

# CISC HANDBOOK OF STEEL CONSTRUCTION

10<sup>th</sup> Edition, 3<sup>rd</sup> Printing 2011

## REVISIONS LIST NO. 3 - NOVEMBER 2012

The following revisions have been into the 4<sup>th</sup> Printing (2012) of the 10<sup>th</sup> Edition of the CISC Handbook of Steel Construction.

Page	Revisions
1-a	Replace the second sentence of the first paragraph with the following:  The reprint includes CSA S16-09 "Design of Steel Structures" (September 2009), along with Update No. 1 (October 2010) and Update No. 2 (February 2012)."
1-38	In CSA S16-09 Clause 13.6(e)(ii), replace "when $M \leq M_{ry}$ " with "when $M_u \leq M_{ry}$ ".
1-52	In Clause 14.10.4, first sentence, replace "Clause 6.2.1" with "Clause 6.3.1.1".
1-81	In Clause 19.1.17(b), replace the equation:

$$V_f = \frac{0.025 C_f d}{na}$$

with:

$$M_f = \frac{0.025 C_f d}{2n}$$

1-118	In Clause 27.11.3(b), replace " $I_E F_a S_a(1.0)$ " with " $I_E F_v S_a(1.0)$ ".
3-4	In the second paragraph, last sentence, replace "Clause 7.2.3" with "Clause 7.2".
3-39	In Table 3-21, replace the factored resistance for fillet welds with:

Weld metal:

$$V_r = 0.67 \phi_w A_w X_u (1.00 + 0.50 \sin^{1.5} \theta) M_w^{(1)}$$

but not greater than:

$$V_r = 0.67 \phi_w A_m F_u$$

if over-matched electrodes are used<sup>(2)</sup>.

Replace footnotes (1) and (2) with:

<sup>(1)</sup>  $M_w$  is the strength reduction factor for multi-orientation fillet welds. See CSA S16-09 Clause 13.13.2.2. The base metal resistance need not be checked for matching electrodes.

<sup>(2)</sup> For information on matching electrodes, see CSA S16-09 Table 4.

3-40 In Table 3-22, add footnote (4) for BASE METAL:

4. The base metal resistance need not be checked when fillet welds are made with matching electrodes. See CSA S16-09 Clause 13.13.12.12 and Table 4.

3-42 Delete the last paragraph.

3-43 Replace the first paragraph with:

The coefficients  $C$  listed in Tables 3-26 to 3-33 are based on an electrode ultimate strength,  $X_u = 490$  MPa (E49XX), and a resistance factor for welded connections,  $\phi_w = 0.67$ . They are applicable to matching electrode applications only. The base metal resistance has not been included; therefore, the tables are not suitable for over-matched applications. For further information, see CSA S16-09 Clause 13.13.2.2 and Table 4.

Delete the reference for Callele et al (2005)

3-84 Near the bottom of the page, replace the paragraph starting with "For the multi-orientation weld..." with:

The factored shear resistance of the transverse weld ( $\theta = 90^\circ$ ) is 2.80 kN/mm (Table 3-25). The base metal check is no longer required when matching electrodes are used. For the two longitudinal welds ( $\theta_1 = 0^\circ$ ), the strength reduction factor for multi-orientation welds (Clause 13.13.2.2),

$$M_w = (0.85 + 0 / 600) / (0.85 + 90 / 600) = 0.85$$

$$V_r = 150 \times 2.80 + 2(130 \times 1.87 \times 0.85) = 833 \text{ kN} > 762 \text{ kN}$$

3-103 Add the following after the last paragraph:

*Block shear around fillet welds*

Failure modes involving block shear in the plate and HSS walls around the fillet welds do not govern for this example (calculations not shown).

4-148 In the first paragraph, replace the last sentence with:

For columns carrying vertical gravity loads only, this connection is required only to hold the parts in line. However, for erection safety, four anchor rods should be used (CSA S16-09 Clause 25.2).

5-173 Near the top of the flowchart, replace the expression for  $V_r$  with:

$$V_r = 0.8 * 0.9 * A_w * F_s$$

6-113 In the nomenclature near the middle of the page, replace the second occurrence of " $I_{xe}$ " with " $I_{ye}$ ".