

*Steel Quiz*, a monthly feature in *Modern Steel Construction*, allows you to test your knowledge of steel design and construction. All references to LRFD specifications pertain to the 1999 *LRFD Specification for Structural Steel Buildings*, available as a free download at

[www.aisc.org/lrfdspec](http://www.aisc.org/lrfdspec)

ASD references pertain to the 1989 *ASD Specification for Structural Steel Buildings*. Where appropriate, other industry standards are also referenced.

If you or your firm are interested in submitting a *Steel Quiz* question or column, contact:



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The content of this month's *Steel Quiz*, written by the Steel Solutions Center, has been taken from the FAQ portion of AISC's web site, [www.aisc.org/faq](http://www.aisc.org/faq). If you don't know the answer to these questions, the Steel Solutions Center encourages you to find them (and hundreds more like them) on AISC's web site. Question 1 is from Section 1 of the FAQs, Question 2 is from Section 2, Question 3 is from Section 3 and so on.

## QUESTIONS

1. Which material specification is most appropriate for hollow structural sections when atmospheric corrosion resistance is desired?
  - a. ASTM A992
  - b. ASTM A500, Grade B
  - c. ASTM A847
  - d. ASTM A500, Grade C
2. Which of the following are acceptable methods for making bolt holes?
  - a. Sub-punching and reaming
  - b. Drilling
  - c. Flame piercing and reaming
  - d. All of the above
3. Can out-of-tolerance mill material be adjusted by the fabricator so that it conforms to the appropriate tolerances?
  - a. Yes, all of the time
  - b. No, never
  - c. Sometimes
4. When a beam with a web penetration requires reinforcement, what is the most efficient location for this reinforcement?
  - a. Above and below the hole, horizontally
  - b. To either side of the hole, vertically
  - c. Both a & b
  - d. Neither a nor b
5. True or False: Through-plates are always required for single-plate connections to HSS columns.
6. When is paint permitted on the faying surfaces of bolted connections?
  - a. For all snug-tight bolted connections
  - b. For all slip-critical bolted connections that have paint with qualified slip resistance
  - c. For all pretensioned bolted connections
  - d. All of the above
7. Which of the following is an incorrect anchor rod specification?
  - a. ASTM F1554, Grade 36
  - b. ASTM F1554, Grade 105
  - c. ASTM A325
  - d. ASTM A449
8. When are plug and slot welds used?
  - a. To transfer compressive forces
  - b. To transfer tensile forces
  - c. To transfer shear forces
  - d. Both a and b
9. Which is the most commonly used non-destructive examination method in structural steel fabrication?
  - a. Visual
  - b. Dye penetrant
  - c. Magnetic particle
  - d. Ultrasonic
10. Which does not need to be included in contract documents when steel is to be painted?
  - a. The type and manufacturer of the specified paint
  - b. The required level of surface preparation
  - c. The desired dry film thickness
  - d. Ventilation requirements

TURN PAGE FOR ANSWERS

# STEEL QUIZ

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## ANSWERS

All FAQs refer to [www.aisc.org/faq](http://www.aisc.org/faq).

1. c. See FAQ 1.3.4.
2. d. See FAQ 2.4.1.
3. c. See FAQ 3.1.1.
4. a. See FAQ 4.4.4.
5. False. See FAQ 5.2.2.
6. d. See FAQ 6.7.1.
7. c. See FAQ 7.1.2.
8. c. See FAQ 8.4.1.
9. a. See FAQ 9.1.1.
10. d. See FAQ 10.1.3.