

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

“The connection shown is a poor one. The bolt group at B can be made strong enough so that the plate can be considered an extension of the beam web, but in so doing we transmit any rotation in the beam end (due to beam deflection) to the column web at A. The weld at A will be subject to shear and moment. The column web, shown unstiffened, may relieve some of the moment by slight controlled buckling. The remaining moment cannot accurately be determined. The weld at A must take this moment, whatever it is, into account. Regardless, when a plate has to “reach out: to make a connection it is subject to twist-

ing - not a good situation. Both the top and bottom of the connection plate should be stiffened laterally and an effort made to laterally stabilize the beam end.

**David T. Ricker, P.E.**

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**W**e have received several requests from architects/engineers over the past several years asking us to determine the weldability of steel for older (circa 1900's) building rehabilitation projects. In such cases we recommend a chemical analysis (including a tramp element survey) of the material in question to determine, among other things, the carbon equivalent. This information is

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# 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 or e-mail it to: [steelinterchange@mcgraw-hill.com](mailto:steelinterchange@mcgraw-hill.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.

*Q. How do you determine the correct number of bolts for a steel connection? Do you use a design manual or a code of practice? What are the factors that you consider when determining the number of bolts?*

**John W. McCann**

Senior Civil Engineer

Retired

**A. The number of bolts is determined by the design of the connection. The design of the connection is determined by the design of the structure. The design of the structure is determined by the design of the building. The design of the building is determined by the design of the architect.**