TWIST-ON ANCHOR QUESTIONS

The Heckmann Twist-On Anchor system for joists and joist girders appeared in the August 2003 issue of Modern Steel Construction as a Hot Products award winner and as an advertisement. Although I understand the purported advantages of this new product over previous similar proprietary connectors, I think that you may be misleading some engineers into thinking that it is appropriate to impart transverse lateral wall-load reactions into the web members of joists or joist girders.

Most web members for open-web joists and joist girders are designed to function as truss members only (axially loaded only) and typically do not have the reserve capacity to function simultaneously as flexural members capable of transmitting lateral out-of-plane loads to the top and bottom chord of the joist or joist girder.

D. Matthew Stuart, P.E., S.E.
Manalapan, NJ

Heckmann responds:

We share your concern for the web members of the joist. You may not have realized that our Twist-on Anchor is attached to an added vertical sliding rail, which is welded to the joist or the beam. This rail is designed to transfer the horizontal forces to the top and bottom chords. The bottom chord should be braced with additional bridging, as is also required when using standard channel slot anchor. For additional information please contact us directly at 800.621.4140 or visit our web site www.heckmannbuildingprods.com. Like you, we think that this is a very important connection and it’s time we rethink it and bring it up to date.

The Twist-On Anchor system offers superior design features that conform to the following criteria:
1. Simple system with clear path for the horizontal forces, while avoiding secondary stress.
2. Vertically adjustable to allow embedment in the mortar bed and free deflection of the steel.
3. Depth of embedment should be adjustable to allow for lateral construction tolerances.
4. Test results and engineering calculations that evaluate its performance.

Paul Curtis
Heckmann Building Products Inc.
Melrose Park, IL

I also noticed that the Kimmel Center for the Performing Arts in Philadelphia was a National Winner in the $100M and greater category. Since this project has been featured in several magazines such as Architectural Record and Modern Steel Construction now for the second time (as it was an E.A.E. winner in the June 2002 issue) I thought it was time to give credit to one important company that was not mentioned.

The company responsible for the predominantly visible glass structure, the vaulted skylight, is Architectural Skylight Co. Inc. (ArchSky) of Maine, a monumental skylight company. The electronic integration of engineering drawings into sophisticated manufacturing computer numerically controlled (CNC) equipment places ArchSky at the forefront of manufacturers utilizing lineal shapes.

Arch Sky used ProSteel 3D software as a complement to AutoCAD to manipulate and modify a variety of shapes and concepts until the best solution was derived.

Karena Meyer, P.Eng.
StrucSoft Solutions
Montreal, Quebec

Please send letters and comments to Scott Melnick, Editor, via e-mail at melnick@modernsteel.com. Letters may be edited for length.