14.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**
		11.6 N/mm2	8.4 N/mm2	11.6 N/mm2	8.4 N/mm2	11.6 N/mm2	8.4 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.0 #D**	**0.0 #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**-<.....> #D1**	**-<.....> #D1**
		0.0 N/mm2	0.0 N/mm2	-2.1 N/mm2	-2.1 N/mm2	-3.4 N/mm2	-3.4 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . 0.0 #D**	**0.0 #D**	**k_σ . -0.36 $\sqrt{f_{cu}}$ #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**k_σ . -0.45 $\sqrt{f_{cu}}$ #D2**	**-0.45 $\sqrt{f_{cu}}$ #D2**
		0.0 N/mm2	0.0 N/mm2	-1.7 N/mm2	-2.1 N/mm2	-2.2 N/mm2	-2.7 N/mm2
		With Rebar	No Rebar	With Rebar	No Rebar	With Rebar	No Rebar

#A1: Note beam, one-way slab or two-way slab option to cl.4.3.5.1 BS8110.
#A2: Note flat slab option to T.2 TR.43 and cl.6.10.2 TR.43.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.4.3.5.2 BS8110.
#B1: Note beam, one-way slab or two-way slab option to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to T.2 TR.43 and cl.6.10.2 TR.43.
#C1: Note beam, one-way slab or two-way slab option to cl.4.3.4.2 BS8110.
#C2: Note flat slab option to T.2 TR.43.
#D: Note beam, one-way slab, two-way slab or flat slab option to cl.4.3.4.3 BS8110.
#D1: Note beam, one-way slab or two-way slab option to cl.4.3.4.3 BS8110. Note -<.....> = MAX {-0.25f_{cu}, (0.7-1.1).(-0.58$\sqrt{f_{cu}}$ to -0.82$\sqrt{f_{cu}}$)-4N/mm^2/1.0%} as the code allows for an increase in the tensile stress limit from 1% of longitudinal steel (untensioned reinforcement) onwards (-4N/mm^2 for every 1% of longitudinal steel (untensioned reinforcement), increasing proportionally, up to the specified upper limit of -0.25f_{cu}). Note crack width @ 0.20mm, %rebar **0.15%** and overall depth, h **600** mm
#D2: Note flat slab option to T.2 TR.43.

Permissible Stress [N/mm^2] [ACI318]							
		Serviceability Class U **Uncracked**		**Serviceability Class T** **Transition**		**Serviceability Class C** **Cracked**	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**
		12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**
		12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.30 f_{ci}' #B1**	**-0.30 f_{ci}' #B1**
		-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.50 $\sqrt{f_{ci}}$' #B2**	**k_σ . -0.50 $\sqrt{f_{ci}}$' #B2**
		-1.1 N/mm2	-0.9 N/mm2	-1.1 N/mm2	-0.9 N/mm2	-2.2 N/mm2	-1.8 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	No Rebar	No Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**
		17.0 N/mm2	17.0 N/mm2	17.0 N/mm2	17.0 N/mm2	17.0 N/mm2	17.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**
		17.0 N/mm2	17.0 N/mm2	17.0 N/mm2	17.0 N/mm2	17.0 N/mm2	17.0 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.62 $\sqrt{f_c}$' #D1**	**-0.62 $\sqrt{f_c}$' #D1**	**-1.00 $\sqrt{f_c}$' #D1**	**-1.00 $\sqrt{f_c}$' #D1**	**-0.30 f_c' #D1**	**-0.30 f_c' #D1**
		-3.3 N/mm2	-3.3 N/mm2	-5.3 N/mm2	-5.3 N/mm2	-8.5 N/mm2	-8.5 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**
		-2.2 N/mm2	-2.7 N/mm2	-2.2 N/mm2	-2.7 N/mm2	-2.2 N/mm2	-2.7 N/mm2
		With Rebar	With Rebar	With Rebar	With Rebar	With Rebar	With Rebar

#A: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.3.1 ACI318.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.3.2 ACI318.
#B1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to cl.24.5.3.2.1 ACI318.
#C: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.4.1 ACI318.
#D1: Note beam, one-way slab or two-way slab option to cl.24.5.2.1 ACI318 and analogous to cl.4.3.4.3 BS8110.
#D2: Note flat slab option to cl.24.5.2.1 ACI318.

Post-Tensioned Member (Bonded Tendons) Permissible Stress BS8110 (TR.43), ACI318, AS3600, EC2 (TR.43-2)		80%FTW-FS-DS	C28/35
Characterictic Strength of Concrete	**Cube**	**Cylinder**	
Characteristic strength of concrete (PT beam and slab), f_{cu} / f_c'	**35**	**28**	N/mm^2
Characteristic strength of concrete at transfer (PT beam and slab), f_{ci} / f_{ci}'	**25**	**20**	N/mm^2
Incorporation of CSTW-FS-DS Approach Within a FTW-FS-DS Approach	**%M_{HOG}**	**%I**	**%f_{min}**
ks = 80%MHOG | 0.5I | 1.3fmin [FTW-FS-DS] [BS8110 TR.43, ACI318, EC2 TR	**80%**	**0.5**	**1.3**
ks = 80%MHOG | 0.5I | 1.0fmin [FTW-FS-DS] [AS3600]	**80%**	**0.5**	**1.0**

Permissible Stress [N/mm^2] [AS3600]							
		Serviceability Class U Uncracked		Serviceability Class T Transition		Serviceability Class C Cracked	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	Beam, One-Way or Two-Way Slab	0.50 f_{ci}' #A	0.50 f_{ci}' #A	0.50 f_{ci}' #A	0.50 f_{ci}' #A	0.50 f_{ci}' #A	0.50 f_{ci}' #A
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
	Flat Slab (FTW-FS-DS)	0.50 f_{ci}' #A	0.50 f_{ci}' #A	0.50 f_{ci}' #A	0.50 f_{ci}' #A	0.50 f_{ci}' #A	0.50 f_{ci}' #A
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
TLS tensile $f'_{min,t/b}$	Beam, One-Way or Two-Way Slab	-0.25 $\sqrt{f_{ci}}$' #B	-0.25 $\sqrt{f_{ci}}$' #B	-0.60 $\sqrt{f_{ci}}$' #B	-0.60 $\sqrt{f_{ci}}$' #B	-0.30 f_{ci}' #B1	-0.30 f_{ci}' #B1
		-1.1 N/mm2	-1.1 N/mm2	-2.7 N/mm2	-2.7 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	-0.25 $\sqrt{f_{ci}}$' #B	k_σ . -0.25 $\sqrt{f_{ci}}$' #B	-0.60 $\sqrt{f_{ci}}$' #B	k_σ . -0.60 $\sqrt{f_{ci}}$' #B	-0.60 $\sqrt{f_{ci}}$' #B2	k_σ . -0.60 $\sqrt{f_{ci}}$' #B2
		-1.1 N/mm2	-0.7 N/mm2	-2.7 N/mm2	-1.7 N/mm2	-2.7 N/mm2	-1.7 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
SLS compressive $f_{max,t/b}$	Beam, One-Way or Two-Way Slab	0.50 f_c' #C	0.50 f_c' #C	0.50 f_c' #C	0.50 f_c' #C	0.50 f_c' #C	0.50 f_c' #C
		14.2 N/mm2	14.2 N/mm2	14.2 N/mm2	14.2 N/mm2	14.2 N/mm2	14.2 N/mm2
	Flat Slab (FTW-FS-DS)	0.50 f_c' #C	0.50 f_c' #C	0.50 f_c' #C	0.50 f_c' #C	0.50 f_c' #C	0.50 f_c' #C
		14.2 N/mm2	14.2 N/mm2	14.2 N/mm2	14.2 N/mm2	14.2 N/mm2	14.2 N/mm2
SLS tensile $f_{min,t/b}$	Beam, One-Way or Two-Way Slab	-0.25 $\sqrt{f_c}$' #D	-0.25 $\sqrt{f_c}$' #D	-0.60 $\sqrt{f_c}$' #D	-0.60 $\sqrt{f_c}$' #D	-0.30 f_c' #D1	-0.30 f_c' #D1
		-1.3 N/mm2	-1.3 N/mm2	-3.2 N/mm2	-3.2 N/mm2	-8.5 N/mm2	-8.5 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	k_σ . -0.25 $\sqrt{f_c}$' #D	-0.25 $\sqrt{f_c}$' #D	k_σ . -0.60 $\sqrt{f_c}$' #D	-0.60 $\sqrt{f_c}$' #D	k_σ . -0.60 $\sqrt{f_c}$' #D2	-0.60 $\sqrt{f_c}$' #D2
		-0.8 N/mm2	-1.3 N/mm2	-2.0 N/mm2	-3.2 N/mm2	-2.0 N/mm2	-3.2 N/mm2
		With Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar

#A: Note beam, one-way slab, two-way slab or flat slab option to cl.8.1.6.2 AS3600.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.8.6.2 and cl.9.4.2 AS3600.
#B1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to cl.9.4.2 AS3600.
#C: Note beam, one-way slab, two-way slab or flat slab option to cl.8.1.6.2 AS3600.
#D: Note beam, one-way slab, two-way slab or flat slab option to cl.8.6.2 and cl.9.4.2 AS3600.
#D1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.4.3 BS8110.
#D2: Note flat slab option to cl.9.4.2 AS3600 as an alternative to cl.6.9.5.3 AS3600.

Permissible Stress [N/mm^2] [EC2 and TR.43-2]							
		Serviceability Class U Uncracked		Serviceability Class T Transition		Serviceability Class C Cracked	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	Beam, One-Way or Two-Way Slab	0.50 f_{ci}' #A1	0.50 f_{ci}' #A1	0.50 f_{ci}' #A1	0.50 f_{ci}' #A1	0.50 f_{ci}' #A1	0.50 f_{ci}' #A1
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
	Flat Slab (FTW-FS-DS)	0.30 f_{ci}' #A2	0.40 f_{ci}' #A2	0.30 f_{ci}' #A2	0.40 f_{ci}' #A2	0.30 f_{ci}' #A2	0.40 f_{ci}' #A2
		6.0 N/mm2	8.0 N/mm2	6.0 N/mm2	8.0 N/mm2	6.0 N/mm2	8.0 N/mm2
TLS tensile $f'_{min,t/b}$	Beam, One-Way or Two-Way Slab	-0.21 f_{ci}'$^{2/3}$ #B1	-0.21 f_{ci}'$^{2/3}$ #B1	-0.21 f_{ci}'$^{2/3}$ #B1	-0.21 f_{ci}'$^{2/3}$ #B1	-0.30 f_{ci}' #B1	-0.30 f_{ci}' #B1
		-1.5 N/mm2	-1.5 N/mm2	-1.5 N/mm2	-1.5 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	-0.09 f_{ci}'$^{2/3}$ #B2	k_σ . -0.09 f_{ci}'$^{2/3}$ #B2	-0.09 f_{ci}'$^{2/3}$ #B2	k_σ . -0.09 f_{ci}'$^{2/3}$ #B2	-0.27 f_{ci}'$^{2/3}$ #B2	k_σ . -0.27 f_{ci}'$^{2/3}$ #B2
		-0.7 N/mm2	-0.5 N/mm2	-0.7 N/mm2	-0.5 N/mm2	-2.0 N/mm2	-1.6 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
SLS compressive $f_{max,t/b}$	Beam, One-Way or Two-Way Slab	0.60 f_c' #C1	0.60 f_c' #C1	0.60 f_c' #C1	0.60 f_c' #C1	0.60 f_c' #C1	0.60 f_c' #C1
		17.0 N/mm2	17.0 N/mm2	17.0 N/mm2	17.0 N/mm2	17.0 N/mm2	17.0 N/mm2
	Flat Slab (FTW-FS-DS)	0.40 f_c' #C2	0.30 f_c' #C2	0.40 f_c' #C2	0.30 f_c' #C2	0.40 f_c' #C2	0.30 f_c' #C2
		11.3 N/mm2	8.5 N/mm2	11.3 N/mm2	8.5 N/mm2	11.3 N/mm2	8.5 N/mm2
SLS tensile $f_{min,t/b}$	Beam, One-Way or Two-Way Slab	-0.21 f_c'$^{2/3}$ #D1	-0.21 f_c'$^{2/3}$ #D1	-0.21 f_c'$^{2/3}$ #D1	-0.21 f_c'$^{2/3}$ #D1	-<.....> #D2	-<.....> #D2
		-2.0 N/mm2	-2.0 N/mm2	-2.0 N/mm2	-2.0 N/mm2	-4.6 N/mm2	-4.6 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	k_σ . -0.09 f_c'$^{2/3}$ #D3	-0.09 f_c'$^{2/3}$ #D3	k_σ . -0.09 f_c'$^{2/3}$ #D3	-0.09 f_c'$^{2/3}$ #D3	k_σ . -0.27 f_c'$^{2/3}$ #D3	-0.27 f_c'$^{2/3}$ #D3
		-0.7 N/mm2	-0.8 N/mm2	-0.7 N/mm2	-0.8 N/mm2	-2.0 N/mm2	-2.5 N/mm2
		With Rebar	No Rebar	With Rebar	No Rebar	With Rebar	No Rebar

#A1: Note beam, one-way slab or two-way slab option to cl.5.8.2 TR.43-2.
#A2: Note flat slab option to T.4 TR.43-2 and cl.5.8.2 TR.43-2.
#B1: Note beam, one-way slab or two-way slab option to cl.5.8.2 TR.43-2 and analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to T.4 TR.43-2 and cl.5.8.2 TR.43-2.
#C1: Note beam, one-way slab or two-way slab option to cl.5.10.2.2 EC2.
#C2: Note flat slab option to T.4 TR.43-2.
#D1: Note beam, one-way slab or two-way slab option analogous to cl.5.8.2 TR.43-2.
#D2: Note beam, one-way slab or two-way slab option to cl.5.8.1 TR.43-2. Note -<.....> = MAX {-0.30f_c', (-0.40f_c'$^{2/3}$ to -0.50f_c'$^{2/3}$)-4N/mm^2/1.0%} as the code allows for an increase in the tensile stress limit from 1% of longitudinal steel (untensioned reinforcement) onwards (-4N/mm^2 for every 1% of longitudinal steel (untensioned reinforcement), increasing proportionally, up to the specified upper limit of -0.30f_c'). Note crack width @ 0.20mm and %rebar **0.15%**
#D3: Note flat slab option to T.4 TR.43-2.

Post-Tensioned Member (Bonded Tendons) Permissible Stress BS8110 (TR.43), ACI318, AS3600, EC2 (TR.43-2)			80%FTW-FS-DS	C32/40
Characterictic Strength of Concrete		**Cube**	**Cylinder**	
Characteristic strength of concrete (PT beam and slab), f_{cu} / f_c'		**40**	**32**	N/mm^2
Characteristic strength of concrete at transfer (PT beam and slab), f_{ci} / f_{ci}'		**25**	**20**	N/mm^2
Incorporation of CSTW-FS-DS Approach Within a FTW-FS-DS Approach	**%M_{HOG}**	**%I**	**%f_{min}**	**[1.7 %M_{HOG}]. %I. %f_{min}**
ks = 80%MHOG | 0.5I | 1.3fmin [FTW-FS-DS] [BS8110 TR.43, ACI318, EC2 TR	**80%**	**0.5**	**1.3**	**0.81**
ks = 80%MHOG | 0.5I | 1.0fmin [FTW-FS-DS] [AS3600]	**80%**	**0.5**	**1.0**	**0.63**

Permissible Stress [N/mm^2] [BS8110, TR.43]							
		Serviceability Class 1 **No Flexural Tensile Stresses**		**Serviceability Class 2** **Flexural Tensile Stresses, Uncracked (No Visible Cracking)**		**Serviceability Class 3** **Flexural Tensile Stresses, Cracked**	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**
		12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2
	Flat Slab (FTW-FS-DS)	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**
		6.0 N/mm2	8.3 N/mm2	6.0 N/mm2	8.3 N/mm2	6.0 N/mm2	8.3 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-1.0 #B**	**-1.0 #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**-0.25 f_{ci} #B1**	**-0.25 f_{ci} #B1**
		-1.0 N/mm2	-1.0 N/mm2	-1.8 N/mm2	-1.8 N/mm2	-6.3 N/mm2	-6.3 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-1.0 #B**	**k_σ . -1.0 #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**k_σ . -0.36 $\sqrt{f_{ci}}$ #B**	**-0.45 $\sqrt{f_{ci}}$ #B2**	**k_σ . -0.45 $\sqrt{f_{ci}}$ #B2**
		-1.0 N/mm2	-0.8 N/mm2	-1.8 N/mm2	-1.5 N/mm2	-2.3 N/mm2	-1.8 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	No Rebar	No Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**
		13.2 N/mm2	16.0 N/mm2	13.2 N/mm2	16.0 N/mm2	13.2 N/mm2	16.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**
		13.2 N/mm2	9.6 N/mm2	13.2 N/mm2	9.6 N/mm2	13.2 N/mm2	9.6 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.0 #D**	**0.0 #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**-<.....> #D1**	**-<.....> #D1**
		0.0 N/mm2	0.0 N/mm2	-2.3 N/mm2	-2.3 N/mm2	-4.5 N/mm2	-4.5 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . 0.0 #D**	**0.0 #D**	**k_σ . -0.36 $\sqrt{f_{cu}}$ #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**k_σ . -0.45 $\sqrt{f_{cu}}$ #D2**	**-0.45 $\sqrt{f_{cu}}$ #D2**
		0.0 N/mm2	0.0 N/mm2	-1.8 N/mm2	-2.3 N/mm2	-2.3 N/mm2	-2.8 N/mm2
		With Rebar	No Rebar	With Rebar	No Rebar	With Rebar	No Rebar

#A1: Note beam, one-way slab or two-way slab option to cl.4.3.5.1 BS8110.
#A2: Note flat slab option to T.2 TR.43 and cl.6.10.2 TR.43.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.4.3.5.2 BS8110.
#B1: Note beam, one-way slab or two-way slab option to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to T.2 TR.43 and cl.6.10.2 TR.43.
#C1: Note beam, one-way slab or two-way slab option to cl.4.3.4.2 BS8110.
#C2: Note flat slab option to T.2 TR.43.
#D: Note beam, one-way slab, two-way slab or flat slab option to cl.4.3.4.3 BS8110.
#D1: Note beam, one-way slab or two-way slab option to cl.4.3.4.3 BS8110. Note -<.....> = MAX {-0.25f_{cu}, (0.7-1.1).(-0.58$\sqrt{f_{cu}}$ to -0.82$\sqrt{f_{cu}}$)-4N/mm^2/1.0%} as the code allows for an increase in the tensile stress limit from 1% of longitudinal steel (untensioned reinforcement) onwards (-4N/mm^2 for every 1% of longitudinal steel (untensioned reinforcement), increasing proportionally, up to the specified upper limit of -0.25f_{cu}). Note crack width @ 0.20mm, %rebar **0.15%** and overall depth, h **600** mm
#D2: Note flat slab option to T.2 TR.43.

Permissible Stress [N/mm^2] [ACI318]							
		Serviceability Class U **Uncracked**		**Serviceability Class T** **Transition**		**Serviceability Class C** **Cracked**	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**
		12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**
		12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.30 f_{ci}' #B1**	**-0.30 f_{ci}' #B1**
		-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.50 $\sqrt{f_{ci}}$' #B2**	**k_σ . -0.50 $\sqrt{f_{ci}}$' #B2**
		-1.1 N/mm2	-0.9 N/mm2	-1.1 N/mm2	-0.9 N/mm2	-2.2 N/mm2	-1.8 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	No Rebar	No Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**
		19.0 N/mm2	19.0 N/mm2	19.0 N/mm2	19.0 N/mm2	19.0 N/mm2	19.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**
		19.0 N/mm2	19.0 N/mm2	19.0 N/mm2	19.0 N/mm2	19.0 N/mm2	19.0 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.62 $\sqrt{f_c}$' #D1**	**-0.62 $\sqrt{f_c}$' #D1**	**-1.00 $\sqrt{f_c}$' #D1**	**-1.00 $\sqrt{f_c}$' #D1**	**-0.30 f_c' #D1**	**-0.30 f_c' #D1**
		-3.5 N/mm2	-3.5 N/mm2	-5.6 N/mm2	-5.6 N/mm2	-9.5 N/mm2	-9.5 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**
		-2.3 N/mm2	-2.8 N/mm2	-2.3 N/mm2	-2.8 N/mm2	-2.3 N/mm2	-2.8 N/mm2
		With Rebar	With Rebar	With Rebar	With Rebar	With Rebar	With Rebar

#A: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.3.1 ACI318.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.3.2 ACI318.
#B1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to cl.24.5.3.2.1 ACI318.
#C: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.4.1 ACI318.
#D1: Note beam, one-way slab or two-way slab option to cl.24.5.2.1 ACI318 and analogous to cl.4.3.4.3 BS8110.
#D2: Note flat slab option to cl.24.5.2.1 ACI318.

Post-Tensioned Member (Bonded Tendons) Permissible Stress BS8110 (TR.43), ACI318, AS3600, EC2 (TR.43-2)		80%FTW-FS-DS	C32/40
Characterictic Strength of Concrete	**Cube**	**Cylinder**	
Characteristic strength of concrete (PT beam and slab), f_{cu} / f_c'	**40**	**32**	N/mm^2
Characteristic strength of concrete at transfer (PT beam and slab), f_{ci} / f_{ci}'	**25**	**20**	N/mm^2

Incorporation of CSTW-FS-DS Approach Within a FTW-FS-DS Approach	**$\%M_{HOG}$**	**%I**	**$\%f_{min}$**	**[1.] $\%M_{HOG}$]. %I. $\%f_{min}$**
ks = 80%MHOG | 0.5I | 1.3fmin [FTW-FS-DS] [BS8110 TR.43, ACI318, EC2 TR	**80%**	**0.5**	**1.3**	**0.81**
ks = 80%MHOG | 0.5I | 1.0fmin [FTW-FS-DS] [AS3600]	**80%**	**0.5**	**1.0**	**0.63**

Permissible Stress [N/mm^2] [AS3600]

		Serviceability Class U Uncracked		Serviceability Class T Transition		Serviceability Class C Cracked	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B**	**-0.30 f_{ci}' #B1**	**-0.30 f_{ci}' #B1**
		-1.1 N/mm2	-1.1 N/mm2	-2.7 N/mm2	-2.7 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.60 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B2**	**k_σ . -0.60 $\sqrt{f_{ci}}$' #B2**
		-1.1 N/mm2	-0.7 N/mm2	-2.7 N/mm2	-1.7 N/mm2	-2.7 N/mm2	-1.7 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**
		15.8 N/mm2	15.8 N/mm2	15.8 N/mm2	15.8 N/mm2	15.8 N/mm2	15.8 N/mm2
	Flat Slab (FTW-FS-DS)	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**
		15.8 N/mm2	15.8 N/mm2	15.8 N/mm2	15.8 N/mm2	15.8 N/mm2	15.8 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.25 $\sqrt{f_c}$' #D**	**-0.25 $\sqrt{f_c}$' #D**	**-0.60 $\sqrt{f_c}$' #D**	**-0.60 $\sqrt{f_c}$' #D**	**-0.30 f_c' #D1**	**-0.30 f_c' #D1**
		-1.4 N/mm2	-1.4 N/mm2	-3.4 N/mm2	-3.4 N/mm2	-9.5 N/mm2	-9.5 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . -0.25 $\sqrt{f_c}$' #D**	**-0.25 $\sqrt{f_c}$' #D**	**k_σ . -0.60 $\sqrt{f_c}$' #D**	**-0.60 $\sqrt{f_c}$' #D**	**k_σ . -0.60 $\sqrt{f_c}$' #D2**	**-0.60 $\sqrt{f_c}$' #D2**
		-0.9 N/mm2	-1.4 N/mm2	-2.1 N/mm2	-3.4 N/mm2	-2.1 N/mm2	-3.4 N/mm2
		With Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar

#A: Note beam, one-way slab, two-way slab or flat slab option to cl.8.1.6.2 AS3600.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.8.6.2 and cl.9.4.2 AS3600.
#B1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to cl.9.4.2 AS3600.
#C: Note beam, one-way slab, two-way slab or flat slab option to cl.8.1.6.2 AS3600.
#D: Note beam, one-way slab, two-way slab or flat slab option to cl.8.6.2 and cl.9.4.2 AS3600.
#D1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.4.3 BS8110.
#D2: Note flat slab option to cl.9.4.2 AS3600 as an alternative to cl.6.9.5.3 AS3600.

Permissible Stress [N/mm^2] [EC2 and TR.43-2]

		Serviceability Class U Uncracked		Serviceability Class T Transition		Serviceability Class C Cracked	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.30 f_{ci}' #A2**	**0.40 f_{ci}' #A2**	**0.30 f_{ci}' #A2**	**0.40 f_{ci}' #A2**	**0.30 f_{ci}' #A2**	**0.40 f_{ci}' #A2**
		6.0 N/mm2	8.0 N/mm2	6.0 N/mm2	8.0 N/mm2	6.0 N/mm2	8.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.30 f_{ci}' #B1**	**-0.30 f_{ci}' #B1**
		-1.5 N/mm2	-1.5 N/mm2	-1.5 N/mm2	-1.5 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-0.09 f_{ci}'$^{2/3}$ #B2**	**k_σ . -0.09 f_{ci}'$^{2/3}$ #B2**	**-0.09 f_{ci}'$^{2/3}$ #B2**	**k_σ . -0.09 f_{ci}'$^{2/3}$ #B2**	**-0.27 f_{ci}'$^{2/3}$ #B2**	**k_σ . -0.27 f_{ci}'$^{2/3}$ #B2**
		-0.7 N/mm2	-0.5 N/mm2	-0.7 N/mm2	-0.5 N/mm2	-2.0 N/mm2	-1.6 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**
		19.0 N/mm2	19.0 N/mm2	19.0 N/mm2	19.0 N/mm2	19.0 N/mm2	19.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.40 f_c' #C2**	**0.30 f_c' #C2**	**0.40 f_c' #C2**	**0.30 f_c' #C2**	**0.40 f_c' #C2**	**0.30 f_c' #C2**
		12.7 N/mm2	9.5 N/mm2	12.7 N/mm2	9.5 N/mm2	12.7 N/mm2	9.5 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.21 f_c'$^{2/3}$ #D1**	**-0.21 f_c'$^{2/3}$ #D1**	**-0.21 f_c'$^{2/3}$ #D1**	**-0.21 f_c'$^{2/3}$ #D1**	**-<.....> #D2**	**-<.....> #D2**
		-2.1 N/mm2	-2.1 N/mm2	-2.1 N/mm2	-2.1 N/mm2	-5.0 N/mm2	-5.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . -0.09 f_c'$^{2/3}$ #D3**	**-0.09 f_c'$^{2/3}$ #D3**	**k_σ . -0.09 f_c'$^{2/3}$ #D3**	**-0.09 f_c'$^{2/3}$ #D3**	**k_σ . -0.27 f_c'$^{2/3}$ #D3**	**-0.27 f_c'$^{2/3}$ #D3**
		-0.7 N/mm2	-0.9 N/mm2	-0.7 N/mm2	-0.9 N/mm2	-2.2 N/mm2	-2.7 N/mm2
		With Rebar	No Rebar	With Rebar	No Rebar	With Rebar	No Rebar

#A1: Note beam, one-way slab or two-way slab option to cl.5.8.2 TR.43-2.
#A2: Note flat slab option to T.4 TR.43-2 and cl.5.8.2 TR.43-2.
#B1: Note beam, one-way slab or two-way slab option to cl.5.8.2 TR.43-2 and analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to T.4 TR.43-2 and cl.5.8.2 TR.43-2.
#C1: Note beam, one-way slab or two-way slab option to cl.5.10.2.2 EC2.
#C2: Note flat slab option to T.4 TR.43-2.
#D1: Note beam, one-way slab or two-way slab option analogous to cl.5.8.2 TR.43-2.
#D2: Note beam, one-way slab or two-way slab option to cl.5.8.1 TR.43-2. Note -<.....> = MAX {-0.30f_c', (-0.40f_c'$^{2/3}$ to -0.50f_c'$^{2/3}$)-4N/mm^2/1.0%} as the code allows for an increase in the tensile stress limit from 1% of longitudinal steel (untensioned reinforcement) onwards (-4N/mm^2 for every 1% of longitudinal steel (untensioned reinforcement), increasing proportionally, up to the specified upper limit of -0.30f_c'). Note crack width @ 0.20mm and %rebar **0.15%**
#D3: Note flat slab option to T.4 TR.43-2.

Post-Tensioned Member (Bonded Tendons) Permissible Stress BS8110 (TR.43), ACI318, AS3600, EC2 (TR.43-2)			80%FTW-FS-DS	C35/45
Characterictic Strength of Concrete		**Cube**	**Cylinder**	
Characteristic strength of concrete (PT beam and slab), f_{cu} / f_c'		**45**	**35**	N/mm^2
Characteristic strength of concrete at transfer (PT beam and slab), f_{ci} / f_{ci}'		**25**	**20**	N/mm^2
Incorporation of CSTW-FS-DS Approach Within a FTW-FS-DS Approach	**%M_{HOG}**	**%I**	**%f_{min}**	**[1.7 %M_{HOG}]. %I. %f_{min}**
ks = 80%MHOG | 0.5I | 1.3fmin [FTW-FS-DS] [BS8110 TR.43, ACI318, EC2 TR	**80%**	**0.5**	**1.3**	**0.81**
ks = 80%MHOG | 0.5I | 1.0fmin [FTW-FS-DS] [AS3600]	**80%**	**0.5**	**1.0**	**0.63**

Permissible Stress [N/mm^2] [BS8110, TR.43]							
		Serviceability Class 1 **No Flexural Tensile Stresses**		**Serviceability Class 2** **Flexural Tensile Stresses, Uncracked (No Visible Cracking)**		**Serviceability Class 3** **Flexural Tensile Stresses, Cracked**	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**
		12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2
	Flat Slab (FTW-FS-DS)	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**
		6.0 N/mm2	8.3 N/mm2	6.0 N/mm2	8.3 N/mm2	6.0 N/mm2	8.3 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-1.0 #B**	**-1.0 #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**-0.25 f_{ci} #B1**	**-0.25 f_{ci} #B1**
		-1.0 N/mm2	-1.0 N/mm2	-1.8 N/mm2	-1.8 N/mm2	-6.3 N/mm2	-6.3 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-1.0 #B**	**k_σ . -1.0 #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**k_σ . -0.36 $\sqrt{f_{ci}}$ #B**	**-0.45 $\sqrt{f_{ci}}$ #B2**	**k_σ . -0.45 $\sqrt{f_{ci}}$ #B2**
		-1.0 N/mm2	-0.8 N/mm2	-1.8 N/mm2	-1.5 N/mm2	-2.3 N/mm2	-1.8 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	No Rebar	No Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**
		14.9 N/mm2	18.0 N/mm2	14.9 N/mm2	18.0 N/mm2	14.9 N/mm2	18.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**
		14.9 N/mm2	10.8 N/mm2	14.9 N/mm2	10.8 N/mm2	14.9 N/mm2	10.8 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.0 #D**	**0.0 #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**-<.....> #D1**	**-<.....> #D1**
		0.0 N/mm2	0.0 N/mm2	-2.4 N/mm2	-2.4 N/mm2	-4.5 N/mm2	-4.5 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . 0.0 #D**	**0.0 #D**	**k_σ . -0.36 $\sqrt{f_{cu}}$ #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**k_σ . -0.45 $\sqrt{f_{cu}}$ #D2**	**-0.45 $\sqrt{f_{cu}}$ #D2**
		0.0 N/mm2	0.0 N/mm2	-2.0 N/mm2	-2.4 N/mm2	-2.5 N/mm2	-3.0 N/mm2
		With Rebar	No Rebar	With Rebar	No Rebar	With Rebar	No Rebar

#A1: Note beam, one-way slab or two-way slab option to cl.4.3.5.1 BS8110.
#A2: Note flat slab option to T.2 TR.43 and cl.6.10.2 TR.43.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.4.3.5.2 BS8110.
#B1: Note beam, one-way slab or two-way slab option to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to T.2 TR.43 and cl.6.10.2 TR.43.
#C1: Note beam, one-way slab or two-way slab option to cl.4.3.4.2 BS8110.
#C2: Note flat slab option to T.2 TR.43.
#D: Note beam, one-way slab, two-way slab or flat slab option to cl.4.3.4.3 BS8110.
#D1: Note beam, one-way slab or two-way slab option to cl.4.3.4.3 BS8110. Note -<.....> = MAX {-0.25f_{cu}, (0.7-1.1).(-0.58$\sqrt{f_{cu}}$ to -0.82$\sqrt{f_{cu}}$)-4N/mm^2/1.0%} as the code allows for an increase in the tensile stress limit from 1% of longitudinal steel (untensioned reinforcement) onwards (-4N/mm^2 for every 1% of longitudinal steel (untensioned reinforcement), increasing proportionally, up to the specified upper limit of -0.25f_{cu}). Note crack width @ 0.20mm, %rebar **0.15%** and overall depth, h **600** mm
#D2: Note flat slab option to T.2 TR.43.

Permissible Stress [N/mm^2] [ACI318]							
		Serviceability Class U **Uncracked**		**Serviceability Class T** **Transition**		**Serviceability Class C** **Cracked**	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**
		12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**
		12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.30 f_{ci}' #B1**	**-0.30 f_{ci}' #B1**
		-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.50 $\sqrt{f_{ci}}$' #B2**	**k_σ . -0.50 $\sqrt{f_{ci}}$' #B2**
		-1.1 N/mm2	-0.9 N/mm2	-1.1 N/mm2	-0.9 N/mm2	-2.2 N/mm2	-1.8 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	No Rebar	No Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**
		21.0 N/mm2	21.0 N/mm2	21.0 N/mm2	21.0 N/mm2	21.0 N/mm2	21.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**
		21.0 N/mm2	21.0 N/mm2	21.0 N/mm2	21.0 N/mm2	21.0 N/mm2	21.0 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.62 $\sqrt{f_c}$' #D1**	**-0.62 $\sqrt{f_c}$' #D1**	**-1.00 $\sqrt{f_c}$' #D1**	**-1.00 $\sqrt{f_c}$' #D1**	**-0.30 f_c' #D1**	**-0.30 f_c' #D1**
		-3.7 N/mm2	-3.7 N/mm2	-5.9 N/mm2	-5.9 N/mm2	-10.5 N/mm2	-10.5 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**
		-2.4 N/mm2	-3.0 N/mm2	-2.4 N/mm2	-3.0 N/mm2	-2.4 N/mm2	-3.0 N/mm2
		With Rebar	With Rebar	With Rebar	With Rebar	With Rebar	With Rebar

#A: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.3.1 ACI318.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.3.2 ACI318.
#B1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to cl.24.5.3.2.1 ACI318.
#C: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.4.1 ACI318.
#D1: Note beam, one-way slab or two-way slab option to cl.24.5.2.1 ACI318 and analogous to cl.4.3.4.3 BS8110.
#D2: Note flat slab option to cl.24.5.2.1 ACI318.

Post-Tensioned Member (Bonded Tendons) Permissible Stress BS8110 (TR.43), ACI318, AS3600, EC2 (TR.43-2)		80%FTW-FS-DS		C35/45
Characterictic Strength of Concrete		**Cube**	**Cylinder**	
Characteristic strength of concrete (PT beam and slab), f_{cu} / f_c'		45	35	N/mm²
Characteristic strength of concrete at transfer (PT beam and slab), f_{ci} / f_{ci}'		25	20	N/mm²
Incorporation of CSTW-FS-DS Approach Within a FTW-FS-DS Approach	**%M_{HOG}**	**%I**	**%f_{min}**	**[1/%M_{HOG}].%I.%f_{min}**
ks = 80%MHOG | 0.5I | 1.3fmin [FTW-FS-DS] [BS8110 TR.43, ACI318, EC2 TR	80%	0.5	1.3	0.81
ks = 80%MHOG | 0.5I | 1.0fmin [FTW-FS-DS] [AS3600]	80%	0.5	1.0	0.63

Permissible Stress [N/mm²] [AS3600]

		Serviceability Class U Uncracked		Serviceability Class T Transition		Serviceability Class C Cracked	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	$0.50 f_{ci}'$ #A	$0.50 f_{ci}'$ #A	$0.50 f_{ci}'$ #A	$0.50 f_{ci}'$ #A	$0.50 f_{ci}'$ #A	$0.50 f_{ci}'$ #A
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
	Flat Slab (FTW-FS-DS)	$0.50 f_{ci}'$ #A	$0.50 f_{ci}'$ #A	$0.50 f_{ci}'$ #A	$0.50 f_{ci}'$ #A	$0.50 f_{ci}'$ #A	$0.50 f_{ci}'$ #A
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	$-0.25 \sqrt{f_{ci}'}$ #B	$-0.25 \sqrt{f_{ci}'}$ #B	$-0.60 \sqrt{f_{ci}'}$ #B	$-0.60 \sqrt{f_{ci}'}$ #B	$-0.30 f_{ci}'$ #B1	$-0.30 f_{ci}'$ #B1
		-1.1 N/mm2	-1.1 N/mm2	-2.7 N/mm2	-2.7 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	$-0.25 \sqrt{f_{ci}'}$ #B	$k_\sigma \cdot -0.25 \sqrt{f_{ci}'}$ #B	$-0.60 \sqrt{f_{ci}'}$ #B	$k_\sigma \cdot -0.60 \sqrt{f_{ci}'}$ #B	$-0.60 \sqrt{f_{ci}'}$ #B2	$k_\sigma \cdot -0.60 \sqrt{f_{ci}'}$ #B2
		-1.1 N/mm2	-0.7 N/mm2	-2.7 N/mm2	-1.7 N/mm2	-2.7 N/mm2	-1.7 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	$0.50 f_c'$ #C	$0.50 f_c'$ #C	$0.50 f_c'$ #C	$0.50 f_c'$ #C	$0.50 f_c'$ #C	$0.50 f_c'$ #C
		17.5 N/mm2	17.5 N/mm2	17.5 N/mm2	17.5 N/mm2	17.5 N/mm2	17.5 N/mm2
	Flat Slab (FTW-FS-DS)	$0.50 f_c'$ #C	$0.50 f_c'$ #C	$0.50 f_c'$ #C	$0.50 f_c'$ #C	$0.50 f_c'$ #C	$0.50 f_c'$ #C
		17.5 N/mm2	17.5 N/mm2	17.5 N/mm2	17.5 N/mm2	17.5 N/mm2	17.5 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	$-0.25 \sqrt{f_c'}$ #D	$-0.25 \sqrt{f_c'}$ #D	$-0.60 \sqrt{f_c'}$ #D	$-0.60 \sqrt{f_c'}$ #D	$-0.30 f_c'$ #D1	$-0.30 f_c'$ #D1
		-1.5 N/mm2	-1.5 N/mm2	-3.5 N/mm2	-3.5 N/mm2	-10.5 N/mm2	-10.5 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	$k_\sigma \cdot -0.25 \sqrt{f_c'}$ #D	$-0.25 \sqrt{f_c'}$ #D	$k_\sigma \cdot -0.60 \sqrt{f_c'}$ #D	$-0.60 \sqrt{f_c'}$ #D	$k_\sigma \cdot -0.60 \sqrt{f_c'}$ #D2	$-0.60 \sqrt{f_c'}$ #D2
		-0.9 N/mm2	-1.5 N/mm2	-2.2 N/mm2	-3.5 N/mm2	-2.2 N/mm2	-3.5 N/mm2
		With Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar

#A: Note beam, one-way slab, two-way slab or flat slab option to cl.8.1.6.2 AS3600.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.8.6.2 and cl.9.4.2 AS3600.
#B1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to cl.9.4.2 AS3600.
#C: Note beam, one-way slab, two-way slab or flat slab option to cl.8.1.6.2 AS3600.
#D: Note beam, one-way slab, two-way slab or flat slab option to cl.8.6.2 and cl.9.4.2 AS3600.
#D1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.4.3 BS8110.
#D2: Note flat slab option to cl.9.4.2 AS3600 as an alternative to cl.6.9.5.3 AS3600.

Permissible Stress [N/mm²] [EC2 and TR.43-2]

		Serviceability Class U Uncracked		Serviceability Class T Transition		Serviceability Class C Cracked	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	$0.50 f_{ci}'$ #A1	$0.50 f_{ci}'$ #A1	$0.50 f_{ci}'$ #A1	$0.50 f_{ci}'$ #A1	$0.50 f_{ci}'$ #A1	$0.50 f_{ci}'$ #A1
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
	Flat Slab (FTW-FS-DS)	$0.30 f_{ci}'$ #A2	$0.40 f_{ci}'$ #A2	$0.30 f_{ci}'$ #A2	$0.40 f_{ci}'$ #A2	$0.30 f_{ci}'$ #A2	$0.40 f_{ci}'$ #A2
		6.0 N/mm2	8.0 N/mm2	6.0 N/mm2	8.0 N/mm2	6.0 N/mm2	8.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	$-0.21 f_{ci}'^{2/3}$ #B1	$-0.21 f_{ci}'^{2/3}$ #B1	$-0.21 f_{ci}'^{2/3}$ #B1	$-0.21 f_{ci}'^{2/3}$ #B1	$-0.30 f_{ci}'$ #B1	$-0.30 f_{ci}'$ #B1
		-1.5 N/mm2	-1.5 N/mm2	-1.5 N/mm2	-1.5 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	$-0.09 f_{ci}'^{2/3}$ #B2	$k_\sigma \cdot -0.09 f_{ci}'^{2/3}$ #B2	$-0.09 f_{ci}'^{2/3}$ #B2	$k_\sigma \cdot -0.09 f_{ci}'^{2/3}$ #B2	$-0.27 f_{ci}'^{2/3}$ #B2	$k_\sigma \cdot -0.27 f_{ci}'^{2/3}$ #B2
		-0.7 N/mm2	-0.5 N/mm2	-0.7 N/mm2	-0.5 N/mm2	-2.0 N/mm2	-1.6 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	$0.60 f_c'$ #C1	$0.60 f_c'$ #C1	$0.60 f_c'$ #C1	$0.60 f_c'$ #C1	$0.60 f_c'$ #C1	$0.60 f_c'$ #C1
		21.0 N/mm2	21.0 N/mm2	21.0 N/mm2	21.0 N/mm2	21.0 N/mm2	21.0 N/mm2
	Flat Slab (FTW-FS-DS)	$0.40 f_c'$ #C2	$0.30 f_c'$ #C2	$0.40 f_c'$ #C2	$0.30 f_c'$ #C2	$0.40 f_c'$ #C2	$0.30 f_c'$ #C2
		14.0 N/mm2	10.5 N/mm2	14.0 N/mm2	10.5 N/mm2	14.0 N/mm2	10.5 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	$-0.21 f_c'^{2/3}$ #D1	$-0.21 f_c'^{2/3}$ #D1	$-0.21 f_c'^{2/3}$ #D1	$-0.21 f_c'^{2/3}$ #D1	-<.......> #D2	-<.......> #D2
		-2.2 N/mm2	-2.2 N/mm2	-2.2 N/mm2	-2.2 N/mm2	-5.3 N/mm2	-5.3 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	$k_\sigma \cdot -0.09 f_c'^{2/3}$ #D3	$-0.09 f_c'^{2/3}$ #D3	$k_\sigma \cdot -0.09 f_c'^{2/3}$ #D3	$-0.09 f_c'^{2/3}$ #D3	$k_\sigma \cdot -0.27 f_c'^{2/3}$ #D3	$-0.27 f_c'^{2/3}$ #D3
		-0.8 N/mm2	-1.0 N/mm2	-0.8 N/mm2	-1.0 N/mm2	-2.3 N/mm2	-2.9 N/mm2
		With Rebar	No Rebar	With Rebar	No Rebar	With Rebar	No Rebar

#A1: Note beam, one-way slab or two-way slab option to cl.5.8.2 TR.43-2.
#A2: Note flat slab option to T.4 TR.43-2 and cl.5.8.2 TR.43-2.
#B1: Note beam, one-way slab or two-way slab option to cl.5.8.2 TR.43-2 and analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to T.4 TR.43-2 and cl.5.8.2 TR.43-2.
#C1: Note beam, one-way slab or two-way slab option to cl.5.10.2.2 EC2.
#C2: Note flat slab option to T.4 TR.43-2.
#D1: Note beam, one-way slab or two-way slab option analogous to cl.5.8.2 TR.43-2.
#D2: Note beam, one-way slab or two-way slab option to cl.5.8.1 TR.43-2. Note -<.......> = MAX {$-0.30 f_c'$, ($-0.40 f_c'^{2/3}$ to $-0.50 f_c'^{2/3}$)-4N/mm²/1.0%} as the code allows for an increase in the tensile stress limit from 1% of longitudinal steel (untensioned reinforcement) onwards (-4N/mm² for every 1% of longitudinal steel (untensioned reinforcement), increasing proportionally, up to the specified upper limit of $-0.30 f_c'$). Note crack width @ 0.20mm and %rebar 0.15%
#D3: Note flat slab option to T.4 TR.43-2.

Post-Tensioned Member (Bonded Tendons) Permissible Stress BS8110 (TR.43), ACI318, AS3600, EC2 (TR.43-2)			80%FTW-FS-DS	C40/50
Characterictic Strength of Concrete		**Cube**	**Cylinder**	
Characteristic strength of concrete (PT beam and slab), f_{cu} / f_c'		**50**	**40**	N/mm^2
Characteristic strength of concrete at transfer (PT beam and slab), f_{ci} / f_{ci}'		**25**	**20**	N/mm^2
Incorporation of CSTW-FS-DS Approach Within a FTW-FS-DS Approach	**%M_{HOG}**	**%I**	**%f_{min}**	**[1.7 %M_{HOG}]. %I. %f_{min}**
ks = 80%MHOG | 0.5I | 1.3fmin [FTW-FS-DS] [BS8110 TR.43, ACI318, EC2 TR	**80%**	**0.5**	**1.3**	**0.81**
ks = 80%MHOG | 0.5I | 1.0fmin [FTW-FS-DS] [AS3600]	**80%**	**0.5**	**1.0**	**0.63**

Permissible Stress [N/mm^2] [BS8110, TR.43]							
		Serviceability Class 1 **No Flexural Tensile Stresses**		**Serviceability Class 2** **Flexural Tensile Stresses, Uncracked (No Visible Cracking)**		**Serviceability Class 3** **Flexural Tensile Stresses, Cracked**	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**
		12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2
	Flat Slab (FTW-FS-DS)	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**
		6.0 N/mm2	8.3 N/mm2	6.0 N/mm2	8.3 N/mm2	6.0 N/mm2	8.3 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-1.0 #B**	**-1.0 #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**-0.25 f_{ci} #B1**	**-0.25 f_{ci} #B1**
		-1.0 N/mm2	-1.0 N/mm2	-1.8 N/mm2	-1.8 N/mm2	-6.3 N/mm2	-6.3 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-1.0 #B**	**k_σ . -1.0 #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**k_σ . -0.36 $\sqrt{f_{ci}}$ #B**	**-0.45 $\sqrt{f_{ci}}$ #B2**	**k_σ . -0.45 $\sqrt{f_{ci}}$ #B2**
		-1.0 N/mm2	-0.8 N/mm2	-1.8 N/mm2	-1.5 N/mm2	-2.3 N/mm2	-1.8 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	No Rebar	No Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**
		16.5 N/mm2	20.0 N/mm2	16.5 N/mm2	20.0 N/mm2	16.5 N/mm2	20.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**
		16.5 N/mm2	12.0 N/mm2	16.5 N/mm2	12.0 N/mm2	16.5 N/mm2	12.0 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.0 #D**	**0.0 #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**-<.....> #D1**	**-<.....> #D1**
		0.0 N/mm2	0.0 N/mm2	-2.5 N/mm2	-2.5 N/mm2	-5.2 N/mm2	-5.2 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . 0.0 #D**	**0.0 #D**	**k_σ . -0.36 $\sqrt{f_{cu}}$ #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**k_σ . -0.45 $\sqrt{f_{cu}}$ #D2**	**-0.45 $\sqrt{f_{cu}}$ #D2**
		0.0 N/mm2	0.0 N/mm2	-2.1 N/mm2	-2.5 N/mm2	-2.6 N/mm2	-3.2 N/mm2
		With Rebar	No Rebar	With Rebar	No Rebar	With Rebar	No Rebar

#A1: Note beam, one-way slab or two-way slab option to cl.4.3.5.1 BS8110.
#A2: Note flat slab option to T.2 TR.43 and cl.6.10.2 TR.43.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.4.3.5.2 BS8110.
#B1: Note beam, one-way slab or two-way slab option to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to T.2 TR.43 and cl.6.10.2 TR.43.
#C1: Note beam, one-way slab or two-way slab option to cl.4.3.4.2 BS8110.
#C2: Note flat slab option to T.2 TR.43.
#D: Note beam, one-way slab, two-way slab or flat slab option to cl.4.3.4.3 BS8110.
#D1: Note beam, one-way slab or two-way slab option to cl.4.3.4.3 BS8110. Note -<.....> = MAX {-0.25f_{cu}, (0.7-1.1).(-0.58$\sqrt{f_{cu}}$ to -0.82$\sqrt{f_{cu}}$)-4N/mm^2/1.0%} as the code allows for an increase in the tensile stress limit from 1% of longitudinal steel (untensioned reinforcement) onwards (-4N/mm^2 for every 1% of longitudinal steel (untensioned reinforcement), increasing proportionally, up to the specified upper limit of -0.25f_{cu}). Note crack width @ 0.20mm, %rebar **0.15%** and overall depth, h **600** mm
#D2: Note flat slab option to T.2 TR.43.

Permissible Stress [N/mm^2] [ACI318]							
		Serviceability Class U **Uncracked**		**Serviceability Class T** **Transition**		**Serviceability Class C** **Cracked**	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**
		12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**
		12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.30 f_{ci}' #B1**	**-0.30 f_{ci}' #B1**
		-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.50 $\sqrt{f_{ci}}$' #B2**	**k_σ . -0.50 $\sqrt{f_{ci}}$' #B2**
		-1.1 N/mm2	-0.9 N/mm2	-1.1 N/mm2	-0.9 N/mm2	-2.2 N/mm2	-1.8 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	No Rebar	No Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**
		24.0 N/mm2	24.0 N/mm2	24.0 N/mm2	24.0 N/mm2	24.0 N/mm2	24.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**
		24.0 N/mm2	24.0 N/mm2	24.0 N/mm2	24.0 N/mm2	24.0 N/mm2	24.0 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.62 $\sqrt{f_c}$' #D1**	**-0.62 $\sqrt{f_c}$' #D1**	**-1.00 $\sqrt{f_c}$' #D1**	**-1.00 $\sqrt{f_c}$' #D1**	**-0.30 f_c' #D1**	**-0.30 f_c' #D1**
		-3.9 N/mm2	-3.9 N/mm2	-6.3 N/mm2	-6.3 N/mm2	-12.0 N/mm2	-12.0 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**
		-2.6 N/mm2	-3.2 N/mm2	-2.6 N/mm2	-3.2 N/mm2	-2.6 N/mm2	-3.2 N/mm2
		With Rebar	With Rebar	With Rebar	With Rebar	With Rebar	With Rebar

#A: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.3.1 ACI318.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.3.2 ACI318.
#B1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to cl.24.5.3.2.1 ACI318.
#C: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.4.1 ACI318.
#D1: Note beam, one-way slab or two-way slab option to cl.24.5.2.1 ACI318 and analogous to cl.4.3.4.3 BS8110.
#D2: Note flat slab option to cl.24.5.2.1 ACI318.

Post-Tensioned Member (Bonded Tendons) Permissible Stress BS8110 (TR.43), ACI318, AS3600, EC2 (TR.43-2)			80%FTW-FS-DS	C40/50
Characterictic Strength of Concrete		**Cube**	**Cylinder**	
Characteristic strength of concrete (PT beam and slab), f_{cu} / f_c'		**50**	**40**	N/mm^2
Characteristic strength of concrete at transfer (PT beam and slab), f_{ci} / f_{ci}'		**25**	**20**	N/mm^2
Incorporation of CSTW-FS-DS Approach Within a FTW-FS-DS Approach	**%M_{HOG}**	**%I**	**%f_{min}**	**[1.] %M_{HOG}]. %I. %f_{min}**
ks = 80%MHOG | 0.5I | 1.3fmin [FTW-FS-DS] [BS8110 TR.43, ACI318, EC2 TR	**80%**	**0.5**	**1.3**	**0.81**
ks = 80%MHOG | 0.5I | 1.0fmin [FTW-FS-DS] [AS3600]	**80%**	**0.5**	**1.0**	**0.63**

Permissible Stress [N/mm^2] [AS3600]							
		Serviceability Class U Uncracked		Serviceability Class T Transition		Serviceability Class C Cracked	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B**	**-0.30 f_{ci}' #B1**	**-0.30 f_{ci}' #B1**
		-1.1 N/mm2	-1.1 N/mm2	-2.7 N/mm2	-2.7 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.60 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B2**	**k_σ . -0.60 $\sqrt{f_{ci}}$' #B2**
		-1.1 N/mm2	-0.7 N/mm2	-2.7 N/mm2	-1.7 N/mm2	-2.7 N/mm2	-1.7 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**
		20.0 N/mm2	20.0 N/mm2	20.0 N/mm2	20.0 N/mm2	20.0 N/mm2	20.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**
		20.0 N/mm2	20.0 N/mm2	20.0 N/mm2	20.0 N/mm2	20.0 N/mm2	20.0 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.25 $\sqrt{f_c}$' #D**	**-0.25 $\sqrt{f_c}$' #D**	**-0.60 $\sqrt{f_c}$' #D**	**-0.60 $\sqrt{f_c}$' #D**	**-0.30 f_c' #D1**	**-0.30 f_c' #D1**
		-1.6 N/mm2	-1.6 N/mm2	-3.8 N/mm2	-3.8 N/mm2	-12.0 N/mm2	-12.0 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . -0.25 $\sqrt{f_c}$' #D**	**-0.25 $\sqrt{f_c}$' #D**	**k_σ . -0.60 $\sqrt{f_c}$' #D**	**-0.60 $\sqrt{f_c}$' #D**	**k_σ . -0.60 $\sqrt{f_c}$' #D2**	**-0.60 $\sqrt{f_c}$' #D2**
		-1.0 N/mm2	-1.6 N/mm2	-2.4 N/mm2	-3.8 N/mm2	-2.4 N/mm2	-3.8 N/mm2
		With Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar

#A: Note beam, one-way slab, two-way slab or flat slab option to cl.8.1.6.2 AS3600.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.8.6.2 and cl.9.4.2 AS3600.
#B1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to cl.9.4.2 AS3600.
#C: Note beam, one-way slab, two-way slab or flat slab option to cl.8.1.6.2 AS3600.
#D: Note beam, one-way slab, two-way slab or flat slab option to cl.8.6.2 and cl.9.4.2 AS3600.
#D1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.4.3 BS8110.
#D2: Note flat slab option to cl.9.4.2 AS3600 as an alternative to cl.6.9.5.3 AS3600.

Permissible Stress [N/mm^2] [EC2 and TR.43-2]							
		Serviceability Class U Uncracked		Serviceability Class T Transition		Serviceability Class C Cracked	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.30 f_{ci}' #A2**	**0.40 f_{ci}' #A2**	**0.30 f_{ci}' #A2**	**0.40 f_{ci}' #A2**	**0.30 f_{ci}' #A2**	**0.40 f_{ci}' #A2**
		6.0 N/mm2	8.0 N/mm2	6.0 N/mm2	8.0 N/mm2	6.0 N/mm2	8.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.30 f_{ci}' #B1**	**-0.30 f_{ci}' #B1**
		-1.5 N/mm2	-1.5 N/mm2	-1.5 N/mm2	-1.5 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-0.09 f_{ci}'$^{2/3}$ #B2**	**k_σ . -0.09 f_{ci}'$^{2/3}$ #B2**	**-0.09 f_{ci}'$^{2/3}$ #B2**	**k_σ . -0.09 f_{ci}'$^{2/3}$ #B2**	**-0.27 f_{ci}'$^{2/3}$ #B2**	**k_σ . -0.27 f_{ci}'$^{2/3}$ #B2**
		-0.7 N/mm2	-0.5 N/mm2	-0.7 N/mm2	-0.5 N/mm2	-2.0 N/mm2	-1.6 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**
		24.0 N/mm2	24.0 N/mm2	24.0 N/mm2	24.0 N/mm2	24.0 N/mm2	24.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.40 f_c' #C2**	**0.30 f_c' #C2**	**0.40 f_c' #C2**	**0.30 f_c' #C2**	**0.40 f_c' #C2**	**0.30 f_c' #C2**
		16.0 N/mm2	12.0 N/mm2	16.0 N/mm2	12.0 N/mm2	16.0 N/mm2	12.0 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.21 f_c'$^{2/3}$ #D1**	**-0.21 f_c'$^{2/3}$ #D1**	**-0.21 f_c'$^{2/3}$ #D1**	**-0.21 f_c'$^{2/3}$ #D1**	**-<.....> #D2**	**-<.....> #D2**
		-2.5 N/mm2	-2.5 N/mm2	-2.5 N/mm2	-2.5 N/mm2	-5.8 N/mm2	-5.8 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . -0.09 f_c'$^{2/3}$ #D3**	**-0.09 f_c'$^{2/3}$ #D3**	**k_σ . -0.09 f_c'$^{2/3}$ #D3**	**-0.09 f_c'$^{2/3}$ #D3**	**k_σ . -0.27 f_c'$^{2/3}$ #D3**	**-0.27 f_c'$^{2/3}$ #D3**
		-0.9 N/mm2	-1.1 N/mm2	-0.9 N/mm2	-1.1 N/mm2	-2.6 N/mm2	-3.2 N/mm2
		With Rebar	No Rebar	With Rebar	No Rebar	With Rebar	No Rebar

#A1: Note beam, one-way slab or two-way slab option to cl.5.8.2 TR.43-2.
#A2: Note flat slab option to T.4 TR.43-2 and cl.5.8.2 TR.43-2.
#B1: Note beam, one-way slab or two-way slab option to cl.5.8.2 TR.43-2 and analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to T.4 TR.43-2 and cl.5.8.2 TR.43-2.
#C1: Note beam, one-way slab or two-way slab option to cl.5.10.2.2 EC2.
#C2: Note flat slab option to T.4 TR.43-2.
#D1: Note beam, one-way slab or two-way slab option analogous to cl.5.8.2 TR.43-2.
#D2: Note beam, one-way slab or two-way slab option to cl.5.8.1 TR.43-2. Note -<.....> = MAX {-0.30f_c', (-0.40f_c'$^{2/3}$ to -0.50f_c'$^{2/3}$)-4N/mm^2/1.0%} as the code allows for an increase in the tensile stress limit from 1% of longitudinal steel (untensioned reinforcement) onwards (-4N/mm^2 for every 1% of longitudinal steel (untensioned reinforcement), increasing proportionally, up to the specified upper limit of -0.30f_c'). Note crack width @ 0.20mm and %rebar **0.15%**
#D3: Note flat slab option to T.4 TR.43-2.

Post-Tensioned Member (Bonded Tendons) Permissible Stress BS8110 (TR.43), ACI318, AS3600, EC2 (TR.43-2)			80%FTW-FS-DS	C45/55
Characterictic Strength of Concrete		**Cube**	**Cylinder**	
Characteristic strength of concrete (PT beam and slab), f_{cu} / f_c'		**55**	**45**	N/mm^2
Characteristic strength of concrete at transfer (PT beam and slab), f_{ci} / f_{ci}'		**25**	**20**	N/mm^2
Incorporation of CSTW-FS-DS Approach Within a FTW-FS-DS Approach	**%M_{HOG}**	**%I**	**%f_{min}**	**[1/ %M_{HOG}]. %I. %f_{mi}**
ks = 80%MHOG | 0.5I | 1.3fmin [FTW-FS-DS] [BS8110 TR.43, ACI318, EC2 TR	**80%**	**0.5**	**1.3**	**0.81**
ks = 80%MHOG | 0.5I | 1.0fmin [FTW-FS-DS] [AS3600]	**80%**	**0.5**	**1.0**	**0.63**

Permissible Stress [N/mm^2] [BS8110, TR.43]							
		Serviceability Class 1 **No Flexural Tensile Stresses**		**Serviceability Class 2** **Flexural Tensile Stresses, Uncracked (No Visible Cracking)**		**Serviceability Class 3** **Flexural Tensile Stresses, Cracked**	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**
		12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2
	Flat Slab (FTW-FS-DS)	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**
		6.0 N/mm2	8.3 N/mm2	6.0 N/mm2	8.3 N/mm2	6.0 N/mm2	8.3 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-1.0 #B**	**-1.0 #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**-0.25 f_{ci} #B1**	**-0.25 f_{ci} #B1**
		-1.0 N/mm2	-1.0 N/mm2	-1.8 N/mm2	-1.8 N/mm2	-6.3 N/mm2	-6.3 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-1.0 #B**	**k_σ . -1.0 #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**k_σ . -0.36 $\sqrt{f_{ci}}$ #B**	**-0.45 $\sqrt{f_{ci}}$ #B2**	**k_σ . -0.45 $\sqrt{f_{ci}}$ #B2**
		-1.0 N/mm2	-0.8 N/mm2	-1.8 N/mm2	-1.5 N/mm2	-2.3 N/mm2	-1.8 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	No Rebar	No Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**
		18.2 N/mm2	22.0 N/mm2	18.2 N/mm2	22.0 N/mm2	18.2 N/mm2	22.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**
		18.2 N/mm2	13.2 N/mm2	18.2 N/mm2	13.2 N/mm2	18.2 N/mm2	13.2 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.0 #D**	**0.0 #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**-<.....> #D1**	**-<.....> #D1**
		0.0 N/mm2	0.0 N/mm2	-2.7 N/mm2	-2.7 N/mm2	-5.2 N/mm2	-5.2 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . 0.0 #D**	**0.0 #D**	**k_σ . -0.36 $\sqrt{f_{cu}}$ #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**k_σ . -0.45 $\sqrt{f_{cu}}$ #D2**	**-0.45 $\sqrt{f_{cu}}$ #D2**
		0.0 N/mm2	0.0 N/mm2	-2.2 N/mm2	-2.7 N/mm2	-2.7 N/mm2	-3.3 N/mm2
		With Rebar	No Rebar	With Rebar	No Rebar	With Rebar	No Rebar

#A1: Note beam, one-way slab or two-way slab option to cl.4.3.5.1 BS8110.
#A2: Note flat slab option to T.2 TR.43 and cl.6.10.2 TR.43.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.4.3.5.2 BS8110.
#B1: Note beam, one-way slab or two-way slab option to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to T.2 TR.43 and cl.6.10.2 TR.43.
#C1: Note beam, one-way slab or two-way slab option to cl.4.3.4.2 BS8110.
#C2: Note flat slab option to T.2 TR.43.
#D: Note beam, one-way slab, two-way slab or flat slab option to cl.4.3.4.3 BS8110.
#D1: Note beam, one-way slab or two-way slab option to cl.4.3.4.3 BS8110. Note -<.....> = MAX {-0.25f_{cu}, (0.7-1.1).(-0.58$\sqrt{f_{cu}}$ to -0.82$\sqrt{f_{cu}}$)-4N/mm^2/1.0%} as the code allows for an increase in the tensile stress limit from 1% of longitudinal steel (untensioned reinforcement) onwards (-4N/mm^2 for every 1% of longitudinal steel (untensioned reinforcement), increasing proportionally, up to the specified upper limit of -0.25f_{cu}), Note crack width @ 0.20mm, %rebar **0.15%** and overall depth, h **600** mm
#D2: Note flat slab option to T.2 TR.43.

Permissible Stress [N/mm^2] [ACI318]							
		Serviceability Class U **Uncracked**		**Serviceability Class T** **Transition**		**Serviceability Class C** **Cracked**	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**
		12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**
		12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.30 f_{ci}' #B1**	**-0.30 f_{ci}' #B1**
		-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.50 $\sqrt{f_{ci}}$' #B2**	**k_σ . -0.50 $\sqrt{f_{ci}}$' #B2**
		-1.1 N/mm2	-0.9 N/mm2	-1.1 N/mm2	-0.9 N/mm2	-2.2 N/mm2	-1.8 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	No Rebar	No Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**
		27.0 N/mm2	27.0 N/mm2	27.0 N/mm2	27.0 N/mm2	27.0 N/mm2	27.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**
		27.0 N/mm2	27.0 N/mm2	27.0 N/mm2	27.0 N/mm2	27.0 N/mm2	27.0 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.62 $\sqrt{f_c}$' #D1**	**-0.62 $\sqrt{f_c}$' #D1**	**-1.00 $\sqrt{f_c}$' #D1**	**-1.00 $\sqrt{f_c}$' #D1**	**-0.30 f_c' #D1**	**-0.30 f_c' #D1**
		-4.2 N/mm2	-4.2 N/mm2	-6.7 N/mm2	-6.7 N/mm2	-13.5 N/mm2	-13.5 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**
		-2.7 N/mm2	-3.4 N/mm2	-2.7 N/mm2	-3.4 N/mm2	-2.7 N/mm2	-3.4 N/mm2
		With Rebar	With Rebar	With Rebar	With Rebar	With Rebar	With Rebar

#A: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.3.1 ACI318.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.3.2 ACI318.
#B1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to cl.24.5.3.2.1 ACI318.
#C: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.4.1 ACI318.
#D1: Note beam, one-way slab or two-way slab option to cl.24.5.2.1 ACI318 and analogous to cl.4.3.4.3 BS8110.
#D2: Note flat slab option to cl.24.5.2.1 ACI318.

Post-Tensioned Member (Bonded Tendons) Permissible Stress BS8110 (TR.43), ACI318, AS3600, EC2 (TR.43-2)		80%FTW-FS-DS	C45/55
Characterictic Strength of Concrete	Cube	Cylinder	
Characteristic strength of concrete (PT beam and slab), f_{cu} / f_c'	55	45	N/mm^2
Characteristic strength of concrete at transfer (PT beam and slab), f_{ci} / f_{ci}'	25	20	N/mm^2

Incorporation of CSTW-FS-DS Approach Within a FTW-FS-DS Approach	$\%M_{HOG}$	%I	$\%f_{min}$	$[1/ \%M_{HOG}] . \%I . \%f_{mi}$
ks = 80%MHOG | 0.5I | 1.3fmin [FTW-FS-DS] [BS8110 TR.43, ACI318, EC2 TR	80%	0.5	1.3	0.81
ks = 80%MHOG | 0.5I | 1.0fmin [FTW-FS-DS] [AS3600]	80%	0.5	1.0	0.63

Permissible Stress [N/mm^2] [AS3600]

		Serviceability Class U Uncracked		Serviceability Class T Transition		Serviceability Class C Cracked	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	Beam, One-Way or Two-Way Slab	$0.50 f_{ci}'$ #A	$0.50 f_{ci}'$ #A	$0.50 f_{ci}'$ #A	$0.50 f_{ci}'$ #A	$0.50 f_{ci}'$ #A	$0.50 f_{ci}'$ #A
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
	Flat Slab (FTW-FS-DS)	$0.50 f_{ci}'$ #A	$0.50 f_{ci}'$ #A	$0.50 f_{ci}'$ #A	$0.50 f_{ci}'$ #A	$0.50 f_{ci}'$ #A	$0.50 f_{ci}'$ #A
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
TLS tensile $f'_{min,t/b}$	Beam, One-Way or Two-Way Slab	$-0.25 \sqrt{f_{ci}'}$ #B	$-0.25 \sqrt{f_{ci}'}$ #B	$-0.60 \sqrt{f_{ci}'}$ #B	$-0.60 \sqrt{f_{ci}'}$ #B	$-0.30 f_{ci}'$ #B1	$-0.30 f_{ci}'$ #B1
		-1.1 N/mm2	-1.1 N/mm2	-2.7 N/mm2	-2.7 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	$-0.25 \sqrt{f_{ci}'}$ #B	$k_\sigma . -0.25 \sqrt{f_{ci}'}$ #B	$-0.60 \sqrt{f_{ci}'}$ #B	$k_\sigma . -0.60 \sqrt{f_{ci}'}$ #B	$-0.60 \sqrt{f_{ci}'}$ #B2	$k_\sigma . -0.60 \sqrt{f_{ci}'}$ #B2
		-1.1 N/mm2	-0.7 N/mm2	-2.7 N/mm2	-1.7 N/mm2	-2.7 N/mm2	-1.7 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
SLS compressive $f_{max,t/b}$	Beam, One-Way or Two-Way Slab	$0.50 f_c'$ #C	$0.50 f_c'$ #C	$0.50 f_c'$ #C	$0.50 f_c'$ #C	$0.50 f_c'$ #C	$0.50 f_c'$ #C
		22.5 N/mm2	22.5 N/mm2	22.5 N/mm2	22.5 N/mm2	22.5 N/mm2	22.5 N/mm2
	Flat Slab (FTW-FS-DS)	$0.50 f_c'$ #C	$0.50 f_c'$ #C	$0.50 f_c'$ #C	$0.50 f_c'$ #C	$0.50 f_c'$ #C	$0.50 f_c'$ #C
		22.5 N/mm2	22.5 N/mm2	22.5 N/mm2	22.5 N/mm2	22.5 N/mm2	22.5 N/mm2
SLS tensile $f_{min,t/b}$	Beam, One-Way or Two-Way Slab	$-0.25 \sqrt{f_c'}$ #D	$-0.25 \sqrt{f_c'}$ #D	$-0.60 \sqrt{f_c'}$ #D	$-0.60 \sqrt{f_c'}$ #D	$-0.30 f_c'$ #D1	$-0.30 f_c'$ #D1
		-1.7 N/mm2	-1.7 N/mm2	-4.0 N/mm2	-4.0 N/mm2	-13.5 N/mm2	-13.5 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	$k_\sigma . -0.25 \sqrt{f_c'}$ #D	$-0.25 \sqrt{f_c'}$ #D	$k_\sigma . -0.60 \sqrt{f_c'}$ #D	$-0.60 \sqrt{f_c'}$ #D	$k_\sigma . -0.60 \sqrt{f_c'}$ #D2	$-0.60 \sqrt{f_c'}$ #D2
		-1.0 N/mm2	-1.7 N/mm2	-2.5 N/mm2	-4.0 N/mm2	-2.5 N/mm2	-4.0 N/mm2
		With Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar

#A: Note beam, one-way slab, two-way slab or flat slab option to cl.8.1.6.2 AS3600.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.8.6.2 and cl.9.4.2 AS3600.
#B1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to cl.9.4.2 AS3600.
#C: Note beam, one-way slab, two-way slab or flat slab option to cl.8.1.6.2 AS3600.
#D: Note beam, one-way slab, two-way slab or flat slab option to cl.8.6.2 and cl.9.4.2 AS3600.
#D1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.4.3 BS8110.
#D2: Note flat slab option to cl.9.4.2 AS3600 as an alternative to cl.6.9.5.3 AS3600.

Permissible Stress [N/mm^2] [EC2 and TR.43-2]

		Serviceability Class U Uncracked		Serviceability Class T Transition		Serviceability Class C Cracked	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	Beam, One-Way or Two-Way Slab	$0.50 f_{ci}'$ #A1	$0.50 f_{ci}'$ #A1	$0.50 f_{ci}'$ #A1	$0.50 f_{ci}'$ #A1	$0.50 f_{ci}'$ #A1	$0.50 f_{ci}'$ #A1
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
	Flat Slab (FTW-FS-DS)	$0.30 f_{ci}'$ #A2	$0.40 f_{ci}'$ #A2	$0.30 f_{ci}'$ #A2	$0.40 f_{ci}'$ #A2	$0.30 f_{ci}'$ #A2	$0.40 f_{ci}'$ #A2
		6.0 N/mm2	8.0 N/mm2	6.0 N/mm2	8.0 N/mm2	6.0 N/mm2	8.0 N/mm2
TLS tensile $f'_{min,t/b}$	Beam, One-Way or Two-Way Slab	$-0.21 f_{ci}'^{2/3}$ #B1	$-0.21 f_{ci}'^{2/3}$ #B1	$-0.21 f_{ci}'^{2/3}$ #B1	$-0.21 f_{ci}'^{2/3}$ #B1	$-0.30 f_{ci}'$ #B1	$-0.30 f_{ci}'$ #B1
		-1.5 N/mm2	-1.5 N/mm2	-1.5 N/mm2	-1.5 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	$-0.09 f_{ci}'^{2/3}$ #B2	$k_\sigma . -0.09 f_{ci}'^{2/3}$ #B2	$-0.09 f_{ci}'^{2/3}$ #B2	$k_\sigma . -0.09 f_{ci}'^{2/3}$ #B2	$-0.27 f_{ci}'^{2/3}$ #B2	$k_\sigma . -0.27 f_{ci}'^{2/3}$ #B2
		-0.7 N/mm2	-0.5 N/mm2	-0.7 N/mm2	-0.5 N/mm2	-2.0 N/mm2	-1.6 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
SLS compressive $f_{max,t/b}$	Beam, One-Way or Two-Way Slab	$0.60 f_c'$ #C1	$0.60 f_c'$ #C1	$0.60 f_c'$ #C1	$0.60 f_c'$ #C1	$0.60 f_c'$ #C1	$0.60 f_c'$ #C1
		27.0 N/mm2	27.0 N/mm2	27.0 N/mm2	27.0 N/mm2	27.0 N/mm2	27.0 N/mm2
	Flat Slab (FTW-FS-DS)	$0.40 f_c'$ #C2	$0.30 f_c'$ #C2	$0.40 f_c'$ #C2	$0.30 f_c'$ #C2	$0.40 f_c'$ #C2	$0.30 f_c'$ #C2
		18.0 N/mm2	13.5 N/mm2	18.0 N/mm2	13.5 N/mm2	18.0 N/mm2	13.5 N/mm2
SLS tensile $f_{min,t/b}$	Beam, One-Way or Two-Way Slab	$-0.21 f_c'^{2/3}$ #D1	$-0.21 f_c'^{2/3}$ #D1	$-0.21 f_c'^{2/3}$ #D1	$-0.21 f_c'^{2/3}$ #D1	-<.......> #D2	-<.......> #D2
		-2.7 N/mm2	-2.7 N/mm2	-2.7 N/mm2	-2.7 N/mm2	-6.3 N/mm2	-6.3 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	$k_\sigma . -0.09 f_c'^{2/3}$ #D3	$-0.09 f_c'^{2/3}$ #D3	$k_\sigma . -0.09 f_c'^{2/3}$ #D3	$-0.09 f_c'^{2/3}$ #D3	$k_\sigma . -0.27 f_c'^{2/3}$ #D3	$-0.27 f_c'^{2/3}$ #D3
		-0.9 N/mm2	-1.1 N/mm2	-0.9 N/mm2	-1.1 N/mm2	-2.8 N/mm2	-3.4 N/mm2
		With Rebar	No Rebar	With Rebar	No Rebar	With Rebar	No Rebar

#A1: Note beam, one-way slab or two-way slab option to cl.5.8.2 TR.43-2.
#A2: Note flat slab option to T.4 TR.43-2 and cl.5.8.2 TR.43-2.
#B1: Note beam, one-way slab or two-way slab option to cl.5.8.2 TR.43-2 and analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to T.4 TR.43-2 and cl.5.8.2 TR.43-2.
#C1: Note beam, one-way slab or two-way slab option to cl.5.10.2.2 EC2.
#C2: Note flat slab option to T.4 TR.43-2.
#D1: Note beam, one-way slab or two-way slab option analogous to cl.5.8.2 TR.43-2.
#D2: Note beam, one-way slab or two-way slab option to cl.5.8.1 TR.43-2. Note -<.......> = MAX {$-0.30 f_c'$, ($-0.40 f_c'^{2/3}$ to $-0.50 f_c'^{2/3}$)-4N/mm^2/1.0%} as the code allows for an increase in the tensile stress limit from 1% of longitudinal steel (untensioned reinforcement) onwards (-4N/mm^2 for every 1% of longitudinal steel (untensioned reinforcement), increasing proportionally, up to the specified upper limit of $-0.30 f_c'$). Note crack width @ 0.20mm and %rebar 0.15%
#D3: Note flat slab option to T.4 TR.43-2.

Post-Tensioned Member (Bonded Tendons) Permissible Stress BS8110 (TR.43), ACI318, AS3600, EC2 (TR.43-2)			80%FTW-FS-DS	C50/60
Characterictic Strength of Concrete		**Cube**	**Cylinder**	
Characteristic strength of concrete (PT beam and slab), f_{cu} / f_c'		**60**	**50**	N/mm^2
Characteristic strength of concrete at transfer (PT beam and slab), f_{ci} / f_{ci}'		**25**	**20**	N/mm^2
Incorporation of CSTW-FS-DS Approach Within a FTW-FS-DS Approach	**%M_{HOG}**	**%I**	**%f_{min}**	**[1/ %M_{HOG}]. %I. %f_{mi}**
ks = 80%MHOG | 0.5I | 1.3fmin [FTW-FS-DS] [BS8110 TR.43, ACI318, EC2 TR	**80%**	**0.5**	**1.3**	**0.81**
ks = 80%MHOG | 0.5I | 1.0fmin [FTW-FS-DS] [AS3600]	**80%**	**0.5**	**1.0**	**0.63**

Permissible Stress [N/mm^2] [BS8110, TR.43]							
		Serviceability Class 1 **No Flexural Tensile Stresses**		**Serviceability Class 2** **Flexural Tensile Stresses, Uncracked (No Visible Cracking)**		**Serviceability Class 3** **Flexural Tensile Stresses, Cracked**	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**
		12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2
	Flat Slab (FTW-FS-DS)	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**
		6.0 N/mm2	8.3 N/mm2	6.0 N/mm2	8.3 N/mm2	6.0 N/mm2	8.3 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-1.0 #B**	**-1.0 #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**-0.25 f_{ci} #B1**	**-0.25 f_{ci} #B1**
		-1.0 N/mm2	-1.0 N/mm2	-1.8 N/mm2	-1.8 N/mm2	-6.3 N/mm2	-6.3 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-1.0 #B**	**k_σ . -1.0 #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**k_σ . -0.36 $\sqrt{f_{ci}}$ #B**	**-0.45 $\sqrt{f_{ci}}$ #B2**	**k_σ . -0.45 $\sqrt{f_{ci}}$ #B2**
		-1.0 N/mm2	-0.8 N/mm2	-1.8 N/mm2	-1.5 N/mm2	-2.3 N/mm2	-1.8 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	No Rebar	No Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**
		19.8 N/mm2	24.0 N/mm2	19.8 N/mm2	24.0 N/mm2	19.8 N/mm2	24.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**
		19.8 N/mm2	14.4 N/mm2	19.8 N/mm2	14.4 N/mm2	19.8 N/mm2	14.4 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.0 #D**	**0.0 #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**-<.....> #D1**	**-<.....> #D1**
		0.0 N/mm2	0.0 N/mm2	-2.8 N/mm2	-2.8 N/mm2	-5.2 N/mm2	-5.2 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . 0.0 #D**	**0.0 #D**	**k_σ . -0.36 $\sqrt{f_{cu}}$ #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**k_σ . -0.45 $\sqrt{f_{cu}}$ #D2**	**-0.45 $\sqrt{f_{cu}}$ #D2**
		0.0 N/mm2	0.0 N/mm2	-2.3 N/mm2	-2.8 N/mm2	-2.8 N/mm2	-3.5 N/mm2
		With Rebar	No Rebar	With Rebar	No Rebar	With Rebar	No Rebar

#A1: Note beam, one-way slab or two-way slab option to cl.4.3.5.1 BS8110.
#A2: Note flat slab option to T.2 TR.43 and cl.6.10.2 TR.43.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.4.3.5.2 BS8110.
#B1: Note beam, one-way slab or two-way slab option to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to T.2 TR.43 and cl.6.10.2 TR.43.
#C1: Note beam, one-way slab or two-way slab option to cl.4.3.4.2 BS8110.
#C2: Note flat slab option to T.2 TR.43.
#D: Note beam, one-way slab, two-way slab or flat slab option to cl.4.3.4.3 BS8110.
#D1: Note beam, one-way slab or two-way slab option to cl.4.3.4.3 BS8110. Note -<.....> = MAX {-0.25f_{cu}, (0.7-1.1).(-0.58$\sqrt{f_{cu}}$ to -0.82$\sqrt{f_{cu}}$)-4N/mm^2/1.0%} as the code allows for an increase in the tensile stress limit from 1% of longitudinal steel (untensioned reinforcement) onwards (-4N/mm^2 for every 1% of longitudinal steel (untensioned reinforcement), increasing proportionally, up to the specified upper limit of -0.25f_{cu}), Note crack width @ 0.20mm, %rebar **0.15%** and overall depth, h **600** mm
#D2: Note flat slab option to T.2 TR.43.

Permissible Stress [N/mm^2] [ACI318]							
		Serviceability Class U **Uncracked**		**Serviceability Class T** **Transition**		**Serviceability Class C** **Cracked**	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**
		12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**
		12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.30 f_{ci}' #B1**	**-0.30 f_{ci}' #B1**
		-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.50 $\sqrt{f_{ci}}$' #B2**	**k_σ . -0.50 $\sqrt{f_{ci}}$' #B2**
		-1.1 N/mm2	-0.9 N/mm2	-1.1 N/mm2	-0.9 N/mm2	-2.2 N/mm2	-1.8 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	No Rebar	No Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**
		30.0 N/mm2	30.0 N/mm2	30.0 N/mm2	30.0 N/mm2	30.0 N/mm2	30.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**
		30.0 N/mm2	30.0 N/mm2	30.0 N/mm2	30.0 N/mm2	30.0 N/mm2	30.0 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.62 $\sqrt{f_c}$' #D1**	**-0.62 $\sqrt{f_c}$' #D1**	**-1.00 $\sqrt{f_c}$' #D1**	**-1.00 $\sqrt{f_c}$' #D1**	**-0.30 f_c' #D1**	**-0.30 f_c' #D1**
		-4.4 N/mm2	-4.4 N/mm2	-7.1 N/mm2	-7.1 N/mm2	-15.0 N/mm2	-15.0 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**
		-2.9 N/mm2	-3.5 N/mm2	-2.9 N/mm2	-3.5 N/mm2	-2.9 N/mm2	-3.5 N/mm2
		With Rebar	With Rebar	With Rebar	With Rebar	With Rebar	With Rebar

#A: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.3.1 ACI318.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.3.2 ACI318.
#B1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to cl.24.5.3.2.1 ACI318.
#C: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.4.1 ACI318.
#D1: Note beam, one-way slab or two-way slab option to cl.24.5.2.1 ACI318 and analogous to cl.4.3.4.3 BS8110.
#D2: Note flat slab option to cl.24.5.2.1 ACI318.

Post-Tensioned Member (Bonded Tendons) Permissible Stress BS8110 (TR.43), ACI318, AS3600, EC2 (TR.43-2)		80%FTW-FS-DS	C50/60
Characterictic Strength of Concrete		Cube	Cylinder	
Characteristic strength of concrete (PT beam and slab), f_{cu} / f_c'		60	50	N/mm^2
Characteristic strength of concrete at transfer (PT beam and slab), f_{ci} / f_{ci}'		25	20	N/mm^2
Incorporation of CSTW-FS-DS Approach Within a FTW-FS-DS Approach	$\%M_{HOG}$	%I	$\%f_{min}$	$[1/\%M_{HOG}].\%I.\%f_{mi}$
ks = 80%MHOG | 0.5I | 1.3fmin [FTW-FS-DS] [BS8110 TR.43, ACI318, EC2 TR	80%	0.5	1.3	0.81
ks = 80%MHOG | 0.5I | 1.0fmin [FTW-FS-DS] [AS3600]	80%	0.5	1.0	0.63

Permissible Stress [N/mm^2] [AS3600]							
		Serviceability Class U Uncracked		Serviceability Class T Transition		Serviceability Class C Cracked	
Stress Type	Floor Type	Top	Bottom	Top	Bottom	Top	Bottom
TLS compressive $f'_{max,t/b}$	Beam, One-Way or Two-Way Slab	$0.50\ f_{ci}'$ #A 10.0 N/mm2	$0.50\ f_{ci}'$ #A 10.0 N/mm2	$0.50\ f_{ci}'$ #A 10.0 N/mm2	$0.50\ f_{ci}'$ #A 10.0 N/mm2	$0.50\ f_{ci}'$ #A 10.0 N/mm2	$0.50\ f_{ci}'$ #A 10.0 N/mm2
	Flat Slab (FTW-FS-DS)	$0.50\ f_{ci}'$ #A 10.0 N/mm2	$0.50\ f_{ci}'$ #A 10.0 N/mm2	$0.50\ f_{ci}'$ #A 10.0 N/mm2	$0.50\ f_{ci}'$ #A 10.0 N/mm2	$0.50\ f_{ci}'$ #A 10.0 N/mm2	$0.50\ f_{ci}'$ #A 10.0 N/mm2
TLS tensile $f'_{min,t/b}$	Beam, One-Way or Two-Way Slab	$-0.25\ \sqrt{f_{ci}'}$ #B -1.1 N/mm2 No Rebar	$-0.25\ \sqrt{f_{ci}'}$ #B -1.1 N/mm2 No Rebar	$-0.60\ \sqrt{f_{ci}'}$ #B -2.7 N/mm2 With Rebar	$-0.60\ \sqrt{f_{ci}'}$ #B -2.7 N/mm2 With Rebar	$-0.30\ f_{ci}'$ #B1 -6.0 N/mm2 With Rebar	$-0.30\ f_{ci}'$ #B1 -6.0 N/mm2 With Rebar
	Flat Slab (FTW-FS-DS)	$-0.25\ \sqrt{f_{ci}'}$ #B -1.1 N/mm2 No Rebar	$k_\sigma . -0.25\ \sqrt{f_{ci}'}$ #B -0.7 N/mm2 No Rebar	$-0.60\ \sqrt{f_{ci}'}$ #B -2.7 N/mm2 With Rebar	$k_\sigma . -0.60\ \sqrt{f_{ci}'}$ #B -1.7 N/mm2 With Rebar	$-0.60\ \sqrt{f_{ci}'}$ #B2 -2.7 N/mm2 With Rebar	$k_\sigma . -0.60\ \sqrt{f_{ci}'}$ #B2 -1.7 N/mm2 With Rebar
SLS compressive $f_{max,t/b}$	Beam, One-Way or Two-Way Slab	$0.50\ f_c'$ #C 25.0 N/mm2	$0.50\ f_c'$ #C 25.0 N/mm2	$0.50\ f_c'$ #C 25.0 N/mm2	$0.50\ f_c'$ #C 25.0 N/mm2	$0.50\ f_c'$ #C 25.0 N/mm2	$0.50\ f_c'$ #C 25.0 N/mm2
	Flat Slab (FTW-FS-DS)	$0.50\ f_c'$ #C 25.0 N/mm2	$0.50\ f_c'$ #C 25.0 N/mm2	$0.50\ f_c'$ #C 25.0 N/mm2	$0.50\ f_c'$ #C 25.0 N/mm2	$0.50\ f_c'$ #C 25.0 N/mm2	$0.50\ f_c'$ #C 25.0 N/mm2
SLS tensile $f_{min,t/b}$	Beam, One-Way or Two-Way Slab	$-0.25\ \sqrt{f_c'}$ #D -1.8 N/mm2 No Rebar	$-0.25\ \sqrt{f_c'}$ #D -1.8 N/mm2 No Rebar	$-0.60\ \sqrt{f_c'}$ #D -4.2 N/mm2 With Rebar	$-0.60\ \sqrt{f_c'}$ #D -4.2 N/mm2 With Rebar	$-0.30\ f_c'$ #D1 -15.0 N/mm2 With Rebar	$-0.30\ f_c'$ #D1 -15.0 N/mm2 With Rebar
	Flat Slab (FTW-FS-DS)	$k_\sigma . -0.25\ \sqrt{f_c'}$ #D -1.1 N/mm2 With Rebar	$-0.25\ \sqrt{f_c'}$ #D -1.8 N/mm2 No Rebar	$k_\sigma . -0.60\ \sqrt{f_c'}$ #D -2.7 N/mm2 With Rebar	$-0.60\ \sqrt{f_c'}$ #D -4.2 N/mm2 With Rebar	$k_\sigma . -0.60\ \sqrt{f_c'}$ #D2 -2.7 N/mm2 With Rebar	$-0.60\ \sqrt{f_c'}$ #D2 -4.2 N/mm2 With Rebar

#A: Note beam, one-way slab, two-way slab or flat slab option to cl.8.1.6.2 AS3600.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.8.6.2 and cl.9.4.2 AS3600.
#B1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to cl.9.4.2 AS3600.
#C: Note beam, one-way slab, two-way slab or flat slab option to cl.8.1.6.2 AS3600.
#D: Note beam, one-way slab, two-way slab or flat slab option to cl.8.6.2 and cl.9.4.2 AS3600.
#D1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.4.3 BS8110.
#D2: Note flat slab option to cl.9.4.2 AS3600 as an alternative to cl.6.9.5.3 AS3600.

Permissible Stress [N/mm^2] [EC2 and TR.43-2]							
		Serviceability Class U Uncracked		Serviceability Class T Transition		Serviceability Class C Cracked	
Stress Type	Floor Type	Top	Bottom	Top	Bottom	Top	Bottom
TLS compressive $f'_{max,t/b}$	Beam, One-Way or Two-Way Slab	$0.50\ f_{ci}'$ #A1 10.0 N/mm2	$0.50\ f_{ci}'$ #A1 10.0 N/mm2	$0.50\ f_{ci}'$ #A1 10.0 N/mm2	$0.50\ f_{ci}'$ #A1 10.0 N/mm2	$0.50\ f_{ci}'$ #A1 10.0 N/mm2	$0.50\ f_{ci}'$ #A1 10.0 N/mm2
	Flat Slab (FTW-FS-DS)	$0.30\ f_{ci}'$ #A2 6.0 N/mm2	$0.40\ f_{ci}'$ #A2 8.0 N/mm2	$0.30\ f_{ci}'$ #A2 6.0 N/mm2	$0.40\ f_{ci}'$ #A2 8.0 N/mm2	$0.30\ f_{ci}'$ #A2 6.0 N/mm2	$0.40\ f_{ci}'$ #A2 8.0 N/mm2
TLS tensile $f'_{min,t/b}$	Beam, One-Way or Two-Way Slab	$-0.21\ f_{ci}'^{2/3}$ #B1 -1.5 N/mm2 No Rebar	$-0.21\ f_{ci}'^{2/3}$ #B1 -1.5 N/mm2 No Rebar	$-0.21\ f_{ci}'^{2/3}$ #B1 -1.5 N/mm2 No Rebar	$-0.21\ f_{ci}'^{2/3}$ #B1 -1.5 N/mm2 No Rebar	$-0.30\ f_{ci}'$ #B1 -6.0 N/mm2 With Rebar	$-0.30\ f_{ci}'$ #B1 -6.0 N/mm2 With Rebar
	Flat Slab (FTW-FS-DS)	$-0.09\ f_{ci}'^{2/3}$ #B2 -0.7 N/mm2 No Rebar	$k_\sigma . -0.09\ f_{ci}'^{2/3}$ #B2 -0.5 N/mm2 No Rebar	$-0.09\ f_{ci}'^{2/3}$ #B2 -0.7 N/mm2 No Rebar	$k_\sigma . -0.09\ f_{ci}'^{2/3}$ #B2 -0.5 N/mm2 No Rebar	$-0.27\ f_{ci}'^{2/3}$ #B2 -2.0 N/mm2 With Rebar	$k_\sigma . -0.27\ f_{ci}'^{2/3}$ #B2 -1.6 N/mm2 With Rebar
SLS compressive $f_{max,t/b}$	Beam, One-Way or Two-Way Slab	$0.60\ f_c'$ #C1 30.0 N/mm2	$0.60\ f_c'$ #C1 30.0 N/mm2	$0.60\ f_c'$ #C1 30.0 N/mm2	$0.60\ f_c'$ #C1 30.0 N/mm2	$0.60\ f_c'$ #C1 30.0 N/mm2	$0.60\ f_c'$ #C1 30.0 N/mm2
	Flat Slab (FTW-FS-DS)	$0.40\ f_c'$ #C2 20.0 N/mm2	$0.30\ f_c'$ #C2 15.0 N/mm2	$0.40\ f_c'$ #C2 20.0 N/mm2	$0.30\ f_c'$ #C2 15.0 N/mm2	$0.40\ f_c'$ #C2 20.0 N/mm2	$0.30\ f_c'$ #C2 15.0 N/mm2
SLS tensile $f_{min,t/b}$	Beam, One-Way or Two-Way Slab	$-0.21\ f_c'^{2/3}$ #D1 -2.9 N/mm2 No Rebar	$-0.21\ f_c'^{2/3}$ #D1 -2.9 N/mm2 No Rebar	$-0.21\ f_c'^{2/3}$ #D1 -2.9 N/mm2 No Rebar	$-0.21\ f_c'^{2/3}$ #D1 -2.9 N/mm2 No Rebar	-<.......> #D2 -6.8 N/mm2 With Rebar	-<.......> #D2 -6.8 N/mm2 With Rebar
	Flat Slab (FTW-FS-DS)	$k_\sigma . -0.09\ f_c'^{2/3}$ #D3 -1.0 N/mm2 With Rebar	$-0.09\ f_c'^{2/3}$ #D3 -1.2 N/mm2 No Rebar	$k_\sigma . -0.09\ f_c'^{2/3}$ #D3 -1.0 N/mm2 With Rebar	$-0.09\ f_c'^{2/3}$ #D3 -1.2 N/mm2 No Rebar	$k_\sigma . -0.27\ f_c'^{2/3}$ #D3 -3.0 N/mm2 With Rebar	$-0.27\ f_c'^{2/3}$ #D3 -3.7 N/mm2 No Rebar

#A1: Note beam, one-way slab or two-way slab option to cl.5.8.2 TR.43-2.
#A2: Note flat slab option to T.4 TR.43-2 and cl.5.8.2 TR.43-2.
#B1: Note beam, one-way slab or two-way slab option to cl.5.8.2 TR.43-2 and analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to T.4 TR.43-2 and cl.5.8.2 TR.43-2.
#C1: Note beam, one-way slab or two-way slab option to cl.5.10.2.2 EC2.
#C2: Note flat slab option to T.4 TR.43-2.
#D1: Note beam, one-way slab or two-way slab option analogous to cl.5.8.2 TR.43-2.
#D2: Note beam, one-way slab or two-way slab option to cl.5.8.1 TR.43-2. Note -<.......> = MAX {$-0.30f_c'$, ($-0.40f_c'^{2/3}$ to $-0.50f_c'^{2/3}$)-4N/mm^2/1.0%} as the code allows for an increase in the tensile stress limit from 1% of longitudinal steel (untensioned reinforcement) onwards (-4N/mm^2 for every 1% of longitudinal steel (untensioned reinforcement), increasing proportionally, up to the specified upper limit of $-0.30f_c'$). Note crack width @ 0.20mm and %rebar 0.15%
#D3: Note flat slab option to T.4 TR.43-2.

Post-Tensioned Member (Bonded Tendons) Permissible Stress BS8110 (TR.43), ACI318, AS3600, EC2 (TR.43-2)			XX%CSTW-FS-DS	C28/35
Characterictic Strength of Concrete		**Cube**	**Cylinder**	
Characteristic strength of concrete (PT beam and slab), f_{cu} / f_c'		**35**	**28**	N/mm^2
Characteristic strength of concrete at transfer (PT beam and slab), f_{ci} / f_{ci}'		**25**	**20**	N/mm^2
Full CSTW-FS-DS Approach	**%M_{HOG}**	**%l**	**%f_{min}**	**[1.7 %M_{HOG}]. %l. %f_{min}**
ks = XX%MHOG | X.Xl | 1.3fmin [CSTW-FS-DS] [BS8110 TR.43, ACI318, EC2	**XX%**	**X.X**	**1.3**	**1.30**
ks = XX%MHOG | X.Xl | 1.0fmin [CSTW-FS-DS] [AS3600]	**XX%**	**X.X**	**1.0**	**1.00**

Permissible Stress [N/mm^2] [BS8110, TR.43]							
		Serviceability Class 1 No Flexural Tensile Stresses		**Serviceability Class 2** Flexural Tensile Stresses, Uncracked (No Visible Cracking)		**Serviceability Class 3** Flexural Tensile Stresses, Cracked	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**
		12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2
	Flat Slab (FTW-FS-DS)	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**
		6.0 N/mm2	8.3 N/mm2	6.0 N/mm2	8.3 N/mm2	6.0 N/mm2	8.3 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-1.0 #B**	**-1.0 #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**-0.25 f_{ci} #B1**	**-0.25 f_{ci} #B1**
		-1.0 N/mm2	-1.0 N/mm2	-1.8 N/mm2	-1.8 N/mm2	-6.3 N/mm2	-6.3 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-1.0 #B**	**k_σ . -1.0 #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**k_σ . -0.36 $\sqrt{f_{ci}}$ #B**	**-0.45 $\sqrt{f_{ci}}$ #B2**	**k_σ . -0.45 $\sqrt{f_{ci}}$ #B2**
		-1.0 N/mm2	-1.3 N/mm2	-1.8 N/mm2	-2.3 N/mm2	-2.3 N/mm2	-2.9 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	No Rebar	No Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**
		11.6 N/mm2	14.0 N/mm2	11.6 N/mm2	14.0 N/mm2	11.6 N/mm2	14.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**
		11.6 N/mm2	8.4 N/mm2	11.6 N/mm2	8.4 N/mm2	11.6 N/mm2	8.4 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.0 #D**	**0.0 #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**-<.....> #D1**	**-<.....> #D1**
		0.0 N/mm2	0.0 N/mm2	-2.1 N/mm2	-2.1 N/mm2	-3.4 N/mm2	-3.4 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . 0.0 #D**	**0.0 #D**	**k_σ . -0.36 $\sqrt{f_{cu}}$ #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**k_σ . -0.45 $\sqrt{f_{cu}}$ #D2**	**-0.45 $\sqrt{f_{cu}}$ #D2**
		0.0 N/mm2	0.0 N/mm2	-2.8 N/mm2	-2.1 N/mm2	-3.5 N/mm2	-2.7 N/mm2
		With Rebar	No Rebar	With Rebar	No Rebar	With Rebar	No Rebar

#A1: Note beam, one-way slab or two-way slab option to cl.4.3.5.1 BS8110.
#A2: Note flat slab option to T.2 TR.43 and cl.6.10.2 TR.43.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.4.3.5.2 BS8110.
#B1: Note beam, one-way slab or two-way slab option to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to T.2 TR.43 and cl.6.10.2 TR.43.
#C1: Note beam, one-way slab or two-way slab option to cl.4.3.4.2 BS8110.
#C2: Note flat slab option to T.2 TR.43.
#D: Note beam, one-way slab, two-way slab or flat slab option to cl.4.3.4.3 BS8110.
#D1: Note beam, one-way slab or two-way slab option to cl.4.3.4.3 BS8110. Note -<.....> = MAX {-0.25f_{cu}, (0.7-1.1).(-0.58$\sqrt{f_{cu}}$ to -0.82$\sqrt{f_{cu}}$)-4N/mm^2/1.0%} as the code allows for an increase in the tensile stress limit from 1% of longitudinal steel (untensioned reinforcement) onwards (-4N/mm^2 for every 1% of longitudinal steel (untensioned reinforcement), increasing proportionally, up to the specified upper limit of -0.25f_{cu}). Note crack width @ 0.20mm, %rebar **0.15%** and overall depth, h **600** mm
#D2: Note flat slab option to T.2 TR.43.

Permissible Stress [N/mm^2] [ACI318]							
		Serviceability Class U Uncracked		**Serviceability Class T** Transition		**Serviceability Class C** Cracked	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**
		12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**
		12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.30 f_{ci}' #B1**	**-0.30 f_{ci}' #B1**
		-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.50 $\sqrt{f_{ci}}$' #B2**	**k_σ . -0.50 $\sqrt{f_{ci}}$' #B2**
		-1.1 N/mm2	-1.5 N/mm2	-1.1 N/mm2	-1.5 N/mm2	-2.2 N/mm2	-2.9 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	No Rebar	No Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**
		17.0 N/mm2	17.0 N/mm2	17.0 N/mm2	17.0 N/mm2	17.0 N/mm2	17.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**
		17.0 N/mm2	17.0 N/mm2	17.0 N/mm2	17.0 N/mm2	17.0 N/mm2	17.0 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.62 $\sqrt{f_c}$' #D1**	**-0.62 $\sqrt{f_c}$' #D1**	**-1.00 $\sqrt{f_c}$' #D1**	**-1.00 $\sqrt{f_c}$' #D1**	**-0.30 f_c' #D1**	**-0.30 f_c' #D1**
		-3.3 N/mm2	-3.3 N/mm2	-5.3 N/mm2	-5.3 N/mm2	-8.5 N/mm2	-8.5 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**
		-3.5 N/mm2	-2.7 N/mm2	-3.5 N/mm2	-2.7 N/mm2	-3.5 N/mm2	-2.7 N/mm2
		With Rebar	With Rebar	With Rebar	With Rebar	With Rebar	With Rebar

#A: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.3.1 ACI318.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.3.2 ACI318.
#B1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to cl.24.5.3.2.1 ACI318.
#C: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.4.1 ACI318.
#D1: Note beam, one-way slab or two-way slab option to cl.24.5.2.1 ACI318 and analogous to cl.4.3.4.3 BS8110.
#D2: Note flat slab option to cl.24.5.2.1 ACI318.

Post-Tensioned Member (Bonded Tendons) Permissible Stress BS8110 (TR.43), ACI318, AS3600, EC2 (TR.43-2)			XX%CSTW-FS-DS	C28/35
Characterictic Strength of Concrete		**Cube**	**Cylinder**	
Characteristic strength of concrete (PT beam and slab), f_{cu} / f_c'		**35**	**28**	N/mm^2
Characteristic strength of concrete at transfer (PT beam and slab), f_{ci} / f_{ci}'		**25**	**20**	N/mm^2
Full CSTW-FS-DS Approach	**$\%M_{HOG}$**	**%I**	**$\%f_{min}$**	**[1.7%MHOG]. %I. %fmi**
ks = XX%MHOG | X.XI | 1.3fmin [CSTW-FS-DS] [BS8110 TR.43, ACI318, EC2 T	**XX%**	**X.X**	**1.3**	**1.30**
ks = XX%MHOG | X.XI | 1.0fmin [CSTW-FS-DS] [AS3600]	**XX%**	**X.X**	**1.0**	**1.00**

Permissible Stress [N/mm^2] [AS3600]

		Serviceability Class U Uncracked		Serviceability Class T Transition		Serviceability Class C Cracked	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B**	**-0.30 f_{ci}' #B1**	**-0.30 f_{ci}' #B1**
		-1.1 N/mm2	-1.1 N/mm2	-2.7 N/mm2	-2.7 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.60 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B2**	**k_σ . -0.60 $\sqrt{f_{ci}}$' #B2**
		-1.1 N/mm2	-1.1 N/mm2	-2.7 N/mm2	-2.7 N/mm2	-2.7 N/mm2	-2.7 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**
		14.2 N/mm2	14.2 N/mm2	14.2 N/mm2	14.2 N/mm2	14.2 N/mm2	14.2 N/mm2
	Flat Slab (FTW-FS-DS)	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**
		14.2 N/mm2	14.2 N/mm2	14.2 N/mm2	14.2 N/mm2	14.2 N/mm2	14.2 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.25 $\sqrt{f_c}$' #D**	**-0.25 $\sqrt{f_c}$' #D**	**-0.60 $\sqrt{f_c}$' #D**	**-0.60 $\sqrt{f_c}$' #D**	**-0.30 f_c' #D1**	**-0.30 f_c' #D1**
		-1.3 N/mm2	-1.3 N/mm2	-3.2 N/mm2	-3.2 N/mm2	-8.5 N/mm2	-8.5 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . -0.25 $\sqrt{f_c}$' #D**	**-0.25 $\sqrt{f_c}$' #D**	**k_σ . -0.60 $\sqrt{f_c}$' #D**	**-0.60 $\sqrt{f_c}$' #D**	**k_σ . -0.60 $\sqrt{f_c}$' #D2**	**-0.60 $\sqrt{f_c}$' #D2**
		-1.3 N/mm2	-1.3 N/mm2	-3.2 N/mm2	-3.2 N/mm2	-3.2 N/mm2	-3.2 N/mm2
		With Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar

#A: Note beam, one-way slab, two-way slab or flat slab option to cl.8.1.6.2 AS3600.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.8.6.2 and cl.9.4.2 AS3600.
#B1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to cl.9.4.2 AS3600.
#C: Note beam, one-way slab, two-way slab or flat slab option to cl.8.1.6.2 AS3600.
#D: Note beam, one-way slab, two-way slab or flat slab option to cl.8.6.2 and cl.9.4.2 AS3600.
#D1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.4.3 BS8110.
#D2: Note flat slab option to cl.9.4.2 AS3600 as an alternative to cl.6.9.5.3 AS3600.

Permissible Stress [N/mm^2] [EC2 and TR.43-2]

		Serviceability Class U Uncracked		Serviceability Class T Transition		Serviceability Class C Cracked	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.30 f_{ci}' #A2**	**0.40 f_{ci}' #A2**	**0.30 f_{ci}' #A2**	**0.40 f_{ci}' #A2**	**0.30 f_{ci}' #A2**	**0.40 f_{ci}' #A2**
		6.0 N/mm2	8.0 N/mm2	6.0 N/mm2	8.0 N/mm2	6.0 N/mm2	8.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.30 f_{ci}' #B1**	**-0.30 f_{ci}' #B1**
		-1.5 N/mm2	-1.5 N/mm2	-1.5 N/mm2	-1.5 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-0.09 f_{ci}'$^{2/3}$ #B2**	**k_σ . -0.09 f_{ci}'$^{2/3}$ #B2**	**-0.09 f_{ci}'$^{2/3}$ #B2**	**k_σ . -0.09 f_{ci}'$^{2/3}$ #B2**	**-0.27 f_{ci}'$^{2/3}$ #B2**	**k_σ . -0.27 f_{ci}'$^{2/3}$ #B2**
		-0.7 N/mm2	-0.9 N/mm2	-0.7 N/mm2	-0.9 N/mm2	-2.0 N/mm2	-2.6 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**
		17.0 N/mm2	17.0 N/mm2	17.0 N/mm2	17.0 N/mm2	17.0 N/mm2	17.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.40 f_c' #C2**	**0.30 f_c' #C2**	**0.40 f_c' #C2**	**0.30 f_c' #C2**	**0.40 f_c' #C2**	**0.30 f_c' #C2**
		11.3 N/mm2	8.5 N/mm2	11.3 N/mm2	8.5 N/mm2	11.3 N/mm2	8.5 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.21 f_c'$^{2/3}$ #D1**	**-0.21 f_c'$^{2/3}$ #D1**	**-0.21 f_c'$^{2/3}$ #D1**	**-0.21 f_c'$^{2/3}$ #D1**	**-<.....> #D2**	**-<.....> #D2**
		-2.0 N/mm2	-2.0 N/mm2	-2.0 N/mm2	-2.0 N/mm2	-4.6 N/mm2	-4.6 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . -0.09 f_c'$^{2/3}$ #D3**	**-0.09 f_c'$^{2/3}$ #D3**	**k_σ . -0.09 f_c'$^{2/3}$ #D3**	**-0.09 f_c'$^{2/3}$ #D3**	**k_σ . -0.27 f_c'$^{2/3}$ #D3**	**-0.27 f_c'$^{2/3}$ #D3**
		-1.1 N/mm2	-0.8 N/mm2	-1.1 N/mm2	-0.8 N/mm2	-3.3 N/mm2	-2.5 N/mm2
		With Rebar	No Rebar	With Rebar	No Rebar	With Rebar	No Rebar

#A1: Note beam, one-way slab or two-way slab option to cl.5.8.2 TR.43-2.
#A2: Note flat slab option to T.4 TR.43-2 and cl.5.8.2 TR.43-2.
#B1: Note beam, one-way slab or two-way slab option to cl.5.8.2 TR.43-2 and analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to T.4 TR.43-2 and cl.5.8.2 TR.43-2.
#C1: Note beam, one-way slab or two-way slab option to cl.5.10.2.2 EC2.
#C2: Note flat slab option to T.4 TR.43-2.
#D1: Note beam, one-way slab or two-way slab option analogous to cl.5.8.2 TR.43-2.
#D2: Note beam, one-way slab or two-way slab option to cl.5.8.1 TR.43-2. Note -<.....> = MAX {-0.30f_c', (-0.40f_c'$^{2/3}$ to -0.50f_c'$^{2/3}$)-4N/mm^2/1.0%} as the code allows for an increase in the tensile stress limit from 1% of longitudinal steel (untensioned reinforcement) onwards (-4N/mm^2 for every 1% of longitudinal steel (untensioned reinforcement), increasing proportionally, up to the specified upper limit of -0.30f_c'). Note crack width @ 0.20mm and %rebar **0.15%**
#D3: Note flat slab option to T.4 TR.43-2.

Post-Tensioned Member (Bonded Tendons) Permissible Stress BS8110 (TR.43), ACI318, AS3600, EC2 (TR.43-2)			XX%CSTW-FS-DS	C32/40
Characterictic Strength of Concrete		**Cube**	**Cylinder**	
Characteristic strength of concrete (PT beam and slab), f_{cu} / f_c'		**40**	**32**	N/mm^2
Characteristic strength of concrete at transfer (PT beam and slab), f_{ci} / f_{ci}'		**25**	**20**	N/mm^2
Full CSTW-FS-DS Approach	**%M_{HOG}**	**%I**	**%f_{min}**	[1.7 %M_{HOG}]. %I. %f_{min}
ks = XX%MHOG | X.XI | 1.3fmin [CSTW-FS-DS] [BS8110 TR.43, ACI318, EC2	**XX%**	**X.X**	**1.3**	**1.30**
ks = XX%MHOG | X.XI | 1.0fmin [CSTW-FS-DS] [AS3600]	**XX%**	**X.X**	**1.0**	**1.00**

Permissible Stress [N/mm^2] [BS8110, TR.43]							
		Serviceability Class 1 No Flexural Tensile Stresses		**Serviceability Class 2** Flexural Tensile Stresses, Uncracked (No Visible Cracking)		**Serviceability Class 3** Flexural Tensile Stresses, Cracked	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**
		12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2
	Flat Slab (FTW-FS-DS)	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**
		6.0 N/mm2	8.3 N/mm2	6.0 N/mm2	8.3 N/mm2	6.0 N/mm2	8.3 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-1.0 #B**	**-1.0 #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**-0.25 f_{ci} #B1**	**-0.25 f_{ci} #B1**
		-1.0 N/mm2	-1.0 N/mm2	-1.8 N/mm2	-1.8 N/mm2	-6.3 N/mm2	-6.3 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-1.0 #B**	**k_σ . -1.0 #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**k_σ . -0.36 $\sqrt{f_{ci}}$ #B**	**-0.45 $\sqrt{f_{ci}}$ #B2**	**k_σ . -0.45 $\sqrt{f_{ci}}$ #B2**
		-1.0 N/mm2	-1.3 N/mm2	-1.8 N/mm2	-2.3 N/mm2	-2.3 N/mm2	-2.9 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	No Rebar	No Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**
		13.2 N/mm2	16.0 N/mm2	13.2 N/mm2	16.0 N/mm2	13.2 N/mm2	16.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**
		13.2 N/mm2	9.6 N/mm2	13.2 N/mm2	9.6 N/mm2	13.2 N/mm2	9.6 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.0 #D**	**0.0 #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**-<.....> #D1**	**-<.....> #D1**
		0.0 N/mm2	0.0 N/mm2	-2.3 N/mm2	-2.3 N/mm2	-4.5 N/mm2	-4.5 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . 0.0 #D**	**0.0 #D**	**k_σ . -0.36 $\sqrt{f_{cu}}$ #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**k_σ . -0.45 $\sqrt{f_{cu}}$ #D2**	**-0.45 $\sqrt{f_{cu}}$ #D2**
		0.0 N/mm2	0.0 N/mm2	-3.0 N/mm2	-2.3 N/mm2	-3.7 N/mm2	-2.8 N/mm2
		With Rebar	No Rebar	With Rebar	No Rebar	With Rebar	No Rebar

#A1: Note beam, one-way slab or two-way slab option to cl.4.3.5.1 BS8110.
#A2: Note flat slab option to T.2 TR.43 and cl.6.10.2 TR.43.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.4.3.5.2 BS8110.
#B1: Note beam, one-way slab or two-way slab option to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to T.2 TR.43 and cl.6.10.2 TR.43.
#C1: Note beam, one-way slab or two-way slab option to cl.4.3.4.2 BS8110.
#C2: Note flat slab option to T.2 TR.43.
#D: Note beam, one-way slab, two-way slab or flat slab option to cl.4.3.4.3 BS8110.
#D1: Note beam, one-way slab or two-way slab option to cl.4.3.4.3 BS8110. Note -<.....> = MAX {-0.25f_{cu}, (0.7-1.1).(-0.58$\sqrt{f_{cu}}$ to -0.82$\sqrt{f_{cu}}$)-4N/mm^2/1.0%} as the code allows for an increase in the tensile stress limit from 1% of longitudinal steel (untensioned reinforcement) onwards (-4N/mm^2 for every 1% of longitudinal steel (untensioned reinforcement), increasing proportionally, up to the specified upper limit of -0.25f_{cu}). Note crack width @ 0.20mm, %rebar **0.15%** and overall depth, h **600** mm
#D2: Note flat slab option to T.2 TR.43.

Permissible Stress [N/mm^2] [ACI318]							
		Serviceability Class U Uncracked		**Serviceability Class T** Transition		**Serviceability Class C** Cracked	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**
		12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**
		12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.30 f_{ci}' #B1**	**-0.30 f_{ci}' #B1**
		-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.50 $\sqrt{f_{ci}}$' #B2**	**k_σ . -0.50 $\sqrt{f_{ci}}$' #B2**
		-1.1 N/mm2	-1.5 N/mm2	-1.1 N/mm2	-1.5 N/mm2	-2.2 N/mm2	-2.9 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	No Rebar	No Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**
		19.0 N/mm2	19.0 N/mm2	19.0 N/mm2	19.0 N/mm2	19.0 N/mm2	19.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**
		19.0 N/mm2	19.0 N/mm2	19.0 N/mm2	19.0 N/mm2	19.0 N/mm2	19.0 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.62 $\sqrt{f_c}$' #D1**	**-0.62 $\sqrt{f_c}$' #D1**	**-1.00 $\sqrt{f_c}$' #D1**	**-1.00 $\sqrt{f_c}$' #D1**	**-0.30 f_c' #D1**	**-0.30 f_c' #D1**
		-3.5 N/mm2	-3.5 N/mm2	-5.6 N/mm2	-5.6 N/mm2	-9.5 N/mm2	-9.5 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**
		-3.7 N/mm2	-2.8 N/mm2	-3.7 N/mm2	-2.8 N/mm2	-3.7 N/mm2	-2.8 N/mm2
		With Rebar	With Rebar	With Rebar	With Rebar	With Rebar	With Rebar

#A: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.3.1 ACI318.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.3.2 ACI318.
#B1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to cl.24.5.3.2.1 ACI318.
#C: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.4.1 ACI318.
#D1: Note beam, one-way slab or two-way slab option to cl.24.5.2.1 ACI318 and analogous to cl.4.3.4.3 BS8110.
#D2: Note flat slab option to cl.24.5.2.1 ACI318.

Post-Tensioned Member (Bonded Tendons) Permissible Stress BS8110 (TR.43), ACI318, AS3600, EC2 (TR.43-2)		XX%CSTW-FS-DS	C32/40
Characterictic Strength of Concrete	**Cube**	**Cylinder**	
Characteristic strength of concrete (PT beam and slab), f_{cu} / f_c'	**40**	**32**	N/mm^2
Characteristic strength of concrete at transfer (PT beam and slab), f_{ci} / f_{ci}'	**25**	**20**	N/mm^2
Full CSTW-FS-DS Approach	**%M_{HOG}**	**%I**	**%f_{min}**	**[1.] %M_{HOG}]. %I. %f_{min}**
ks = XX%MHOG | X.XI | 1.3fmin [CSTW-FS-DS] [BS8110 TR.43, ACI318, EC2 T	**XX%**	**X.X**	**1.3**	**1.30**
ks = XX%MHOG | X.XI | 1.0fmin [CSTW-FS-DS] [AS3600]	**XX%**	**X.X**	**1.0**	**1.00**

Permissible Stress [N/mm^2] [AS3600]

		Serviceability Class U Uncracked		Serviceability Class T Transition		Serviceability Class C Cracked	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B**	**-0.30 f_{ci}' #B1**	**-0.30 f_{ci}' #B1**
		-1.1 N/mm2	-1.1 N/mm2	-2.7 N/mm2	-2.7 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.60 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B2**	**k_σ . -0.60 $\sqrt{f_{ci}}$' #B2**
		-1.1 N/mm2	-1.1 N/mm2	-2.7 N/mm2	-2.7 N/mm2	-2.7 N/mm2	-2.7 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**
		15.8 N/mm2	15.8 N/mm2	15.8 N/mm2	15.8 N/mm2	15.8 N/mm2	15.8 N/mm2
	Flat Slab (FTW-FS-DS)	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**
		15.8 N/mm2	15.8 N/mm2	15.8 N/mm2	15.8 N/mm2	15.8 N/mm2	15.8 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.25 $\sqrt{f_c}$' #D**	**-0.25 $\sqrt{f_c}$' #D**	**-0.60 $\sqrt{f_c}$' #D**	**-0.60 $\sqrt{f_c}$' #D**	**-0.30 f_c' #D1**	**-0.30 f_c' #D1**
		-1.4 N/mm2	-1.4 N/mm2	-3.4 N/mm2	-3.4 N/mm2	-9.5 N/mm2	-9.5 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . -0.25 $\sqrt{f_c}$' #D**	**-0.25 $\sqrt{f_c}$' #D**	**k_σ . -0.60 $\sqrt{f_c}$' #D**	**-0.60 $\sqrt{f_c}$' #D**	**k_σ . -0.60 $\sqrt{f_c}$' #D2**	**-0.60 $\sqrt{f_c}$' #D2**
		-1.4 N/mm2	-1.4 N/mm2	-3.4 N/mm2	-3.4 N/mm2	-3.4 N/mm2	-3.4 N/mm2
		With Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar

#A: Note beam, one-way slab, two-way slab or flat slab option to cl.8.1.6.2 AS3600.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.8.6.2 and cl.9.4.2 AS3600.
#B1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to cl.9.4.2 AS3600.
#C: Note beam, one-way slab, two-way slab or flat slab option to cl.8.1.6.2 AS3600.
#D: Note beam, one-way slab, two-way slab or flat slab option to cl.8.6.2 and cl.9.4.2 AS3600.
#D1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.4.3 BS8110.
#D2: Note flat slab option to cl.9.4.2 AS3600 as an alternative to cl.6.9.5.3 AS3600.

Permissible Stress [N/mm^2] [EC2 and TR.43-2]

		Serviceability Class U Uncracked		Serviceability Class T Transition		Serviceability Class C Cracked	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.30 f_{ci}' #A2**	**0.40 f_{ci}' #A2**	**0.30 f_{ci}' #A2**	**0.40 f_{ci}' #A2**	**0.30 f_{ci}' #A2**	**0.40 f_{ci}' #A2**
		6.0 N/mm2	8.0 N/mm2	6.0 N/mm2	8.0 N/mm2	6.0 N/mm2	8.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.30 f_{ci}' #B1**	**-0.30 f_{ci}' #B1**
		-1.5 N/mm2	-1.5 N/mm2	-1.5 N/mm2	-1.5 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-0.09 f_{ci}'$^{2/3}$ #B2**	**k_σ . -0.09 f_{ci}'$^{2/3}$ #B2**	**-0.09 f_{ci}'$^{2/3}$ #B2**	**k_σ . -0.09 f_{ci}'$^{2/3}$ #B2**	**-0.27 f_{ci}'$^{2/3}$ #B2**	**k_σ . -0.27 f_{ci}'$^{2/3}$ #B2**
		-0.7 N/mm2	-0.9 N/mm2	-0.7 N/mm2	-0.9 N/mm2	-2.0 N/mm2	-2.6 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**
		19.0 N/mm2	19.0 N/mm2	19.0 N/mm2	19.0 N/mm2	19.0 N/mm2	19.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.40 f_c' #C2**	**0.30 f_c' #C2**	**0.40 f_c' #C2**	**0.30 f_c' #C2**	**0.40 f_c' #C2**	**0.30 f_c' #C2**
		12.7 N/mm2	9.5 N/mm2	12.7 N/mm2	9.5 N/mm2	12.7 N/mm2	9.5 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.21 f_c'$^{2/3}$ #D1**	**-0.21 f_c'$^{2/3}$ #D1**	**-0.21 f_c'$^{2/3}$ #D1**	**-0.21 f_c'$^{2/3}$ #D1**	**-<.....> #D2**	**-<.....> #D2**
		-2.1 N/mm2	-2.1 N/mm2	-2.1 N/mm2	-2.1 N/mm2	-5.0 N/mm2	-5.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . -0.09 f_c'$^{2/3}$ #D3**	**-0.09 f_c'$^{2/3}$ #D3**	**k_σ . -0.09 f_c'$^{2/3}$ #D3**	**-0.09 f_c'$^{2/3}$ #D3**	**k_σ . -0.27 f_c'$^{2/3}$ #D3**	**-0.27 f_c'$^{2/3}$ #D3**
		-1.2 N/mm2	-0.9 N/mm2	-1.2 N/mm2	-0.9 N/mm2	-3.5 N/mm2	-2.7 N/mm2
		With Rebar	No Rebar	With Rebar	No Rebar	With Rebar	No Rebar

#A1: Note beam, one-way slab or two-way slab option to cl.5.8.2 TR.43-2.
#A2: Note flat slab option to T.4 TR.43-2 and cl.5.8.2 TR.43-2.
#B1: Note beam, one-way slab or two-way slab option to cl.5.8.2 TR.43-2 and analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to T.4 TR.43-2 and cl.5.8.2 TR.43-2.
#C1: Note beam, one-way slab or two-way slab option to cl.5.10.2.2 EC2.
#C2: Note flat slab option to T.4 TR.43-2.
#D1: Note beam, one-way slab or two-way slab option analogous to cl.5.8.2 TR.43-2.
#D2: Note beam, one-way slab or two-way slab option to cl.5.8.1 TR.43-2. Note -<.....> = MAX {-0.30f_c', (-0.40f_c'$^{2/3}$ to -0.50f_c'$^{2/3}$)-4N/mm^2/1.0%} as the code allows for an increase in the tensile stress limit from 1% of longitudinal steel (untensioned reinforcement) onwards (-4N/mm^2 for every 1% of longitudinal steel (untensioned reinforcement), increasing proportionally, up to the specified upper limit of -0.30f_c'). Note crack width @ 0.20mm and %rebar **0.15%**
#D3: Note flat slab option to T.4 TR.43-2.

Post-Tensioned Member (Bonded Tendons) Permissible Stress BS8110 (TR.43), ACI318, AS3600, EC2 (TR.43-2)			XX%CSTW-FS-DS	C35/45
Characterictic Strength of Concrete		**Cube**	**Cylinder**	
Characteristic strength of concrete (PT beam and slab), f_{cu} / f_c'		**45**	**35**	N/mm^2
Characteristic strength of concrete at transfer (PT beam and slab), f_{ci} / f_{ci}'		**25**	**20**	N/mm^2
Full CSTW-FS-DS Approach	**%M_{HOG}**	**%I**	**%f_{min}**	**[1.7 %M_{HOG}]. %I. %f_{min}**
ks = XX%MHOG | X.XI | 1.3fmin [CSTW-FS-DS] [BS8110 TR.43, ACI318, EC2	**XX%**	**X.X**	**1.3**	**1.30**
ks = XX%MHOG | X.XI | 1.0fmin [CSTW-FS-DS] [AS3600]	**XX%**	**X.X**	**1.0**	**1.00**

Permissible Stress [N/mm^2] [BS8110, TR.43]							
		Serviceability Class 1 No Flexural Tensile Stresses		**Serviceability Class 2** Flexural Tensile Stresses, Uncracked (No Visible Cracking)		**Serviceability Class 3** Flexural Tensile Stresses, Cracked	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**
		12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2
	Flat Slab (FTW-FS-DS)	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**
		6.0 N/mm2	8.3 N/mm2	6.0 N/mm2	8.3 N/mm2	6.0 N/mm2	8.3 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-1.0 #B**	**-1.0 #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**-0.25 f_{ci} #B1**	**-0.25 f_{ci} #B1**
		-1.0 N/mm2	-1.0 N/mm2	-1.8 N/mm2	-1.8 N/mm2	-6.3 N/mm2	-6.3 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-1.0 #B**	**k_σ . -1.0 #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**k_σ . -0.36 $\sqrt{f_{ci}}$ #B**	**-0.45 $\sqrt{f_{ci}}$ #B2**	**k_σ . -0.45 $\sqrt{f_{ci}}$ #B2**
		-1.0 N/mm2	-1.3 N/mm2	-1.8 N/mm2	-2.3 N/mm2	-2.3 N/mm2	-2.9 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	No Rebar	No Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**
		14.9 N/mm2	18.0 N/mm2	14.9 N/mm2	18.0 N/mm2	14.9 N/mm2	18.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**
		14.9 N/mm2	10.8 N/mm2	14.9 N/mm2	10.8 N/mm2	14.9 N/mm2	10.8 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.0 #D**	**0.0 #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**-<.....> #D1**	**-<.....> #D1**
		0.0 N/mm2	0.0 N/mm2	-2.4 N/mm2	-2.4 N/mm2	-4.5 N/mm2	-4.5 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . 0.0 #D**	**0.0 #D**	**k_σ . -0.36 $\sqrt{f_{cu}}$ #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**k_σ . -0.45 $\sqrt{f_{cu}}$ #D2**	**-0.45 $\sqrt{f_{cu}}$ #D2**
		0.0 N/mm2	0.0 N/mm2	-3.1 N/mm2	-2.4 N/mm2	-3.9 N/mm2	-3.0 N/mm2
		With Rebar	No Rebar	With Rebar	No Rebar	With Rebar	No Rebar

#A1: Note beam, one-way slab or two-way slab option to cl.4.3.5.1 BS8110.
#A2: Note flat slab option to T.2 TR.43 and cl.6.10.2 TR.43.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.4.3.5.2 BS8110.
#B1: Note beam, one-way slab or two-way slab option to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to T.2 TR.43 and cl.6.10.2 TR.43.
#C1: Note beam, one-way slab or two-way slab option to cl.4.3.4.2 BS8110.
#C2: Note flat slab option to T.2 TR.43.
#D: Note beam, one-way slab, two-way slab or flat slab option to cl.4.3.4.3 BS8110.
#D1: Note beam, one-way slab or two-way slab option to cl.4.3.4.3 BS8110. Note -<.....> = MAX {-0.25f_{cu}, (0.7-1.1).(-0.58$\sqrt{f_{cu}}$ to -0.82$\sqrt{f_{cu}}$)-4N/mm^2/1.0%} as the code allows for an increase in the tensile stress limit from 1% of longitudinal steel (untensioned reinforcement) onwards (-4N/mm^2 for every 1% of longitudinal steel (untensioned reinforcement), increasing proportionally, up to the specified upper limit of -0.25f_{cu}). Note crack width @ 0.20mm, %rebar **0.15%** and overall depth, h **600** mm
#D2: Note flat slab option to T.2 TR.43.

Permissible Stress [N/mm^2] [ACI318]							
		Serviceability Class U Uncracked		**Serviceability Class T** Transition		**Serviceability Class C** Cracked	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**
		12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**
		12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.30 f_{ci}' #B1**	**-0.30 f_{ci}' #B1**
		-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.50 $\sqrt{f_{ci}}$' #B2**	**k_σ . -0.50 $\sqrt{f_{ci}}$' #B2**
		-1.1 N/mm2	-1.5 N/mm2	-1.1 N/mm2	-1.5 N/mm2	-2.2 N/mm2	-2.9 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	No Rebar	No Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**
		21.0 N/mm2	21.0 N/mm2	21.0 N/mm2	21.0 N/mm2	21.0 N/mm2	21.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**
		21.0 N/mm2	21.0 N/mm2	21.0 N/mm2	21.0 N/mm2	21.0 N/mm2	21.0 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.62 $\sqrt{f_c}$' #D1**	**-0.62 $\sqrt{f_c}$' #D1**	**-1.00 $\sqrt{f_c}$' #D1**	**-1.00 $\sqrt{f_c}$' #D1**	**-0.30 f_c' #D1**	**-0.30 f_c' #D1**
		-3.7 N/mm2	-3.7 N/mm2	-5.9 N/mm2	-5.9 N/mm2	-10.5 N/mm2	-10.5 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**
		-3.8 N/mm2	-3.0 N/mm2	-3.8 N/mm2	-3.0 N/mm2	-3.8 N/mm2	-3.0 N/mm2
		With Rebar	With Rebar	With Rebar	With Rebar	With Rebar	With Rebar

#A: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.3.1 ACI318.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.3.2 ACI318.
#B1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to cl.24.5.3.2.1 ACI318.
#C: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.4.1 ACI318.
#D1: Note beam, one-way slab or two-way slab option to cl.24.5.2.1 ACI318 and analogous to cl.4.3.4.3 BS8110.
#D2: Note flat slab option to cl.24.5.2.1 ACI318.

Post-Tensioned Member (Bonded Tendons) Permissible Stress BS8110 (TR.43), ACI318, AS3600, EC2 (TR.43-2)		XX%CSTW-FS-DS	C35/45
Characterictic Strength of Concrete		Cube	Cylinder	
Characteristic strength of concrete (PT beam and slab), f_{cu} / f_c'		45	35	N/mm^2
Characteristic strength of concrete at transfer (PT beam and slab), f_{ci} / f_{ci}'		25	20	N/mm^2
Full CSTW-FS-DS Approach	%M_{HOG}	%I	%f_{min}	[1/%M_{HOG}].%I.%f_{mi}
ks = XX%MHOG | X.XI | 1.3fmin [CSTW-FS-DS] [BS8110 TR.43, ACI318, EC2 T	XX%	X.X	1.3	1.30
ks = XX%MHOG | X.XI | 1.0fmin [CSTW-FS-DS] [AS3600]	XX%	X.X	1.0	1.00

Permissible Stress [N/mm^2] [AS3600]

		Serviceability Class U Uncracked		Serviceability Class T Transition		Serviceability Class C Cracked	
Stress Type	Floor Type	Top	Bottom	Top	Bottom	Top	Bottom
TLS compressive $f'_{max,t/b}$	Beam, One-Way or Two-Way Slab	$0.50\ f_{ci}'$ #A 10.0 N/mm2	$0.50\ f_{ci}'$ #A 10.0 N/mm2	$0.50\ f_{ci}'$ #A 10.0 N/mm2	$0.50\ f_{ci}'$ #A 10.0 N/mm2	$0.50\ f_{ci}'$ #A 10.0 N/mm2	$0.50\ f_{ci}'$ #A 10.0 N/mm2
	Flat Slab (FTW-FS-DS)	$0.50\ f_{ci}'$ #A 10.0 N/mm2	$0.50\ f_{ci}'$ #A 10.0 N/mm2	$0.50\ f_{ci}'$ #A 10.0 N/mm2	$0.50\ f_{ci}'$ #A 10.0 N/mm2	$0.50\ f_{ci}'$ #A 10.0 N/mm2	$0.50\ f_{ci}'$ #A 10.0 N/mm2
TLS tensile $f'_{min,t/b}$	Beam, One-Way or Two-Way Slab	$-0.25\ \sqrt{f_{ci}'}$ #B -1.1 N/mm2 No Rebar	$-0.25\ \sqrt{f_{ci}'}$ #B -1.1 N/mm2 No Rebar	$-0.60\ \sqrt{f_{ci}'}$ #B -2.7 N/mm2 With Rebar	$-0.60\ \sqrt{f_{ci}'}$ #B -2.7 N/mm2 With Rebar	$-0.30\ f_{ci}'$ #B1 -6.0 N/mm2 With Rebar	$-0.30\ f_{ci}'$ #B1 -6.0 N/mm2 With Rebar
	Flat Slab (FTW-FS-DS)	$-0.25\ \sqrt{f_{ci}'}$ #B -1.1 N/mm2 No Rebar	$k_\sigma . -0.25\ \sqrt{f_{ci}'}$ #B -1.1 N/mm2 No Rebar	$-0.60\ \sqrt{f_{ci}'}$ #B -2.7 N/mm2 With Rebar	$k_\sigma . -0.60\ \sqrt{f_{ci}'}$ #B -2.7 N/mm2 With Rebar	$-0.60\ \sqrt{f_{ci}'}$ #B2 -2.7 N/mm2 With Rebar	$k_\sigma . -0.60\ \sqrt{f_{ci}'}$ #B2 -2.7 N/mm2 With Rebar
SLS compressive $f_{max,t/b}$	Beam, One-Way or Two-Way Slab	$0.50\ f_c'$ #C 17.5 N/mm2	$0.50\ f_c'$ #C 17.5 N/mm2	$0.50\ f_c'$ #C 17.5 N/mm2	$0.50\ f_c'$ #C 17.5 N/mm2	$0.50\ f_c'$ #C 17.5 N/mm2	$0.50\ f_c'$ #C 17.5 N/mm2
	Flat Slab (FTW-FS-DS)	$0.50\ f_c'$ #C 17.5 N/mm2	$0.50\ f_c'$ #C 17.5 N/mm2	$0.50\ f_c'$ #C 17.5 N/mm2	$0.50\ f_c'$ #C 17.5 N/mm2	$0.50\ f_c'$ #C 17.5 N/mm2	$0.50\ f_c'$ #C 17.5 N/mm2
SLS tensile $f_{min,t/b}$	Beam, One-Way or Two-Way Slab	$-0.25\ \sqrt{f_c'}$ #D -1.5 N/mm2 No Rebar	$-0.25\ \sqrt{f_c'}$ #D -1.5 N/mm2 No Rebar	$-0.60\ \sqrt{f_c'}$ #D -3.5 N/mm2 With Rebar	$-0.60\ \sqrt{f_c'}$ #D -3.5 N/mm2 With Rebar	$-0.30\ f_c'$ #D1 -10.5 N/mm2 With Rebar	$-0.30\ f_c'$ #D1 -10.5 N/mm2 With Rebar
	Flat Slab (FTW-FS-DS)	$k_\sigma . -0.25\ \sqrt{f_c'}$ #D -1.5 N/mm2 With Rebar	$-0.25\ \sqrt{f_c'}$ #D -1.5 N/mm2 No Rebar	$k_\sigma . -0.60\ \sqrt{f_c'}$ #D -3.5 N/mm2 With Rebar	$-0.60\ \sqrt{f_c'}$ #D -3.5 N/mm2 With Rebar	$k_\sigma . -0.60\ \sqrt{f_c'}$ #D2 -3.5 N/mm2 With Rebar	$-0.60\ \sqrt{f_c'}$ #D2 -3.5 N/mm2 With Rebar

#A: Note beam, one-way slab, two-way slab or flat slab option to cl.8.1.6.2 AS3600.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.8.6.2 and cl.9.4.2 AS3600.
#B1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to cl.9.4.2 AS3600.
#C: Note beam, one-way slab, two-way slab or flat slab option to cl.8.1.6.2 AS3600.
#D: Note beam, one-way slab, two-way slab or flat slab option to cl.8.6.2 and cl.9.4.2 AS3600.
#D1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.4.3 BS8110.
#D2: Note flat slab option to cl.9.4.2 AS3600 as an alternative to cl.6.9.5.3 AS3600.

Permissible Stress [N/mm^2] [EC2 and TR.43-2]

		Serviceability Class U Uncracked		Serviceability Class T Transition		Serviceability Class C Cracked	
Stress Type	Floor Type	Top	Bottom	Top	Bottom	Top	Bottom
TLS compressive $f'_{max,t/b}$	Beam, One-Way or Two-Way Slab	$0.50\ f_{ci}'$ #A1 10.0 N/mm2	$0.50\ f_{ci}'$ #A1 10.0 N/mm2	$0.50\ f_{ci}'$ #A1 10.0 N/mm2	$0.50\ f_{ci}'$ #A1 10.0 N/mm2	$0.50\ f_{ci}'$ #A1 10.0 N/mm2	$0.50\ f_{ci}'$ #A1 10.0 N/mm2
	Flat Slab (FTW-FS-DS)	$0.30\ f_{ci}'$ #A2 6.0 N/mm2	$0.40\ f_{ci}'$ #A2 8.0 N/mm2	$0.30\ f_{ci}'$ #A2 6.0 N/mm2	$0.40\ f_{ci}'$ #A2 8.0 N/mm2	$0.30\ f_{ci}'$ #A2 6.0 N/mm2	$0.40\ f_{ci}'$ #A2 8.0 N/mm2
TLS tensile $f'_{min,t/b}$	Beam, One-Way or Two-Way Slab	$-0.21\ f_{ci}'^{2/3}$ #B1 -1.5 N/mm2 No Rebar	$-0.21\ f_{ci}'^{2/3}$ #B1 -1.5 N/mm2 No Rebar	$-0.21\ f_{ci}'^{2/3}$ #B1 -1.5 N/mm2 No Rebar	$-0.21\ f_{ci}'^{2/3}$ #B1 -1.5 N/mm2 No Rebar	$-0.30\ f_{ci}'$ #B1 -6.0 N/mm2 With Rebar	$-0.30\ f_{ci}'$ #B1 -6.0 N/mm2 With Rebar
	Flat Slab (FTW-FS-DS)	$-0.09\ f_{ci}'^{2/3}$ #B2 -0.7 N/mm2 No Rebar	$k_\sigma . -0.09\ f_{ci}'^{2/3}$ #B2 -0.9 N/mm2 No Rebar	$-0.09\ f_{ci}'^{2/3}$ #B2 -0.7 N/mm2 No Rebar	$k_\sigma . -0.09\ f_{ci}'^{2/3}$ #B2 -0.9 N/mm2 No Rebar	$-0.27\ f_{ci}'^{2/3}$ #B2 -2.0 N/mm2 With Rebar	$k_\sigma . -0.27\ f_{ci}'^{2/3}$ #B2 -2.6 N/mm2 With Rebar
SLS compressive $f_{max,t/b}$	Beam, One-Way or Two-Way Slab	$0.60\ f_c'$ #C1 21.0 N/mm2	$0.60\ f_c'$ #C1 21.0 N/mm2	$0.60\ f_c'$ #C1 21.0 N/mm2	$0.60\ f_c'$ #C1 21.0 N/mm2	$0.60\ f_c'$ #C1 21.0 N/mm2	$0.60\ f_c'$ #C1 21.0 N/mm2
	Flat Slab (FTW-FS-DS)	$0.40\ f_c'$ #C2 14.0 N/mm2	$0.30\ f_c'$ #C2 10.5 N/mm2	$0.40\ f_c'$ #C2 14.0 N/mm2	$0.30\ f_c'$ #C2 10.5 N/mm2	$0.40\ f_c'$ #C2 14.0 N/mm2	$0.30\ f_c'$ #C2 10.5 N/mm2
SLS tensile $f_{min,t/b}$	Beam, One-Way or Two-Way Slab	$-0.21\ f_c'^{2/3}$ #D1 -2.2 N/mm2 No Rebar	$-0.21\ f_c'^{2/3}$ #D1 -2.2 N/mm2 No Rebar	$-0.21\ f_c'^{2/3}$ #D1 -2.2 N/mm2 No Rebar	$-0.21\ f_c'^{2/3}$ #D1 -2.2 N/mm2 No Rebar	-<.......> #D2 -5.3 N/mm2 With Rebar	-<.......> #D2 -5.3 N/mm2 With Rebar
	Flat Slab (FTW-FS-DS)	$k_\sigma . -0.09\ f_c'^{2/3}$ #D3 -1.3 N/mm2 With Rebar	$-0.09\ f_c'^{2/3}$ #D3 -1.0 N/mm2 No Rebar	$k_\sigma . -0.09\ f_c'^{2/3}$ #D3 -1.3 N/mm2 With Rebar	$-0.09\ f_c'^{2/3}$ #D3 -1.0 N/mm2 No Rebar	$k_\sigma . -0.27\ f_c'^{2/3}$ #D3 -3.8 N/mm2 With Rebar	$-0.27\ f_c'^{2/3}$ #D3 -2.9 N/mm2 No Rebar

#A1: Note beam, one-way slab or two-way slab option to cl.5.8.2 TR.43-2.
#A2: Note flat slab option to T.4 TR.43-2 and cl.5.8.2 TR.43-2.
#B1: Note beam, one-way slab or two-way slab option to cl.5.8.2 TR.43-2 and analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to T.4 TR.43-2 and cl.5.8.2 TR.43-2.
#C1: Note beam, one-way slab or two-way slab option to cl.5.10.2.2 EC2.
#C2: Note flat slab option to T.4 TR.43-2.
#D1: Note beam, one-way slab or two-way slab option analogous to cl.5.8.2 TR.43-2.
#D2: Note beam, one-way slab or two-way slab option to cl.5.8.1 TR.43-2. Note -<.......> = MAX {$-0.30 f_c'$, ($-0.40 f_c'^{2/3}$ to $-0.50 f_c'^{2/3}$)-4N/mm^2/1.0%} as the code allows for an increase in the tensile stress limit from 1% of longitudinal steel (untensioned reinforcement) onwards (-4N/mm^2 for every 1% of longitudinal steel (untensioned reinforcement), increasing proportionally, up to the specified upper limit of $-0.30 f_c'$). Note crack width @ 0.20mm and %rebar 0.15%
#D3: Note flat slab option to T.4 TR.43-2.

Post-Tensioned Member (Bonded Tendons) Permissible Stress BS8110 (TR.43), ACI318, AS3600, EC2 (TR.43-2)			XX%CSTW-FS-DS	C40/50
Characterictic Strength of Concrete		**Cube**	**Cylinder**	
Characteristic strength of concrete (PT beam and slab), f_{cu} / f_c'		**50**	**40**	N/mm^2
Characteristic strength of concrete at transfer (PT beam and slab), f_{ci} / f_{ci}'		**25**	**20**	N/mm^2
Full CSTW-FS-DS Approach	**%M_{HOG}**	**%I**	**%f_{min}**	**[1.7 %M_{HOG}]. %I. %f_{min}**
ks = XX%MHOG | X.XI | 1.3fmin [CSTW-FS-DS] [BS8110 TR.43, ACI318, EC2	**XX%**	**X.X**	**1.3**	**1.30**
ks = XX%MHOG | X.XI | 1.0fmin [CSTW-FS-DS] [AS3600]	**XX%**	**X.X**	**1.0**	**1.00**

Permissible Stress [N/mm^2] [BS8110, TR.43]							
		Serviceability Class 1 No Flexural Tensile Stresses		**Serviceability Class 2** Flexural Tensile Stresses, Uncracked (No Visible Cracking)		**Serviceability Class 3** Flexural Tensile Stresses, Cracked	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**
		12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2
	Flat Slab (FTW-FS-DS)	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**
		6.0 N/mm2	8.3 N/mm2	6.0 N/mm2	8.3 N/mm2	6.0 N/mm2	8.3 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-1.0 #B**	**-1.0 #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**-0.25 f_{ci} #B1**	**-0.25 f_{ci} #B1**
		-1.0 N/mm2	-1.0 N/mm2	-1.8 N/mm2	-1.8 N/mm2	-6.3 N/mm2	-6.3 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-1.0 #B**	**k_σ . -1.0 #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**k_σ . -0.36 $\sqrt{f_{ci}}$ #B**	**-0.45 $\sqrt{f_{ci}}$ #B2**	**k_σ . -0.45 $\sqrt{f_{ci}}$ #B2**
		-1.0 N/mm2	-1.3 N/mm2	-1.8 N/mm2	-2.3 N/mm2	-2.3 N/mm2	-2.9 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	No Rebar	No Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**
		16.5 N/mm2	20.0 N/mm2	16.5 N/mm2	20.0 N/mm2	16.5 N/mm2	20.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**
		16.5 N/mm2	12.0 N/mm2	16.5 N/mm2	12.0 N/mm2	16.5 N/mm2	12.0 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.0 #D**	**0.0 #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**-<.....> #D1**	**-<.....> #D1**
		0.0 N/mm2	0.0 N/mm2	-2.5 N/mm2	-2.5 N/mm2	-5.2 N/mm2	-5.2 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . 0.0 #D**	**0.0 #D**	**k_σ . -0.36 $\sqrt{f_{cu}}$ #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**k_σ . -0.45 $\sqrt{f_{cu}}$ #D2**	**-0.45 $\sqrt{f_{cu}}$ #D2**
		0.0 N/mm2	0.0 N/mm2	-3.3 N/mm2	-2.5 N/mm2	-4.1 N/mm2	-3.2 N/mm2
		With Rebar	No Rebar	With Rebar	No Rebar	With Rebar	No Rebar

#A1: Note beam, one-way slab or two-way slab option to cl.4.3.5.1 BS8110.
#A2: Note flat slab option to T.2 TR.43 and cl.6.10.2 TR.43.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.4.3.5.2 BS8110.
#B1: Note beam, one-way slab or two-way slab option to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to T.2 TR.43 and cl.6.10.2 TR.43.
#C1: Note beam, one-way slab or two-way slab option to cl.4.3.4.2 BS8110.
#C2: Note flat slab option to T.2 TR.43.
#D: Note beam, one-way slab, two-way slab or flat slab option to cl.4.3.4.3 BS8110.
#D1: Note beam, one-way slab or two-way slab option to cl.4.3.4.3 BS8110. Note -<.....> = MAX {-0.25f_{cu}, (0.7-1.1).(-0.58$\sqrt{f_{cu}}$ to -0.82$\sqrt{f_{cu}}$)-4N/mm^2/1.0%} as the code allows for an increase in the tensile stress limit from 1% of longitudinal steel (untensioned reinforcement) onwards (-4N/mm^2 for every 1% of longitudinal steel (untensioned reinforcement), increasing proportionally, up to the specified upper limit of -0.25f_{cu}). Note crack width @ 0.20mm, %rebar **0.15%** and overall depth, h **600** mm
#D2: Note flat slab option to T.2 TR.43.

Permissible Stress [N/mm^2] [ACI318]							
		Serviceability Class U Uncracked		**Serviceability Class T** Transition		**Serviceability Class C** Cracked	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**
		12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**
		12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.30 f_{ci}' #B1**	**-0.30 f_{ci}' #B1**
		-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.50 $\sqrt{f_{ci}}$' #B2**	**k_σ . -0.50 $\sqrt{f_{ci}}$' #B2**
		-1.1 N/mm2	-1.5 N/mm2	-1.1 N/mm2	-1.5 N/mm2	-2.2 N/mm2	-2.9 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	No Rebar	No Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**
		24.0 N/mm2	24.0 N/mm2	24.0 N/mm2	24.0 N/mm2	24.0 N/mm2	24.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**
		24.0 N/mm2	24.0 N/mm2	24.0 N/mm2	24.0 N/mm2	24.0 N/mm2	24.0 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.62 $\sqrt{f_c}$' #D1**	**-0.62 $\sqrt{f_c}$' #D1**	**-1.00 $\sqrt{f_c}$' #D1**	**-1.00 $\sqrt{f_c}$' #D1**	**-0.30 f_c' #D1**	**-0.30 f_c' #D1**
		-3.9 N/mm2	-3.9 N/mm2	-6.3 N/mm2	-6.3 N/mm2	-12.0 N/mm2	-12.0 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**
		-4.1 N/mm2	-3.2 N/mm2	-4.1 N/mm2	-3.2 N/mm2	-4.1 N/mm2	-3.2 N/mm2
		With Rebar	With Rebar	With Rebar	With Rebar	With Rebar	With Rebar

#A: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.3.1 ACI318.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.3.2 ACI318.
#B1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to cl.24.5.3.2.1 ACI318.
#C: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.4.1 ACI318.
#D1: Note beam, one-way slab or two-way slab option to cl.24.5.2.1 ACI318 and analogous to cl.4.3.4.3 BS8110.
#D2: Note flat slab option to cl.24.5.2.1 ACI318.

Post-Tensioned Member (Bonded Tendons) Permissible Stress BS8110 (TR.43), ACI318, AS3600, EC2 (TR.43-2)		XX%CSTW-FS-DS	C40/50	
Characterictic Strength of Concrete		**Cube**	**Cylinder**	
Characteristic strength of concrete (PT beam and slab), f_{cu} / f_c'		50	40	N/mm^2
Characteristic strength of concrete at transfer (PT beam and slab), f_{ci} / f_{ci}'		25	20	N/mm^2
Full CSTW-FS-DS Approach	**%M_{HOG}**	**%I**	**%f_{min}**	**[1/%M_{HOG}]:%I:%f_{mi}**
ks = XX%MHOG | X.XI | 1.3fmin [CSTW-FS-DS] [BS8110 TR.43, ACI318, EC2 T	XX%	X.X	1.3	1.30
ks = XX%MHOG | X.XI | 1.0fmin [CSTW-FS-DS] [AS3600]	XX%	X.X	1.0	1.00

Permissible Stress [N/mm^2] [AS3600]

		Serviceability Class U Uncracked		Serviceability Class T Transition		Serviceability Class C Cracked	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	Beam, One-Way or Two-Way Slab	$0.50 f_{ci}'$ #A 10.0 N/mm2	$0.50 f_{ci}'$ #A 10.0 N/mm2	$0.50 f_{ci}'$ #A 10.0 N/mm2	$0.50 f_{ci}'$ #A 10.0 N/mm2	$0.50 f_{ci}'$ #A 10.0 N/mm2	$0.50 f_{ci}'$ #A 10.0 N/mm2
	Flat Slab (FTW-FS-DS)	$0.50 f_{ci}'$ #A 10.0 N/mm2	$0.50 f_{ci}'$ #A 10.0 N/mm2	$0.50 f_{ci}'$ #A 10.0 N/mm2	$0.50 f_{ci}'$ #A 10.0 N/mm2	$0.50 f_{ci}'$ #A 10.0 N/mm2	$0.50 f_{ci}'$ #A 10.0 N/mm2
TLS tensile $f'_{min,t/b}$	Beam, One-Way or Two-Way Slab	$-0.25 \sqrt{f_{ci}'}$ #B -1.1 N/mm2 No Rebar	$-0.25 \sqrt{f_{ci}'}$ #B -1.1 N/mm2 No Rebar	$-0.60 \sqrt{f_{ci}'}$ #B -2.7 N/mm2 With Rebar	$-0.60 \sqrt{f_{ci}'}$ #B -2.7 N/mm2 With Rebar	$-0.30 f_{ci}'$ #B1 -6.0 N/mm2 With Rebar	$-0.30 f_{ci}'$ #B1 -6.0 N/mm2 With Rebar
	Flat Slab (FTW-FS-DS)	$-0.25 \sqrt{f_{ci}'}$ #B -1.1 N/mm2 No Rebar	k_{σ} . $-0.25 \sqrt{f_{ci}'}$ #B -1.1 N/mm2 No Rebar	$-0.60 \sqrt{f_{ci}'}$ #B -2.7 N/mm2 With Rebar	k_{σ} . $-0.60 \sqrt{f_{ci}'}$ #B -2.7 N/mm2 With Rebar	$-0.60 \sqrt{f_{ci}'}$ #B2 -2.7 N/mm2 With Rebar	k_{σ} . $-0.60 \sqrt{f_{ci}'}$ #B2 -2.7 N/mm2 With Rebar
SLS compressive $f_{max,t/b}$	Beam, One-Way or Two-Way Slab	$0.50 f_c'$ #C 20.0 N/mm2	$0.50 f_c'$ #C 20.0 N/mm2	$0.50 f_c'$ #C 20.0 N/mm2	$0.50 f_c'$ #C 20.0 N/mm2	$0.50 f_c'$ #C 20.0 N/mm2	$0.50 f_c'$ #C 20.0 N/mm2
	Flat Slab (FTW-FS-DS)	$0.50 f_c'$ #C 20.0 N/mm2	$0.50 f_c'$ #C 20.0 N/mm2	$0.50 f_c'$ #C 20.0 N/mm2	$0.50 f_c'$ #C 20.0 N/mm2	$0.50 f_c'$ #C 20.0 N/mm2	$0.50 f_c'$ #C 20.0 N/mm2
SLS tensile $f_{min,t/b}$	Beam, One-Way or Two-Way Slab	$-0.25 \sqrt{f_c'}$ #D -1.6 N/mm2 No Rebar	$-0.25 \sqrt{f_c'}$ #D -1.6 N/mm2 No Rebar	$-0.60 \sqrt{f_c'}$ #D -3.8 N/mm2 With Rebar	$-0.60 \sqrt{f_c'}$ #D -3.8 N/mm2 With Rebar	$-0.30 f_c'$ #D1 -12.0 N/mm2 With Rebar	$-0.30 f_c'$ #D1 -12.0 N/mm2 With Rebar
	Flat Slab (FTW-FS-DS)	k_{σ} . $-0.25 \sqrt{f_c'}$ #D -1.6 N/mm2 With Rebar	$-0.25 \sqrt{f_c'}$ #D -1.6 N/mm2 No Rebar	k_{σ} . $-0.60 \sqrt{f_c'}$ #D -3.8 N/mm2 With Rebar	$-0.60 \sqrt{f_c'}$ #D -3.8 N/mm2 With Rebar	k_{σ} . $-0.60 \sqrt{f_c'}$ #D2 -3.8 N/mm2 With Rebar	$-0.60 \sqrt{f_c'}$ #D2 -3.8 N/mm2 With Rebar

#A: Note beam, one-way slab, two-way slab or flat slab option to cl.8.1.6.2 AS3600.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.8.6.2 and cl.9.4.2 AS3600.
#B1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to cl.9.4.2 AS3600.
#C: Note beam, one-way slab, two-way slab or flat slab option to cl.8.1.6.2 AS3600.
#D: Note beam, one-way slab, two-way slab or flat slab option to cl.8.6.2 and cl.9.4.2 AS3600.
#D1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.4.3 BS8110.
#D2: Note flat slab option to cl.9.4.2 AS3600 as an alternative to cl.6.9.5.3 AS3600.

Permissible Stress [N/mm^2] [EC2 and TR.43-2]

		Serviceability Class U Uncracked		Serviceability Class T Transition		Serviceability Class C Cracked	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	Beam, One-Way or Two-Way Slab	$0.50 f_{ci}'$ #A1 10.0 N/mm2	$0.50 f_{ci}'$ #A1 10.0 N/mm2	$0.50 f_{ci}'$ #A1 10.0 N/mm2	$0.50 f_{ci}'$ #A1 10.0 N/mm2	$0.50 f_{ci}'$ #A1 10.0 N/mm2	$0.50 f_{ci}'$ #A1 10.0 N/mm2
	Flat Slab (FTW-FS-DS)	$0.30 f_{ci}'$ #A2 6.0 N/mm2	$0.40 f_{ci}'$ #A2 8.0 N/mm2	$0.30 f_{ci}'$ #A2 6.0 N/mm2	$0.40 f_{ci}'$ #A2 8.0 N/mm2	$0.30 f_{ci}'$ #A2 6.0 N/mm2	$0.40 f_{ci}'$ #A2 8.0 N/mm2
TLS tensile $f'_{min,t/b}$	Beam, One-Way or Two-Way Slab	$-0.21 f_{ci}'^{2/3}$ #B1 -1.5 N/mm2 No Rebar	$-0.21 f_{ci}'^{2/3}$ #B1 -1.5 N/mm2 No Rebar	$-0.21 f_{ci}'^{2/3}$ #B1 -1.5 N/mm2 No Rebar	$-0.21 f_{ci}'^{2/3}$ #B1 -1.5 N/mm2 No Rebar	$-0.30 f_{ci}'$ #B1 -6.0 N/mm2 With Rebar	$-0.30 f_{ci}'$ #B1 -6.0 N/mm2 With Rebar
	Flat Slab (FTW-FS-DS)	$-0.09 f_{ci}'^{2/3}$ #B2 -0.7 N/mm2 No Rebar	k_{σ} . $-0.09 f_{ci}'^{2/3}$ #B2 -0.9 N/mm2 No Rebar	$-0.09 f_{ci}'^{2/3}$ #B2 -0.7 N/mm2 No Rebar	k_{σ} . $-0.09 f_{ci}'^{2/3}$ #B2 -0.9 N/mm2 No Rebar	$-0.27 f_{ci}'^{2/3}$ #B2 -2.0 N/mm2 With Rebar	k_{σ} . $-0.27 f_{ci}'^{2/3}$ #B2 -2.6 N/mm2 With Rebar
SLS compressive $f_{max,t/b}$	Beam, One-Way or Two-Way Slab	$0.60 f_c'$ #C1 24.0 N/mm2	$0.60 f_c'$ #C1 24.0 N/mm2	$0.60 f_c'$ #C1 24.0 N/mm2	$0.60 f_c'$ #C1 24.0 N/mm2	$0.60 f_c'$ #C1 24.0 N/mm2	$0.60 f_c'$ #C1 24.0 N/mm2
	Flat Slab (FTW-FS-DS)	$0.40 f_c'$ #C2 16.0 N/mm2	$0.30 f_c'$ #C2 12.0 N/mm2	$0.40 f_c'$ #C2 16.0 N/mm2	$0.30 f_c'$ #C2 12.0 N/mm2	$0.40 f_c'$ #C2 16.0 N/mm2	$0.30 f_c'$ #C2 12.0 N/mm2
SLS tensile $f_{min,t/b}$	Beam, One-Way or Two-Way Slab	$-0.21 f_c'^{2/3}$ #D1 -2.5 N/mm2 No Rebar	$-0.21 f_c'^{2/3}$ #D1 -2.5 N/mm2 No Rebar	$-0.21 f_c'^{2/3}$ #D1 -2.5 N/mm2 No Rebar	$-0.21 f_c'^{2/3}$ #D1 -2.5 N/mm2 No Rebar	-<.......> #D2 -5.8 N/mm2 With Rebar	-<.......> #D2 -5.8 N/mm2 With Rebar
	Flat Slab (FTW-FS-DS)	k_{σ} . $-0.09 f_c'^{2/3}$ #D3 -1.4 N/mm2 With Rebar	$-0.09 f_c'^{2/3}$ #D3 -1.1 N/mm2 No Rebar	k_{σ} . $-0.09 f_c'^{2/3}$ #D3 -1.4 N/mm2 With Rebar	$-0.09 f_c'^{2/3}$ #D3 -1.1 N/mm2 No Rebar	k_{σ} . $-0.27 f_c'^{2/3}$ #D3 -4.1 N/mm2 With Rebar	$-0.27 f_c'^{2/3}$ #D3 -3.2 N/mm2 No Rebar

#A1: Note beam, one-way slab or two-way slab option to cl.5.8.2 TR.43-2.
#A2: Note flat slab option to T.4 TR.43-2 and cl.5.8.2 TR.43-2.
#B1: Note beam, one-way slab or two-way slab option to cl.5.8.2 TR.43-2 and analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to T.4 TR.43-2 and cl.5.8.2 TR.43-2.
#C1: Note beam, one-way slab or two-way slab option to cl.5.10.2.2 EC2.
#C2: Note flat slab option to T.4 TR.43-2.
#D1: Note beam, one-way slab or two-way slab option analogous to cl.5.8.2 TR.43-2.
#D2: Note beam, one-way slab or two-way slab option to cl.5.8.1 TR.43-2. Note -<.......> = MAX {$-0.30 f_c'$, ($-0.40 f_c'^{2/3}$ to $-0.50 f_c'^{2/3}$)-4N/mm^2/1.0%} as the code allows for an increase in the tensile stress limit from 1% of longitudinal steel (untensioned reinforcement) onwards (-4N/mm^2 for every 1% of longitudinal steel (untensioned reinforcement), increasing proportionally, up to the specified upper limit of $-0.30 f_c'$). Note crack width @ 0.20mm and %rebar 0.15%
#D3: Note flat slab option to T.4 TR.43-2.

Post-Tensioned Member (Bonded Tendons) Permissible Stress BS8110 (TR.43), ACI318, AS3600, EC2 (TR.43-2)			XX%CSTW-FS-DS	C45/55
Characterictic Strength of Concrete		**Cube**	**Cylinder**	
Characteristic strength of concrete (PT beam and slab), f_{cu} / f_c'		**55**	**45**	N/mm^2
Characteristic strength of concrete at transfer (PT beam and slab), f_{ci} / f_{ci}'		**25**	**20**	N/mm^2
Full CSTW-FS-DS Approach	**%M_{HOG}**	**%I**	**%f_{min}**	**[1.7 %M_{HOG}]. %I. %f_{min}**
ks = XX%MHOG | X.XI | 1.3fmin [CSTW-FS-DS] [BS8110 TR.43, ACI318, EC2	**XX%**	**X.X**	**1.3**	**1.30**
ks = XX%MHOG | X.XI | 1.0fmin [CSTW-FS-DS] [AS3600]	**XX%**	**X.X**	**1.0**	**1.00**

Permissible Stress [N/mm^2] [BS8110, TR.43]							
		Serviceability Class 1 No Flexural Tensile Stresses		**Serviceability Class 2** Flexural Tensile Stresses, Uncracked (No Visible Cracking)		**Serviceability Class 3** Flexural Tensile Stresses, Cracked	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**
		12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2
	Flat Slab (FTW-FS-DS)	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**
		6.0 N/mm2	8.3 N/mm2	6.0 N/mm2	8.3 N/mm2	6.0 N/mm2	8.3 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-1.0 #B**	**-1.0 #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**-0.25 f_{ci} #B1**	**-0.25 f_{ci} #B1**
		-1.0 N/mm2	-1.0 N/mm2	-1.8 N/mm2	-1.8 N/mm2	-6.3 N/mm2	-6.3 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-1.0 #B**	**k_σ . -1.0 #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**k_σ . -0.36 $\sqrt{f_{ci}}$ #B**	**-0.45 $\sqrt{f_{ci}}$ #B2**	**k_σ . -0.45 $\sqrt{f_{ci}}$ #B2**
		-1.0 N/mm2	-1.3 N/mm2	-1.8 N/mm2	-2.3 N/mm2	-2.3 N/mm2	-2.9 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	No Rebar	No Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**
		18.2 N/mm2	22.0 N/mm2	18.2 N/mm2	22.0 N/mm2	18.2 N/mm2	22.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**
		18.2 N/mm2	13.2 N/mm2	18.2 N/mm2	13.2 N/mm2	18.2 N/mm2	13.2 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.0 #D**	**0.0 #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**-<.....> #D1**	**-<.....> #D1**
		0.0 N/mm2	0.0 N/mm2	-2.7 N/mm2	-2.7 N/mm2	-5.2 N/mm2	-5.2 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . 0.0 #D**	**0.0 #D**	**k_σ . -0.36 $\sqrt{f_{cu}}$ #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**k_σ . -0.45 $\sqrt{f_{cu}}$ #D2**	**-0.45 $\sqrt{f_{cu}}$ #D2**
		0.0 N/mm2	0.0 N/mm2	-3.5 N/mm2	-2.7 N/mm2	-4.3 N/mm2	-3.3 N/mm2
		With Rebar	No Rebar	With Rebar	No Rebar	With Rebar	No Rebar

#A1: Note beam, one-way slab or two-way slab option to cl.4.3.5.1 BS8110.
#A2: Note flat slab option to T.2 TR.43 and cl.6.10.2 TR.43.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.4.3.5.2 BS8110.
#B1: Note beam, one-way slab or two-way slab option to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to T.2 TR.43 and cl.6.10.2 TR.43.
#C1: Note beam, one-way slab or two-way slab option to cl.4.3.4.2 BS8110.
#C2: Note flat slab option to T.2 TR.43.
#D: Note beam, one-way slab, two-way slab or flat slab option to cl.4.3.4.3 BS8110.
#D1: Note beam, one-way slab or two-way slab option to cl.4.3.4.3 BS8110. Note -<.....> = MAX {-0.25f_{cu}, (0.7-1.1).(-0.58$\sqrt{f_{cu}}$ to -0.82$\sqrt{f_{cu}}$)-4N/mm^2/1.0%} as the code allows for an increase in the tensile stress limit from 1% of longitudinal steel (untensioned reinforcement) onwards (-4N/mm^2 for every 1% of longitudinal steel (untensioned reinforcement), increasing proportionally, up to the specified upper limit of -0.25f_{cu}). Note crack width @ 0.20mm, %rebar **0.15%** and overall depth, h **600** mm
#D2: Note flat slab option to T.2 TR.43.

Permissible Stress [N/mm^2] [ACI318]							
		Serviceability Class U Uncracked		**Serviceability Class T** Transition		**Serviceability Class C** Cracked	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**
		12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**
		12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.30 f_{ci}' #B1**	**-0.30 f_{ci}' #B1**
		-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.50 $\sqrt{f_{ci}}$' #B2**	**k_σ . -0.50 $\sqrt{f_{ci}}$' #B2**
		-1.1 N/mm2	-1.5 N/mm2	-1.1 N/mm2	-1.5 N/mm2	-2.2 N/mm2	-2.9 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	No Rebar	No Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**
		27.0 N/mm2	27.0 N/mm2	27.0 N/mm2	27.0 N/mm2	27.0 N/mm2	27.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**
		27.0 N/mm2	27.0 N/mm2	27.0 N/mm2	27.0 N/mm2	27.0 N/mm2	27.0 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.62 $\sqrt{f_c}$' #D1**	**-0.62 $\sqrt{f_c}$' #D1**	**-1.00 $\sqrt{f_c}$' #D1**	**-1.00 $\sqrt{f_c}$' #D1**	**-0.30 f_c' #D1**	**-0.30 f_c' #D1**
		-4.2 N/mm2	-4.2 N/mm2	-6.7 N/mm2	-6.7 N/mm2	-13.5 N/mm2	-13.5 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**
		-4.4 N/mm2	-3.4 N/mm2	-4.4 N/mm2	-3.4 N/mm2	-4.4 N/mm2	-3.4 N/mm2
		With Rebar	With Rebar	With Rebar	With Rebar	With Rebar	With Rebar

#A: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.3.1 ACI318.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.3.2 ACI318.
#B1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to cl.24.5.3.2.1 ACI318.
#C: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.4.1 ACI318.
#D1: Note beam, one-way slab or two-way slab option to cl.24.5.2.1 ACI318 and analogous to cl.4.3.4.3 BS8110.
#D2: Note flat slab option to cl.24.5.2.1 ACI318.

Post-Tensioned Member (Bonded Tendons) Permissible Stress BS8110 (TR.43), ACI318, AS3600, EC2 (TR.43-2)		XX%CSTW-FS-DS	C45/55
Characterictic Strength of Concrete	**Cube**	**Cylinder**	
Characteristic strength of concrete (PT beam and slab), f_{cu} / f_c'	**55**	**45**	N/mm^2
Characteristic strength of concrete at transfer (PT beam and slab), f_{ci} / f_{ci}'	**25**	**20**	N/mm^2
Full CSTW-FS-DS Approach	**$\%M_{HOG}$**	**%I**	**$\%f_{min}$**	**[1.7%MHOG]. %I. %fmi**
ks = XX%MHOG | X.XI | 1.3fmin [CSTW-FS-DS] [BS8110 TR.43, ACI318, EC2 T	**XX%**	**X.X**	**1.3**	**1.30**
ks = XX%MHOG | X.XI | 1.0fmin [CSTW-FS-DS] [AS3600]	**XX%**	**X.X**	**1.0**	**1.00**

Permissible Stress [N/mm^2] [AS3600]

		Serviceability Class U Uncracked		Serviceability Class T Transition		Serviceability Class C Cracked	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B**	**-0.30 f_{ci}' #B1**	**-0.30 f_{ci}' #B1**
		-1.1 N/mm2	-1.1 N/mm2	-2.7 N/mm2	-2.7 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.60 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B2**	**k_σ . -0.60 $\sqrt{f_{ci}}$' #B2**
		-1.1 N/mm2	-1.1 N/mm2	-2.7 N/mm2	-2.7 N/mm2	-2.7 N/mm2	-2.7 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**
		22.5 N/mm2	22.5 N/mm2	22.5 N/mm2	22.5 N/mm2	22.5 N/mm2	22.5 N/mm2
	Flat Slab (FTW-FS-DS)	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**
		22.5 N/mm2	22.5 N/mm2	22.5 N/mm2	22.5 N/mm2	22.5 N/mm2	22.5 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.25 $\sqrt{f_c}$' #D**	**-0.25 $\sqrt{f_c}$' #D**	**-0.60 $\sqrt{f_c}$' #D**	**-0.60 $\sqrt{f_c}$' #D**	**-0.30 f_c' #D1**	**-0.30 f_c' #D1**
		-1.7 N/mm2	-1.7 N/mm2	-4.0 N/mm2	-4.0 N/mm2	-13.5 N/mm2	-13.5 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . -0.25 $\sqrt{f_c}$' #D**	**-0.25 $\sqrt{f_c}$' #D**	**k_σ . -0.60 $\sqrt{f_c}$' #D**	**-0.60 $\sqrt{f_c}$' #D**	**k_σ . -0.60 $\sqrt{f_c}$' #D2**	**-0.60 $\sqrt{f_c}$' #D2**
		-1.7 N/mm2	-1.7 N/mm2	-4.0 N/mm2	-4.0 N/mm2	-4.0 N/mm2	-4.0 N/mm2
		With Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar

#A: Note beam, one-way slab, two-way slab or flat slab option to cl.8.1.6.2 AS3600.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.8.6.2 and cl.9.4.2 AS3600.
#B1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to cl.9.4.2 AS3600.
#C: Note beam, one-way slab, two-way slab or flat slab option to cl.8.1.6.2 AS3600.
#D: Note beam, one-way slab, two-way slab or flat slab option to cl.8.6.2 and cl.9.4.2 AS3600.
#D1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.4.3 BS8110.
#D2: Note flat slab option to cl.9.4.2 AS3600 as an alternative to cl.6.9.5.3 AS3600.

Permissible Stress [N/mm^2] [EC2 and TR.43-2]

		Serviceability Class U Uncracked		Serviceability Class T Transition		Serviceability Class C Cracked	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.30 f_{ci}' #A2**	**0.40 f_{ci}' #A2**	**0.30 f_{ci}' #A2**	**0.40 f_{ci}' #A2**	**0.30 f_{ci}' #A2**	**0.40 f_{ci}' #A2**
		6.0 N/mm2	8.0 N/mm2	6.0 N/mm2	8.0 N/mm2	6.0 N/mm2	8.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.30 f_{ci}' #B1**	**-0.30 f_{ci}' #B1**
		-1.5 N/mm2	-1.5 N/mm2	-1.5 N/mm2	-1.5 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-0.09 f_{ci}'$^{2/3}$ #B2**	**k_σ . -0.09 f_{ci}'$^{2/3}$ #B2**	**-0.09 f_{ci}'$^{2/3}$ #B2**	**k_σ . -0.09 f_{ci}'$^{2/3}$ #B2**	**-0.27 f_{ci}'$^{2/3}$ #B2**	**k_σ . -0.27 f_{ci}'$^{2/3}$ #B2**
		-0.7 N/mm2	-0.9 N/mm2	-0.7 N/mm2	-0.9 N/mm2	-2.0 N/mm2	-2.6 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**
		27.0 N/mm2	27.0 N/mm2	27.0 N/mm2	27.0 N/mm2	27.0 N/mm2	27.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.40 f_c' #C2**	**0.30 f_c' #C2**	**0.40 f_c' #C2**	**0.30 f_c' #C2**	**0.40 f_c' #C2**	**0.30 f_c' #C2**
		18.0 N/mm2	13.5 N/mm2	18.0 N/mm2	13.5 N/mm2	18.0 N/mm2	13.5 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.21 f_c'$^{2/3}$ #D1**	**-0.21 f_c'$^{2/3}$ #D1**	**-0.21 f_c'$^{2/3}$ #D1**	**-0.21 f_c'$^{2/3}$ #D1**	**-<.....> #D2**	**-<.....> #D2**
		-2.7 N/mm2	-2.7 N/mm2	-2.7 N/mm2	-2.7 N/mm2	-6.3 N/mm2	-6.3 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . -0.09 f_c'$^{2/3}$ #D3**	**-0.09 f_c'$^{2/3}$ #D3**	**k_σ . -0.09 f_c'$^{2/3}$ #D3**	**-0.09 f_c'$^{2/3}$ #D3**	**k_σ . -0.27 f_c'$^{2/3}$ #D3**	**-0.27 f_c'$^{2/3}$ #D3**
		-1.5 N/mm2	-1.1 N/mm2	-1.5 N/mm2	-1.1 N/mm2	-4.4 N/mm2	-3.4 N/mm2
		With Rebar	No Rebar	With Rebar	No Rebar	With Rebar	No Rebar

#A1: Note beam, one-way slab or two-way slab option to cl.5.8.2 TR.43-2.
#A2: Note flat slab option to T.4 TR.43-2 and cl.5.8.2 TR.43-2.
#B1: Note beam, one-way slab or two-way slab option to cl.5.8.2 TR.43-2 and analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to T.4 TR.43-2 and cl.5.8.2 TR.43-2.
#C1: Note beam, one-way slab or two-way slab option to cl.5.10.2.2 EC2.
#C2: Note flat slab option to T.4 TR.43-2.
#D1: Note beam, one-way slab or two-way slab option analogous to cl.5.8.2 TR.43-2.
#D2: Note beam, one-way slab or two-way slab option to cl.5.8.1 TR.43-2. Note -<.....> = MAX {-0.30f_c', (-0.40f_c'$^{2/3}$ to -0.50f_c'$^{2/3}$)-4N/mm^2/1.0%} as the code allows for an increase in the tensile stress limit from 1% of longitudinal steel (untensioned reinforcement) onwards (-4N/mm^2 for every 1% of longitudinal steel (untensioned reinforcement), increasing proportionally, up to the specified upper limit of -0.30f_c'). Note crack width @ 0.20mm and %rebar **0.15%**
#D3: Note flat slab option to T.4 TR.43-2.

Post-Tensioned Member (Bonded Tendons) Permissible Stress BS8110 (TR.43), ACI318, AS3600, EC2 (TR.43-2)			XX%CSTW-FS-DS	C50/60
Characterictic Strength of Concrete		**Cube**	**Cylinder**	
Characteristic strength of concrete (PT beam and slab), f_{cu} / f_c'		**60**	**50**	N/mm^2
Characteristic strength of concrete at transfer (PT beam and slab), f_{ci} / f_{ci}'		**25**	**20**	N/mm^2
Full CSTW-FS-DS Approach	**%M_{HOG}**	**%I**	**%f_{min}**	**[1.7 %M_{HOG}]. %I. %f_{min}**
ks = XX%MHOG | X.XI | 1.3fmin [CSTW-FS-DS] [BS8110 TR.43, ACI318, EC2	**XX%**	**X.X**	**1.3**	**1.30**
ks = XX%MHOG | X.XI | 1.0fmin [CSTW-FS-DS] [AS3600]	**XX%**	**X.X**	**1.0**	**1.00**

Permissible Stress [N/mm^2] [BS8110, TR.43]							
		Serviceability Class 1 No Flexural Tensile Stresses		**Serviceability Class 2** Flexural Tensile Stresses, Uncracked (No Visible Cracking)		**Serviceability Class 3** Flexural Tensile Stresses, Cracked	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**	**0.50 f_{ci} #A1**
		12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2	12.5 N/mm2
	Flat Slab (FTW-FS-DS)	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**	**0.24 f_{ci} #A2**	**0.33 f_{ci} #A2**
		6.0 N/mm2	8.3 N/mm2	6.0 N/mm2	8.3 N/mm2	6.0 N/mm2	8.3 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-1.0 #B**	**-1.0 #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**-0.25 f_{ci} #B1**	**-0.25 f_{ci} #B1**
		-1.0 N/mm2	-1.0 N/mm2	-1.8 N/mm2	-1.8 N/mm2	-6.3 N/mm2	-6.3 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-1.0 #B**	**k_σ . -1.0 #B**	**-0.36 $\sqrt{f_{ci}}$ #B**	**k_σ . -0.36 $\sqrt{f_{ci}}$ #B**	**-0.45 $\sqrt{f_{ci}}$ #B2**	**k_σ . -0.45 $\sqrt{f_{ci}}$ #B2**
		-1.0 N/mm2	-1.3 N/mm2	-1.8 N/mm2	-2.3 N/mm2	-2.3 N/mm2	-2.9 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	No Rebar	No Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**	**0.33 f_{cu} #C1**	**0.40 f_{cu} #C1**
		19.8 N/mm2	24.0 N/mm2	19.8 N/mm2	24.0 N/mm2	19.8 N/mm2	24.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**	**0.33 f_{cu} #C2**	**0.24 f_{cu} #C2**
		19.8 N/mm2	14.4 N/mm2	19.8 N/mm2	14.4 N/mm2	19.8 N/mm2	14.4 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.0 #D**	**0.0 #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**-<.....> #D1**	**-<.....> #D1**
		0.0 N/mm2	0.0 N/mm2	-2.8 N/mm2	-2.8 N/mm2	-5.2 N/mm2	-5.2 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . 0.0 #D**	**0.0 #D**	**k_σ . -0.36 $\sqrt{f_{cu}}$ #D**	**-0.36 $\sqrt{f_{cu}}$ #D**	**k_σ . -0.45 $\sqrt{f_{cu}}$ #D2**	**-0.45 $\sqrt{f_{cu}}$ #D2**
		0.0 N/mm2	0.0 N/mm2	-3.6 N/mm2	-2.8 N/mm2	-4.5 N/mm2	-3.5 N/mm2
		With Rebar	No Rebar	With Rebar	No Rebar	With Rebar	No Rebar

#A1: Note beam, one-way slab or two-way slab option to cl.4.3.5.1 BS8110.
#A2: Note flat slab option to T.2 TR.43 and cl.6.10.2 TR.43.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.4.3.5.2 BS8110.
#B1: Note beam, one-way slab or two-way slab option to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to T.2 TR.43 and cl.6.10.2 TR.43.
#C1: Note beam, one-way slab or two-way slab option to cl.4.3.4.2 BS8110.
#C2: Note flat slab option to T.2 TR.43.
#D: Note beam, one-way slab, two-way slab or flat slab option to cl.4.3.4.3 BS8110.
#D1: Note beam, one-way slab or two-way slab option to cl.4.3.4.3 BS8110. Note -<.....> = MAX {-0.25f_{cu}, (0.7-1.1).(-0.58$\sqrt{f_{cu}}$ to -0.82$\sqrt{f_{cu}}$)-4N/mm^2/1.0%} as the code allows for an increase in the tensile stress limit from 1% of longitudinal steel (untensioned reinforcement) onwards (-4N/mm^2 for every 1% of longitudinal steel (untensioned reinforcement), increasing proportionally, up to the specified upper limit of -0.25f_{cu}). Note crack width @ 0.20mm, %rebar **0.15%** and overall depth, h **600** mm
#D2: Note flat slab option to T.2 TR.43.

Permissible Stress [N/mm^2] [ACI318]							
		Serviceability Class U Uncracked		**Serviceability Class T** Transition		**Serviceability Class C** Cracked	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**
		12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**	**0.60 f_{ci}' #A**
		12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2	12.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.30 f_{ci}' #B1**	**-0.30 f_{ci}' #B1**
		-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-1.1 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.50 $\sqrt{f_{ci}}$' #B2**	**k_σ . -0.50 $\sqrt{f_{ci}}$' #B2**
		-1.1 N/mm2	-1.5 N/mm2	-1.1 N/mm2	-1.5 N/mm2	-2.2 N/mm2	-2.9 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	No Rebar	No Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**
		30.0 N/mm2	30.0 N/mm2	30.0 N/mm2	30.0 N/mm2	30.0 N/mm2	30.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**	**0.60 f_c' #C**
		30.0 N/mm2	30.0 N/mm2	30.0 N/mm2	30.0 N/mm2	30.0 N/mm2	30.0 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.62 $\sqrt{f_c}$' #D1**	**-0.62 $\sqrt{f_c}$' #D1**	**-1.00 $\sqrt{f_c}$' #D1**	**-1.00 $\sqrt{f_c}$' #D1**	**-0.30 f_c' #D1**	**-0.30 f_c' #D1**
		-4.4 N/mm2	-4.4 N/mm2	-7.1 N/mm2	-7.1 N/mm2	-15.0 N/mm2	-15.0 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**	**k_σ . -0.50 $\sqrt{f_c}$' #D2**	**-0.50 $\sqrt{f_c}$' #D2**
		-4.6 N/mm2	-3.5 N/mm2	-4.6 N/mm2	-3.5 N/mm2	-4.6 N/mm2	-3.5 N/mm2
		With Rebar	With Rebar	With Rebar	With Rebar	With Rebar	With Rebar

#A: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.3.1 ACI318.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.3.2 ACI318.
#B1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to cl.24.5.3.2.1 ACI318.
#C: Note beam, one-way slab, two-way slab or flat slab option to cl.24.5.4.1 ACI318.
#D1: Note beam, one-way slab or two-way slab option to cl.24.5.2.1 ACI318 and analogous to cl.4.3.4.3 BS8110.
#D2: Note flat slab option to cl.24.5.2.1 ACI318.

Post-Tensioned Member (Bonded Tendons) Permissible Stress BS8110 (TR.43), ACI318, AS3600, EC2 (TR.43-2)		XX%CSTW-FS-DS	C50/60
Characterictic Strength of Concrete	**Cube**	**Cylinder**	
Characteristic strength of concrete (PT beam and slab), f_{cu} / f_c'	**60**	**50**	N/mm^2
Characteristic strength of concrete at transfer (PT beam and slab), f_{ci} / f_{ci}'	**25**	**20**	N/mm^2
Full CSTW-FS-DS Approach	**%M_{HOG}**	**%I**	**%f_{min}**	**[1.7%M_{HOG}]: %I: %f_{min}**
ks = XX%MHOG | X.XI | 1.3fmin [CSTW-FS-DS] [BS8110 TR.43, ACI318, EC2 T	**XX%**	**X.X**	**1.3**	**1.30**
ks = XX%MHOG | X.XI | 1.0fmin [CSTW-FS-DS] [AS3600]	**XX%**	**X.X**	**1.0**	**1.00**

Permissible Stress [N/mm^2] [AS3600]

		Serviceability Class U Uncracked		Serviceability Class T Transition		Serviceability Class C Cracked	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**	**0.50 f_{ci}' #A**
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.25 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B**	**-0.30 f_{ci}' #B1**	**-0.30 f_{ci}' #B1**
		-1.1 N/mm2	-1.1 N/mm2	-2.7 N/mm2	-2.7 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-0.25 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.25 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B**	**k_σ . -0.60 $\sqrt{f_{ci}}$' #B**	**-0.60 $\sqrt{f_{ci}}$' #B2**	**k_σ . -0.60 $\sqrt{f_{ci}}$' #B2**
		-1.1 N/mm2	-1.1 N/mm2	-2.7 N/mm2	-2.7 N/mm2	-2.7 N/mm2	-2.7 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**
		25.0 N/mm2	25.0 N/mm2	25.0 N/mm2	25.0 N/mm2	25.0 N/mm2	25.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**	**0.50 f_c' #C**
		25.0 N/mm2	25.0 N/mm2	25.0 N/mm2	25.0 N/mm2	25.0 N/mm2	25.0 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.25 $\sqrt{f_c}$' #D**	**-0.25 $\sqrt{f_c}$' #D**	**-0.60 $\sqrt{f_c}$' #D**	**-0.60 $\sqrt{f_c}$' #D**	**-0.30 f_c' #D1**	**-0.30 f_c' #D1**
		-1.8 N/mm2	-1.8 N/mm2	-4.2 N/mm2	-4.2 N/mm2	-15.0 N/mm2	-15.0 N/mm2
		No Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . -0.25 $\sqrt{f_c}$' #D**	**-0.25 $\sqrt{f_c}$' #D**	**k_σ . -0.60 $\sqrt{f_c}$' #D**	**-0.60 $\sqrt{f_c}$' #D**	**k_σ . -0.60 $\sqrt{f_c}$' #D2**	**-0.60 $\sqrt{f_c}$' #D2**
		-1.8 N/mm2	-1.8 N/mm2	-4.2 N/mm2	-4.2 N/mm2	-4.2 N/mm2	-4.2 N/mm2
		With Rebar	No Rebar	With Rebar	With Rebar	With Rebar	With Rebar

#A: Note beam, one-way slab, two-way slab or flat slab option to cl.8.1.6.2 AS3600.
#B: Note beam, one-way slab, two-way slab or flat slab option to cl.8.6.2 and cl.9.4.2 AS3600.
#B1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to cl.9.4.2 AS3600.
#C: Note beam, one-way slab, two-way slab or flat slab option to cl.8.1.6.2 AS3600.
#D: Note beam, one-way slab, two-way slab or flat slab option to cl.8.6.2 and cl.9.4.2 AS3600.
#D1: Note beam, one-way slab or two-way slab option analogous to cl.4.3.4.3 BS8110.
#D2: Note flat slab option to cl.9.4.2 AS3600 as an alternative to cl.6.9.5.3 AS3600.

Permissible Stress [N/mm^2] [EC2 and TR.43-2]

		Serviceability Class U Uncracked		Serviceability Class T Transition		Serviceability Class C Cracked	
Stress Type	**Floor Type**	**Top**	**Bottom**	**Top**	**Bottom**	**Top**	**Bottom**
TLS compressive $f'_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**	**0.50 f_{ci}' #A1**
		10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2	10.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.30 f_{ci}' #A2**	**0.40 f_{ci}' #A2**	**0.30 f_{ci}' #A2**	**0.40 f_{ci}' #A2**	**0.30 f_{ci}' #A2**	**0.40 f_{ci}' #A2**
		6.0 N/mm2	8.0 N/mm2	6.0 N/mm2	8.0 N/mm2	6.0 N/mm2	8.0 N/mm2
TLS tensile $f'_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.21 f_{ci}'$^{2/3}$ #B1**	**-0.30 f_{ci}' #B1**	**-0.30 f_{ci}' #B1**
		-1.5 N/mm2	-1.5 N/mm2	-1.5 N/mm2	-1.5 N/mm2	-6.0 N/mm2	-6.0 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**-0.09 f_{ci}'$^{2/3}$ #B2**	**k_σ . -0.09 f_{ci}'$^{2/3}$ #B2**	**-0.09 f_{ci}'$^{2/3}$ #B2**	**k_σ . -0.09 f_{ci}'$^{2/3}$ #B2**	**-0.27 f_{ci}'$^{2/3}$ #B2**	**k_σ . -0.27 f_{ci}'$^{2/3}$ #B2**
		-0.7 N/mm2	-0.9 N/mm2	-0.7 N/mm2	-0.9 N/mm2	-2.0 N/mm2	-2.6 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
SLS compressive $f_{max,t/b}$	**Beam, One-Way or Two-Way Slab**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**	**0.60 f_c' #C1**
		30.0 N/mm2	30.0 N/mm2	30.0 N/mm2	30.0 N/mm2	30.0 N/mm2	30.0 N/mm2
	Flat Slab (FTW-FS-DS)	**0.40 f_c' #C2**	**0.30 f_c' #C2**	**0.40 f_c' #C2**	**0.30 f_c' #C2**	**0.40 f_c' #C2**	**0.30 f_c' #C2**
		20.0 N/mm2	15.0 N/mm2	20.0 N/mm2	15.0 N/mm2	20.0 N/mm2	15.0 N/mm2
SLS tensile $f_{min,t/b}$	**Beam, One-Way or Two-Way Slab**	**-0.21 f_c'$^{2/3}$ #D1**	**-0.21 f_c'$^{2/3}$ #D1**	**-0.21 f_c'$^{2/3}$ #D1**	**-0.21 f_c'$^{2/3}$ #D1**	**-<.....> #D2**	**-<.....> #D2**
		-2.9 N/mm2	-2.9 N/mm2	-2.9 N/mm2	-2.9 N/mm2	-6.8 N/mm2	-6.8 N/mm2
		No Rebar	No Rebar	No Rebar	No Rebar	With Rebar	With Rebar
	Flat Slab (FTW-FS-DS)	**k_σ . -0.09 f_c'$^{2/3}$ #D3**	**-0.09 f_c'$^{2/3}$ #D3**	**k_σ . -0.09 f_c'$^{2/3}$ #D3**	**-0.09 f_c'$^{2/3}$ #D3**	**k_σ . -0.27 f_c'$^{2/3}$ #D3**	**-0.27 f_c'$^{2/3}$ #D3**
		-1.6 N/mm2	-1.2 N/mm2	-1.6 N/mm2	-1.2 N/mm2	-4.8 N/mm2	-3.7 N/mm2
		With Rebar	No Rebar	With Rebar	No Rebar	With Rebar	No Rebar

#A1: Note beam, one-way slab or two-way slab option to cl.5.8.2 TR.43-2.
#A2: Note flat slab option to T.4 TR.43-2 and cl.5.8.2 TR.43-2.
#B1: Note beam, one-way slab or two-way slab option to cl.5.8.2 TR.43-2 and analogous to cl.4.3.5.2 BS8110.
#B2: Note flat slab option to T.4 TR.43-2 and cl.5.8.2 TR.43-2.
#C1: Note beam, one-way slab or two-way slab option to cl.5.10.2.2 EC2.
#C2: Note flat slab option to T.4 TR.43-2.
#D1: Note beam, one-way slab or two-way slab option analogous to cl.5.8.2 TR.43-2.
#D2: Note beam, one-way slab or two-way slab option to cl.5.8.1 TR.43-2. Note -<.....> = MAX {-0.30f_c', (-0.40f_c'$^{2/3}$ to -0.50f_c'$^{2/3}$)-4N/mm^2/1.0%} as the code allows for an increase in the tensile stress limit from 1% of longitudinal steel (untensioned reinforcement) onwards (-4N/mm^2 for every 1% of longitudinal steel (untensioned reinforcement), increasing proportionally, up to the specified upper limit of -0.30f_c'). Note crack width @ 0.20mm and %rebar **0.15%**
#D3: Note flat slab option to T.4 TR.43-2.