

STEEL QUIZ

STEEL QUIZ, A MONTHLY FEATURE IN MODERN STEEL CONSTRUCTION, allows you to test your knowledge of steel design and construction. Unless otherwise noted, all answers can be found in the *LRFD Manual of Steel Construction*. **To receive a copy of the current AISC Publications List, please call 800/644-2400 or fax 312/670-5403.**

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If you or your firm are interested in submitting a steel quiz column, please contact Scott Melnick at 312/670-5407 (email: melnick@aiscmail.com).

This month's steel quiz column was submitted by **Victor Shneur**, P.E., from LeJeune Steel Company in Minneapolis.

QUESTIONS:

1. What are two basic types of camber?
2. What is the most common measure of structural steel weldability?
3. What method is used for the production of structural shapes in the United States?
4. Is a hardened washer conforming to ASTM F436 needed under the round head of A325-T.C. and A490-T.C. bolts at oversize or shortened holes if the head diameter is equal to F436 washer diameter?
5. Is paint permitted on the faying surfaces in slip critical connections?
6. What is the common size of grout holes in base plates?
7. Why should connections have adequate inelastic capacity?
8. What is a lamellar tear?
9. Why should the bottom nut at the embedded end of anchor be welded to the rod?
10. What is a minimum recommended angle thickness for $\frac{3}{4}$ " diameter A325 bolts at single-angle connections?

ANSWERS

1. Two basic types of camber are natural mill camber and induced camber.
2. The most common measure of structural steel weldability is carbon equivalent.
3. Continuous casting.
4. No, per RCSC Specification Section 7(c) 9.
5. Yes, if the paint has a slip coefficient ($M \geq 0.33$) and is qualified per RCSC Specification Appendix A.
6. The grout holes should be approximately 3" in diameter.
7. It is required to avoid overstress of the fasteners or welds.
8. Per LRFD, Second Edition, "A lamellar tear is a separation or crack in the base metal that initiated at a non-metallic inclusion and progressed due to through-thickness weld shrinkage strains."
9. It is required to prevent the rod from turning out when the top nut is tightened.
10. The minimum recommended angle thickness is $\frac{3}{8}$ ".