Revision and Errata List

AISC Specification for Structural Steel Buildings, 2022 (1st Printing)

Date: December 21, 2023

The following list represents corrections to the First Printing of the AISC Specifications for Structural Steel Buildings, dated August 1, 2022.

<table>
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<th>Page(s)</th>
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<tbody>
<tr>
<td>16.1-60</td>
<td>In Equation F5-1, replace $M_p$ with $M_n$.</td>
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<tr>
<td>16.1-64</td>
<td>Replace equation numbers (F7-10) through (F7-13) with (F7-8) through (F7-11).</td>
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<td>16.1-167</td>
<td>Revise the resistance factor, $\phi$, for the limit state of shear yielding (punching) for branches under in-plane bending (given by Equation K4-2) from 0.90 to 0.95 (LRFD).</td>
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</table>
| 16.1-185   | In Sections N4.1(b) and N4.2(b), revise “AWS D1.1/D1.1M, clause 8.1.4.2(4)” to “AWS D1.1/D1.1M, clause 8.1.4.2(5)”.
| 16.1-241   | In Section 4.2.4d(c), revise the second sentence after Equation A-4-11 as follows: “$P_e(T)$ is calculated at elevated temperature using Equation 12-5 12-4.” |
| 16.1-242   | In Section 4.2.4d(d), revise the second sentence after Equation A-4-12 as follows: “$P_e(T)$ is calculated at elevated temperature using Equation 12-5 12-4.” |
| 16.1-281   | In Section 7.3.1(b), revise the definition for the symbol $L$ as follows: “$L = \text{height of story, laterally unbraced length of member, in. (mm)}$” |
| 16.1-447   | Replace Figure C-I3.8(c) with the following ($F_c$, revised to $F_n$).                     |

\[
\begin{align*}
    b_i &= B - 2t_w \\
    t_f &= 0.70f_c \\
    b_i t_i F_n &= 0.35f_c (a_{cr} - t_f) b_i \\
    F_y &= a_{cr} 2t_w 0.5F_n \\
    b_i t_i F_{y}^\dagger &= (H - a_{cr}) 2t_w 0.5F_y \\
    \text{Neutral axis location for force equilibrium: } a_{cr} &= \frac{F_c H t_w + (0.35f_c + F_y - F_n) b_i t_f}{t_w (F_n + F_y) + 0.35f_c b_i} \\
    \dagger & \text{Neglecting stress variation over flange thickness}
\end{align*}
\]

16.1-477   | Revise the caption for Figure C-J1.2 under Alternates 1 and 2 as follows: “Rolled shapes and are built-up shapes assembled prior to cutting the weld access hole.” |
Replace Figure C-A-4.6 with the following (the coefficient 0.45 revised to 0.54).

\[ P_n(T) = A_y f_y(T) + 0.85 \sum_{i=\text{concrete elements}} f'_{c}(T_i) A_{c} \]

\[ P_s(T) = \frac{\pi^2 (EI)_{\text{eff}}}{L_c^2} \]

\[ (EI)_{\text{eff}} = E_s(T_i) I_s + C_3 \sum_{i=\text{concrete elements}} E_{c}(T_i) I_{c} \]

\[ C_3 = 0.45 + 3 \left( \frac{A_s}{A_y} \right) \leq 0.9 \]