

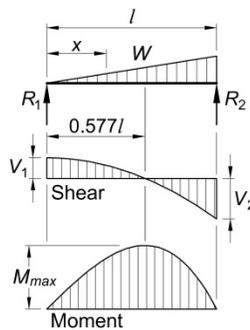
Revision and Errata List—June 2018
AISC Steel Construction Manual, 15th Edition

The following list represents corrections to the First Printing of the AISC *Steel Construction Manual*, 15th Edition. These corrections are incorporated in the Second Printing dated June 2018.

Page(s) **Item**
 3-208 Table 3-23, Case 2, revise M_{max} listing as follows:

$$M_{max} \left(\text{at } x = \frac{l}{\sqrt{3}} = 0.577l \right) \dots\dots\dots \frac{2Wl}{9\sqrt{3}} = 0.128Wl$$

Also replace accompanying figure with the following:



8-10 Add r_i to symbols list, as follows:

r_i = distance from instantaneous center of rotation to the i th weld element, in.

8-11 Add Δ_{mi} to symbols list, as follows:

$\Delta_{mi} = 0.209(\theta_i + 2)^{-0.32} W$
 = deformation of the i th weld element at maximum stress (rupture), in.

8-12 Replace the 1st paragraph with the following:

The individual resistance of each weld segment is assumed to act on a line perpendicular to a ray passing through the IC and centroid of that weld segment, as illustrated in Figure 8-4(b). If the correct location of the instantaneous center has been selected, the three equations of in-plane static equilibrium, $\Sigma F_x = 0$, $\Sigma F_y = 0$, and $\Sigma M = 0$, will be satisfied.

The nominal strength, R_{nx} and R_{ny} , and the nominal flexural strength, M_n , can be determined as follows:

$$R_{nx} = \sum F_{nwx} A_{wei}$$

$$R_{ny} = \sum F_{nwy} A_{wei}$$

$$M_n = \sum [F_{nwy} A_{wei} (x_i) - F_{nwx} A_{wei} (y_i)]$$

where

- A_{wei} = effective area of weld throat of the i th weld element, in.²
- F_{nwi} = nominal stress in the i th weld element, ksi
- F_{nwx} = x -component of nominal stress, F_{nwi} ksi
- F_{nwy} = y -component of nominal stress, F_{nwi} ksi

x_i = x-component of r_{is} in.
 y_i = y-component of r_{is} in.

9-9 Revise Equation 9-15 to the following (reverse the inequality):

$$C_b = \left[3 + \ln \left(\frac{L_b}{d} \right) \right] \left(1 - \frac{d_{ct}}{d} \right) \geq 1.84$$

9-10 Revise Equation 9-16 to the following (reverse the inequality):

$$C_b = \left(\frac{c_b}{c_t} \right) \left[3 + \ln \left(\frac{L_b}{d} \right) \right] \left(1 - \frac{d_{ct}}{d} \right) \geq 1.84$$

9-17 Revise Equation 9-35 as follows (Q_f factor removed):

$$M_n = \frac{t^2 F_y}{4} \left(\frac{4\sqrt{2abcT\rho} + L\rho}{2ab} \right) \quad (9-35)$$

16.1-101 Section I6.1, last line should be, "...load introduction length as determined in accordance with Section I6.4."

16.1-133 Revise User Note, 2nd sentence, to, "...The effective strength of an individual fastener may be taken as the lesser of the fastener shear strength per Section J3.6 or the bearing or tearout strength at the bolt hole per Section J3.10."

16.1-255 In definition of v , delete "=11,200 ksi (77 200 MPa)".

16.1-319: Revise Equation C-E7-4 to the following (last term is revised):

$$F_{el-r} = k \frac{\pi^2 E}{12(1-\nu^2)} \left(\frac{t}{b} \right)^2 = k \frac{\pi^2 E}{12(1-\nu^2)} \left(\frac{1}{\lambda_r} \right)^2$$

16.2-18 In Section 3.2.2(3) the last sentence should read: "When prepared by roughening, the *galvanized faying surface* is designated as Class A for design."

16.2-51 In Section 8.1, the last sentence should read:

The snug tightened condition is the tightness that is attained with a few impacts of an impact wrench or the full effort of an ironworker using an ordinary spud wrench to bring the plies into *firm contact*.

16.2-75 In Section A4.2, replace the first sentence with the following:

The load to be placed on the creep specimen is as follows:

$$R_s = \frac{2\mu_t T_t}{1.5} \quad (\text{Equation A4.1})$$

where

μ_t = mean slip coefficient for the particular slip coefficient category under consideration

T_t = measured bolt force of the clamping bolt