

# steel quiz

*Modern Steel Construction's* monthly Steel Quiz

tests your knowledge of steel design and construction.

This month's Quiz focuses on bolts, materials and more.

- 1 **True or False:** The inside diameter of a 6-in. std. weight pipe is approximately 6 in. in diameter.
  - 2 When calling out steel bars, it is a preferred practice to call out these members in what width increments?
    - a. 1/8-in. increments
    - b. 1/4-in. increments
    - c. 1/2-in. increments
    - d. 1-in. increments
  - 3 The line where the bolts are placed in angles is called:
    - a. Centroid line
    - b. Bolt line
    - c. Gage line
    - d. All of the above are correct
  - 4 **True or False:** The web thickness in an HP shape is equal to the flange thickness.
  - 5 When detailing a steel beam, the drawings do not have to be drawn to scale in the \_\_\_\_ dimension.
    - a. Longitudinal or length
    - b. Depth or height
    - c. Width
  - 6 What tightening method uses a double-socket electric wrench to tighten the bolt?
    - a. Turn-of-nut
    - b. Calibrated wrench
    - c. Tension-control bolt
    - d. Direct-tension indicator
  - 7 The tool that is commonly used to fabricate holes in angles and cut angles to length is referred to as a:
    - a. Angle wizard
    - b. Angle line
    - c. Angle genie
    - d. Angle sorcerer
  - 8 Material produced at rolling mills is sometimes referred to as \_\_\_\_ material.
    - a. Plain
    - b. Ductile
    - c. Raw
    - d. Heavy
    - e. a and c
  - 9 S-shapes listed in the AISC 15th Edition *Steel Construction Manual* can also be referred to as:
    - a. American standard beam
    - b. Sloped flange beams
    - c. Monorail beams
    - d. Simple beams
  - 10 ASTM A307 bolts are commonly referred to as:
    - a. Common bolts
    - b. Plain bolts
    - c. Soft bolts
    - d. Machine bolts
    - e. All of the above
- .....

TURN PAGE FOR THE ANSWERS

# steel quiz ANSWERS

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- 1 **True.** It is listed as 6.07 in. in the AISC *Steel Construction Manual* (available at [www.aisc.org/manual](http://www.aisc.org/manual)).
- 2 **b.** This is stated in Part 1 of the 15th Edition *Manual*.
- 3 **c.** Gage line.
- 4 **True.** HP shapes are commonly used as pilings in foundations. Their heavy webs are made to resist the impact of the piledriving hammers.
- 5 **a.** Longitudinal or length.
- 6 **c.** Tension-control bolt.
- 7 **b.** Angle line.
- 8 **e.** a and c, Plain and Raw.
- 9 **a.** These were the first beam sections rolled in America and are not used as beams or columns in today's buildings. They are more common in special applications such as monorails and crane runways. These shapes are not typically stocked by steel fabricators.
- 10 **e.** All of the above. These fasteners are not typically used in primary framing member connections.



**STEEL SOLUTIONS  
CENTER**

Anyone is welcome to submit questions and answers for the Steel Quiz. If you are interested in submitting one question or an entire quiz, contact AISC's Steel Solutions Center at 866.ASK.AISC or [solutions@aisc.org](mailto:solutions@aisc.org).