## steel interchange

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

**Turn-of-Nut Method** 



This seems to be more a question of terminology rather than requirements. Whether the nut is turned or the head is turned, the method is the same. That is, the same requirements apply.

 $A_{-}$ ,  $A_{-}$ ,  $E_{-}$ 



The important type of restraint is rotational restraint, not axial or in-plane expansion. Only a moderate amount of rotational restraint is needed for an assembly to perform as restrained. Beams framed with typical shear connections provide enough restraint. Other factors influence the degree of rotational restraint in large steel-framed floor assemblies. If continuity and/or composite action are part of the floor system, fire tests have shown that the concrete slab plays a significant role in providing rotational restraint and improves fire resistance.

The ability of standard shear connections to provide sufficient rotational restraint was tested by UL and independently under AISI sponsorship.

These findings are discussed in a paper "Restrained Fire Resis-

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Steel Interchange is a forum to exchange useful and practical professional ideas and information on all phases of steel building and bridge construction. Opinions and suggestions are welcome on any subject covered in this magazine.

The opinions expressed in Steel Interchange do not necessarily represent an official position of the American Institute of Steel Construction, Inc. and have not been reviewed. It is recognized that the design of structures is within the scope and expertise of a competent licensed structural engineer, architect or other licensed professional for the application of principles to a particular structure. If you have a question or problem that your fellow readers might help you solve, please forward it to us. At the same time, feel free to respond to any of the questions that you have read here. Contact Steel Interchange