where

\[ S_{OL} = B_1 \frac{P_{\text{max}} D_0}{2 \tau_0} + B_2 \frac{M_A + M_0}{Z} + S_{MT} \]

- \( S_{MT} \leq 1.8 S_h \) but not greater than 1.5\( S_y \) for Level A and B loadings
- \( S_{MT} \leq 2.25 S_h \) but not greater than 1.8\( S_y \) for Level C loadings
- \( S_{MT} \leq 3.0 S_h \) but not greater than 2.0\( S_y \) for Level D loadings

(3) NC-3653.2 eq. (10a) becomes

\[ S_E = \frac{i M_C}{Z} + \frac{S_{PT}}{2} \leq S_A \]

(4) NC-3653.2 eq. (10b) becomes

\[ \frac{i M_D}{Z} + \frac{S_{PT}}{2} \leq 3.0 S_C \]

(5) NC-3653.2 eq. (11) becomes

\[ S_{TE} = \frac{P D_0}{4 t_r} + 0.75 \left( \frac{M_A}{Z} \right) + i \left( \frac{M_C}{Z} \right) + S_{MT} \]

\[ + \frac{S_{PT}}{2} \leq \left( S_h + S_A \right) \]

In eq. (NC-11), \( S_{MT} \) is the same as used in eq. (1)(NC-8), and \( S_{PT} \) is the same as used in eq. (3)(NC-10a).

(c) In addition to the Code equations, the following equations shall also be satisfied.

\[ S_{MT}^{**} \leq 2 S_y \]

Y-5420 ANALYSIS OF ATTACHMENT WELDED TO PIPE WITH FILLET WELDS OR PARTIAL PENETRATION WELDS

(a) The requirements of Y-5410 shall be met.

(b) The following additional requirements shall be met.

For Level A and B loadings, \( S_{OL} \leq 1.8 S_h \) and \( S_{OL} \leq 1.5 S_y \).

For Level C loadings, \( S_{OL} \leq 2.25 S_h \) and \( S_{OL} \leq 1.8 S_y \).

For Level D loadings, \( S_{OL} \leq 3.0 S_h \) and \( S_{OL} \leq 2.0 S_y \).

(c) In addition to the Code equations, the following equations shall also be satisfied.

\[ \left( \frac{W^{**}}{A_w} \right)^2 + \left( \frac{Q_1^{**} + Q_2^{**}}{A_w} + \frac{M_T^{**}}{Z_{MT}} \right)^{1/2} \leq S_y \]
In order to tag this properly in XML, we'd like to rewrite this as text below the equation. Please let us know if you are okay with this editorial change.

For Level A and B loadings, $S_{OL} \leq 1.8S_h$ and $S_{OL} \leq 1.5S_y$.
For Level C loadings, $S_{OL} \leq 2.25S_h$ and $S_{OL} \leq 1.8S_y$.
For Level D loadings, $S_{OL} \leq 3.0S_h$ and $S_{OL} \leq 2.0S_y$.

The above is how we interpret the boxed area. However, shouldn't the second "≤" sign be "≤" sign?

Approved

NU - OK AS IS