

The following responses from previous Steel Interchange columns have been received:

Are the Rules in the AISC Specification for Structural Steel Buildings appropriate to use when designing in a foreign country? How about when the material follows a foreign structural steel specification?

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With the rail eccentric from the girder web since fabrication and erection tolerances (horizontal sweep in the girder, column plumbness, etc.) could also contribute to rail/girder web eccentricity. Also, if a floating rail clip system is used, the rail is permitted to move laterally up to .25", further contributing to the eccentricity. Rail/girder web eccentricities induce torsional forces on the crane girder and will reduce the fatigue life of the girder web to top flange weld for plate girders.

If, during an inspection of an existing crane runway, the rail is found to be eccentric, the web to top flange weld should be inspected for signs of distress. There are numerous conditions which may lead to girder/rail eccentricities, including fabrication and erection tolerances mentioned above, failed top lateral tie connections, bowed girder top flanges due to overstress, failed rail clamp connections etc. Efforts should be made to determine the cause of misalignments, and the problems corrected. The rail should be realigned within AISE Technical Report 13 guidelines and, if eccentricity cannot be eliminated, an analysis of the girder should be performed accounting for torsional stresses due to eccentricity.

ChemTech Consultants, Inc.
Bridgeville, PA

There was a typographical error in the August issue of Steel Interchange:

The answer concerning re-entrant corners of beam copes correctly stated that the *AISC Manual of Steel Construction Load and Resistance Factor Design, Volume II* recommends that an appropriate minimum radius to which the re-entrant corner of a beam cope must be shaped is 1/2-in. radius. However, the error occurred where the answer stated that there is nothing magical about a 1 1/2-in. radius. This should have stated that there is nothing magical about a 1/2-in radius.

New Questions

Listed below are questions that we would like the readers to answer or discuss.

If you have an answer or suggestion please send it to the Steel Interchange Editor, Modern Steel Construction, One East Wacker Dr., Suite 3100, Chicago, IL 60601-2001. Questions can also be sent via e-mail to aiscpmn@interaccess.com.

Questions and responses will be printed in future editions of Steel Interchange. Also, if you have a question or problem that readers might help solve, send these to the Steel Interchange Editor.

Under What Conditions, if any, is it acceptable to flame cut bolt holes, and what references substantiate this?

Feeco International, Inc.
Green Bay, WI

What design criteria is recommended for a circular bolt pattern in a moment connection, such as a splice joint in a circular column? I have used the Pressure Vessel Design Handbook, section 4.4.

Chapman, Salt Lake City, UT

Does an unbraced trolley beam that is loaded on the bottom flange have the same buckling characteristics as an unbraced beam loaded on the top flange?

Baton Rouge, LA