

Mode n Seel

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Note: Unless specifically noted, all AISC code and standards mentioned in this question and/or answer are independent of the edition (2010 or 2016) and can be found at www.aisc.org.

Flexural Yield Strength of Single Angles

Section F10.1 of the 2010 AISC Specification, Section F10.1, a Single Angle (ANSI/AISC 360-10) addresses flexural yielding of single angles. The description preceding this section describes this limit state as "the limit state of yielding (plastic moment)." This is confusing me because previous sections differentiate between the plastic moment, $F_y Z_x$, and the yield moment, $F_y S_x$, but here they seem to be combined. What is the yield moment for a single angle?

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Stan B. Meier, PE

Minimum Bend Radius

I am working on a project that involves a staircase with a roughly helical geometry. We plan on using HSS for the stringers. I am concerned about the effect of the bending process on the strength of the section. Is there a minimum radius to which HSS can be bent?

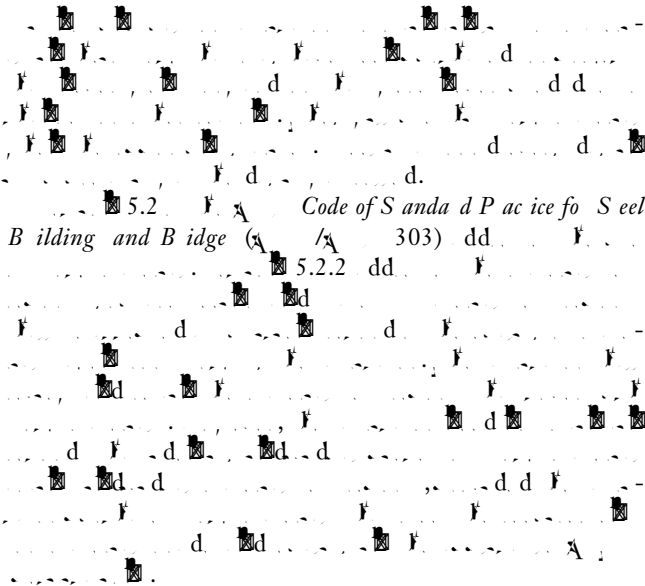
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Bo Doell, PE, PhD



"Old" Steel

I am reviewing material test reports from a fabricator. Some of the steel was rolled as far back as 2012. Is it common to see rolling dates this old?



Ca lo Lini, PE

Welds in Holes

I understand that a plug weld cannot be used to resist tension. I have several questions related to welds in holes:

1. Is it acceptable to place a fillet weld around the circumference of a hole to resist combined tension and shear?
2. The diameter of the hole is 1/2 in. and the thickness of the material is 3/16 in. Is it possible to make a fillet weld in such a small space?
3. When the welding is complete, would the fillet weld around the edge of the hole be significantly different than a plug weld?

