

IF YOU'VE EVER ASKED YOURSELF "WHY?" about something related to structural steel design or construction, C's monthly Steel Interchange column is for you! Send your questions or comments to solutions@aisc.org.

Bolt Spacing for Prying Action

All of the equations for prying action include the symbol p (the spacing between bolt rows). However, if we have only one bolt row in a connection, there is no spacing between rows. If $p = 0$, it seems to invalidate equations related to calculation of prying action. Are there alternative equations when $p = 0$?

Edge Distances for Single-Plate Shear Connections

In the October 2006 issue of *Modern Steel Construction*, a range for the support line to bolt line (a -distance) is given as 2½ in. to 3½ in. for single-plate shear connections. Does this necessarily mean $a = 2$ would not work properly? If the connection were a through plate passing through a 6-in. column could $a = 2$ in. be used?

Shear Center

How do I calculate the shear center of a rolled shape?

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Section Modulus Relative to Angle Leg Toe in Compression

How does one calculate S_c for Section F.3 in AISC 360-05? What does "elastic section modulus to the toe in compression relative to the axis of bending" mean? What if the entire angle leg is in compression? When one has an equal-leg angle with no lateral-torsional restraint bent about a geometric axis, $S_c = 0.8S$, what if the angle does not have equal legs?

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Use of the Overstrength Factor

How do I use the system overstrength factor ϕ_o . Is it used as a multiplier on the load side or the strength side of the equation?

