Welded Connections – A Primer For Engineers
Quiz for Session 8: Problems and Fixes – December 10, 2019
Due: January 7, 8:00 a.m. EST – Submit through the online form

1. The speaker highlighted language in AWS D1.1 that is intended to address unique or complex problems in welded construction. That language assigns the responsibility of approving a solution to which entity?
    a. Authority Having Jurisdiction
    b. Engineer
    c. Welder
    d. Owner

2. When a mill-induced discontinuity is discovered along the cut edge of a material, at what minimum length is further investigation, or repair required?
    a. 1/2 in.
    b. 1 in.
    c. 1 1/2 in.
    d. 2 in.

3. In the case of butt joint misalignment, what is the maximum slope at which the parts should be drawn in, according to AWS D1.1?
    a. 1:2.5
    b. 1:5
    c. 1:12
    d. 1:24

4. For plates less than 3 inches thick, how large can the root opening be before corrective action, beyond just increasing the fillet weld size, is required?
    a. 1/8”
    b. 3/16”
    c. 1/4"
    d. 5/16”

5. Which of the following is correct about the use of buttering to rectify a fit-up that is too loose, in preparation for a CJP groove weld?
    a. Buttering is not allowed at CJP groove welds
    b. Buttering is allowed to fix a loose fit-up, but the number of butter layers is limited to two
    c. Buttering is allowed to fix a loose fit-up only when approved by the engineer
    d. Buttering is allowed to fix a loose fit-up even without approval of the engineer, if the joint is within a specified dimensional limit

6. True or False: When fixing a situation where a member is cut too short, the speaker's recommendation is that a larger insert (e.g., approximately 1 ft) is better than a shorter insert (e.g., approximately 3 in.).
    a. True
    b. False

7. Why is it that plug welds may not be a good substitute for high-strength bolts?
    a. Plug welds do not have the same capacity as a high-strength bolts
    b. For cyclically loaded connections, plug welds have poor fatigue performance
    c. Plug welds are assumed to be loaded in shear, whereas bolts might resist tensile force
    d. All of the above

8. Which of the following is NOT correct regarding weldability?
    a. Weldability is affected by hardenability.
    b. Weldability refers to how easily the material can be welded.
    c. Weldability is a judgment of whether or not a material can be welded.
    d. Weldability is affected by carbon content.

9. Which of the following is a feature of the anchor rod extension welding procedure developed by Jim Fisher and Larry Kloiber?
    a. A special steel donut with an inside dimension equal to the outside dimension of the too-short anchor rod
    b. An anchor rod extension with a pencil-point preparation
    c. A backing bar on one side of the anchor rod extension
    d. All of the above

10. According to the speaker, what is the question that should be asked when assessing unspecified welds on a project?
    a. How were these welds made?
    b. Were the welds inspected?
    c. Where are these welds located?
    d. Why were these welds added?