AMENDMENT NO. 1 JANUARY 2012
TO
IS 800 : 2007 GENERAL CONSTRUCTION IN STEEL — CODE OF PRACTICE

(Third Revision)

[(*Page* (iii), *Section* 17] — Insert the following new item, as appropriate:

'17.15 Bedding Requirement 116'

(*Page* 6, *line* 38) — Delete the symbols 'C_{my}, C_{mz}' and the corresponding explanation.

(*Page* 8, *line* 33) — Insert the following symbols and explanations after this line:

'K_y, K_z, K_{LT} — Moment amplification factors (*see* **4.4.2**, **4.4.3.1**, **4.4.3.3** and **9.3.2.2**)'

(*Page* 18, *Table* 2, *col* 2) — Substitute 'd/t' *for* 'D/t_f' for entry against 'Stem of a T-section, rolled or cut from a rolled I- or H-section'.

(*Page* 18, *Table* 2, *col* 3, 4 *and* 5) — Substitute 'but $\geq 42\varepsilon$' *for* 'but $\leq 42\ \varepsilon$' for entries against 'Web of an I, H or box section'.

(*Page* 18, *Table* 2, *Notes*, *last line*) — Substitute 'overall' *for* 'overll'.

(*Page* 19, *Fig.* 2, *ROLLED CHANNELS*) — Substitute 'd' *for* 'h' in the figure.

(*Page* 24, *clause* **4.4.2**, *line* 10) — Substitute 'K_y, K_z' *for* 'C_y, C_z'.

(*Page* 24, *clause* **4.4.3.1**, *line* 9) — Substitute 'K_y *and* K_z' *for* 'C_y *and* C_z'.

(*Page* 24, *clause* **4.4.3.3**, *line* 3) — Substitute '(K_y, K_z)' *for* '(C_{my}, C_{mz})'.

(*Page* 25, *clause* **4.5.2**, *line* 19) — Insert 'less' between 'be' and 'than'.

(*Page* 31, *clause* **5.6.1**, *line* 6) — Substitute 'using load factors of Table 4.' *for* 'using a load factor of 1.0.'

(*Page* 31, *clause* **5.6.1**, *third sentence*) — Insert the following at the end:

'In Table 6, live load should include all post construction loads including superimposed dead loads.'

(*Page* 33, *clause* **6.3.3**, *line* 6) — Substitute '$0.9\ f_u\ \gamma_{m0}/f_y\ \gamma_{m1}$' *for* '$f_u\ \gamma_{m0}/f_y\ \gamma_{m1}$'.

(*Page* 34, *clause* **7.1.2**, *line* 1) — Substitute the following for the existing:

'The factored design compression, P in members shall satisfy the following requirement:

$$P < P_d$$'

(*Page* 34, *clause* **7.1.2.1**, *line* 20) — Substitute 'γ_{m0}' *for* 'λ_{m0}'.

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(*Page* 35, *Fig*. 8) — Insert 'λ' as the title of the abscissa (x-axis).

(*Page* 44, *Table* 10, *col* 2, *line* 3) — Substitute '40 mm < $t_f \leq$ 100 mm' *for* '40 ≤ mm < $t_f \leq$ 100 mm'.

(*Page* 45, *Table* 11, *second row*, *col* 1 *and* 2) — Substitute the following for the existing entries:

(1)	(2)
Restrained	Free

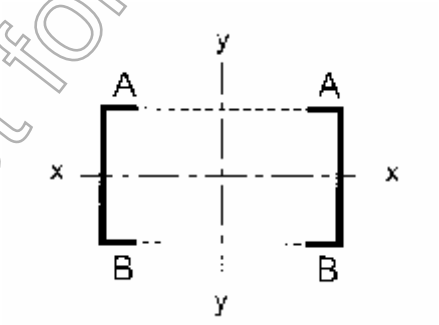
(*Page* 48, *clause* **7.5.1.2**, *line* 4) — Add the following in the end:

", in place of λ in **7.1.2.1** and using curve '*c*' ($\alpha = 0.49$)"

(*Page* 48, *clause* **7.5.1.2**, *line* 9, *formula*) — Substitute the following for the existing:

$$\text{'}\lambda_{vv} = \frac{\left(\frac{l}{r_{vv}}\right)}{\varepsilon\sqrt{\frac{\pi^2 E}{250}}} \text{ and } \lambda_{\varphi} = \frac{\left(b_1 + b_2\right)/2t}{\varepsilon\sqrt{\frac{\pi^2 E}{250}}}\text{'}$$

(*Page* 49, *Fig.* 10) — Substitute the following figure for the existing as appropriate, and substitute 'Members' *for* 'Numbers' in the sub-title of Fig. 10C and substitute the existing title of Fig. 10 with 'TOP RESTRAINT CONDITIONS':



(*Page* 53, *clause* **8.2.1.1**, *line* 3) — Substitute '$d/t_w > 67\varepsilon$' *for* '$d/t_w \leq 67\varepsilon$'.

(*Page* 54, *clause* **8.3.1**, *second para*) — Substitute the following for the existing:

'In simply supported beams with intermediate lateral restraints against lateral torsional buckling, the effective length for lateral torsional buckling, L_{LT} to be used in **8.2.2.1** shall be taken as the length of the relevant segment in between the lateral restraints. In the case of intermediate partial lateral restraints, the effective length, L_{LT} shall be taken as equal to 1.2 times the length of the relevant segment in between the partial lateral restraints.'

(*Page* 57, *Table* 14) — Substitute 'L_{LT}/r_y' and 'h_f/t_f' *for* 'KL/r' and 'h/t_f'.

(*Page* 58*, clause* **8.3.2**, *line* 9) — Insert 'centre' between 'shear' and 'and'.

(*Page* 58*, Table* 15, *col* 3, *first row*) — Substitute 'Both flanges partially restrained' *for* 'Both flanges fully restrained'.

(*Page* 59, *clause* **8.4.2.1**) — Substitute 'ε_w' *for* 'ε' and 'f_{yw}' *for* 'f_y', wherever appearing.

(*Page* 60, *clause* **8.4.2.2**, *col* 1, *line* 18 *from top*) — Substitute ' $_{cr,e}$ *for* $_{cr,e}$.

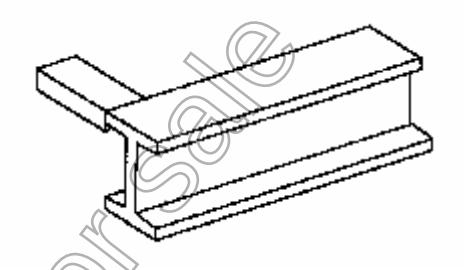
(*Page* 60, *clause* **8.4.2.2**, *col* 2, *line* 52) — Substitute 'nearly = $\tan^{-1}\dfrac{\left(\frac{d}{c}\right)}{1.5}$' *for* ' $= \tan^{-1}\left(\frac{d}{c}\right)$'.

(*Page* 60, *clause* **8.4.2.2**, *col* 2, *line* 55) — Substitute '$= d\cos\phi - (c - s_c - s_t)\sin\phi$, for the existing.

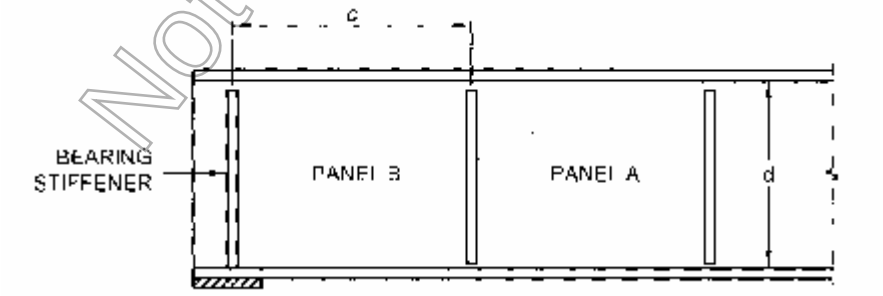
(*Page* 60, *clause* **8.4.2.2**, *col* 2, *lines* 59 *and* 60) — Delete the lines.

(*Page* 60, *clause* **8.5.1**, *line* 3) — Insert 'out' between 'carried' *and* 'in'.

(*Page* 61, *Table* 16, *last row*, *col* 1) — Substitute the following for the existing figure:



(*Page* 62, *Fig.* 12) — Substitute the following for the existing figure:



NOTES

1 Panel *A* is designed utilizing tension field action as given in **8.4.2.2**(b).

2 Panel *B* is designed using simple post critical method as given in **8.4.2.2**(a).

3 Bearing stiffener is designed for the compressive force due to bearing plus compressive force due to the moment M_{tf} as given in **8.5.3**.

FIG. 12 END PANEL DESIGNED NOT USING TENSION FIELD ACTION

(*Page* 63, *Fig.* 13, *Notes*) — Delete NOTE 2 and renumber the subsequent Note accordingly.

(*Page* 63, *clause* **8.6.1.1**) — Substitute 'ε_w' *for* 'ε' wherever appearing.

(*Page* 63, *clause* **8.6.1.1**, *line* 13) — Substitute '$c < 0.74d$' *for* '$c < d$'.

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(*Page* 64, *clause* **8.6.1.2**, *line* 15) — Substitute 'ε_f = yield stress ratio of flange = $\sqrt{\frac{250}{f_{yf}}}$' *for* '$\varepsilon_f$ = yield stress ratio of web = $\sqrt{\frac{250}{f_{yf}}}$'.

(*Page* 65, *clause* **8.7.1.2**, *second para*, *line* 1) — Insert 'stiffener' between the words 'web' *and* 'is'.

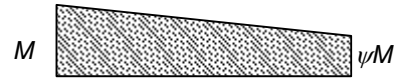
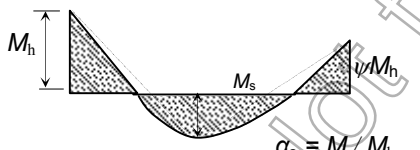
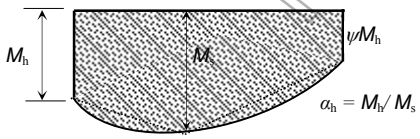
[*Page* 70, *clause* **9.3.1.2**(c)] — Substitute the following for the existing:

'c) *For standard I or H sections*

$M_{ndz} = 1.11\, M_{dz}\,(1 - n) \le M_{dz}$

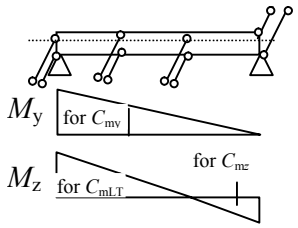
for $n \le 0.2$, $M_{ndy} = M_{dy}$
for $n > 0.2$, $M_{ndy} = 1.56\, M_{dy}\,(1 - n)\,(n + 0.6)$'

(*Page* 72, *Table* 18) — Substitute the following for the existing table:

Bending Moment Diagram (1)	**Range** (2)		C_{my}, C_{mz}, C_{mLT}	
			Uniform Loading (3)	Concentrated Load (4)
	$-1 \le \psi \le 1$		$0.6 + 0.4\,\psi \ge 0.4$	
	$0 \le \alpha_s \le 1$	$-1 \le \psi \le 1$	$0.2 + 0.8\,\alpha_s \ge 0.4$	$0.2 + 0.8\,\alpha_s \ge 0.4$
	$-1 \le \alpha_s \le 0$	$0 \le \psi \le 1$	$0.1 - 0.8\,\alpha_s \ge 0.4$	$-0.8\,\alpha_s \ge 0.4$
		$-1 \le \psi \le 0$	$0.1(1-\psi) - 0.8\,\alpha_s \ge 0.4$	$0.2(-\psi) - 0.8\,\alpha_s \ge 0.4$
	$0 \le \alpha_h \le 1$	$-1 \le \psi \le 1$	$0.95 - 0.05\,\alpha_h$	$0.90 + 0.10\,\alpha_h$
	$-1 \le \alpha_h \le 0$	$0 \le \psi \le 1$	$0.95 + 0.05\,\alpha_h$	$0.90 + 0.10\,\alpha_h$
		$-1 \le \psi \le 0$	$0.95 + 0.05\,\alpha_h\,(1+2\,\psi)$	$0.90 + 0.1\alpha_h\,(1+2\,\psi)$
For members with sway buckling mode, the equivalent uniform moment factor $C_{my} = C_{mz} = 0.9$.				

C_{my}, C_{mz}, C_{mLT} shall be obtained according to the bending moment diagram between the relevant braced points

Moment factor	*Bending axis*	*Points braced in direction*
C_{my}	$z - z$	$y - y$
C_{mz}	$y - y$	$z - z$
C_{mLT}	$z - z$	$z - z$



(*Page* 75, *clause* **10.3.2**, *line* 3) — Substitute the following for the existing:

'$V_{sb} \leq V_{db}$'

(*Page* 76, *clause* **10.4.3**, *first sentence*) — Substitute the following for the existing:

'Design for friction type bolting, where slip resistance is required at factored design force V_{sf}, shall satisfy the following:'

(*Page* 76, *clause* **10.4.3**, *line* 14) — Substitute '$\mu_f \leq 0.55$' *for* '$\mu_f = 0.55$'.

(*Page* 76, *clause* **10.4.3**, *Note*, *line* 1) — Substitute 'V_{nsf}' *for* 'V_{ns}'.

(*Page* 77, *clause* **10.4.5**, *col* 1, *line* 6, *from top*, *formula*) — Substitute '$0.9 f_{ub} A_n \leq f_{yb} A_{sb}(\gamma_{m1}/\gamma_{m0})$' *for* '$0.9 f_{ub} A_n \leq f_{yb} A_{sb}(\gamma_{m1}/\gamma_m)$'.

(*Page* 80, *clause* **10.5.10.2.2**, *line* 7, *formula*) — Substitute ' f_{br}^2 ' *for* ' f_{bf}^2 '.

(*Page* 89, *clause* **12.8.2.1**, *first sentence*) — Substitute the following for the existing:

'Bracing members shall be made of E250B steel of IS 2062 or of steel having Charpy V-notch energy, E > 27J.'

(*Page* 90, *clause* **12.11.1**, *line* 2) — Insert 'or of steel having Charpy V-notch energy, E > 27J' between 'IS 2062' and 'and'.

(*Page* 106, *clause* **16.4.1**, *line* 4, *formula*) — Substitute ' $\frac{f_y(T)}{f_y(20)} = \frac{905 - T}{690} \leq 1.0$ for the existing.

(*Page* 121, *Annex* B, *clause* **B-3.2**, *line* 10 *from top*, *formula*) — Substitute '$\phi_{si} = \frac{\delta_{ui} - \delta_{Li}}{h_i}$' *for* '$\phi_s = \frac{\delta_u - \delta_L}{h}$'.

(*Page* 121, *Annex* B, *clause* **B-3.2**, *lines* 12, 13 *and* 16 *from top*) – Substitute 'h_i', 'δ_{ui}' and 'δ_{Li}' *for* 'h', 'δ_u' and 'δ_L'.

(*Page* 128, *Annex* E, *clause* **E-1.2**, *line* 5, *formula*) — Substitute '$(L_{LT})^2$' *for* '(L_{LT})'.

(*Page* 128, *Annex* E, *clause* **E-1.2**, *line* 30) — Substitute '$(z^2 + y^2)^2$' *for* '$(z^2 - y^2)$'.

(*Page* 129, *Annex* E, *clause* **E-1.2**, *col* 1, *line* 18 *from top*) — Insert 'St. Venant's' before 'torsion'.

(*Page* 130, *Table* 42, *col* 5, *row* 7) — Substitute '1.267' *for* '1.257'.

(*Page* 129, *Table* 42, *col* 6, *rows* 5 *and* 10) — Substitute '1.730' *for* '1.780' and '1.890' *for* '1.390', respectively.

(CED 7)

Reprography Unit, BIS, New Delhi, India