Vertical Bracing Connections
Session 3: Bracing Connection Details and Prying Action
April 19, 2022

To be submitted by 8:00 a.m. EDT May 17, 2022 – Submit through online form

Night School 28 – Vertical Bracing Connections
Quiz 3

1. True or False: The shear/tension interaction equation for bearing bolts in the AISC Specification is given as the effect on bolt tensile strength of applied bolt shear. This interaction equation could just as correctly be written as the effect on bolt shear strength of applied bolt tension.
   a. True
   b. False

2. True or False: The shear/tension interaction equation for slip critical bolts in the AISC Specification is given as the effect on bolt shear strength (bolt slip resistance) of applied bolt tension. This interaction equation could just as correctly be written as the effect on bolt tensile strength of applied bolt shear.
   a. True
   b. False

3. True or False: The first mention in an AISC Specification and Manual, of the possibility of what is called prying action, occurred in the 8th Edition Manual and Specification.
   a. True
   b. False

4. True or False: If the thickness of a fitting exceeds t_c, that fitting will produce no prying action.
   a. True
   b. False

5. True or False: The prying action solution of the 14th Edition Manual will produce a design strength (capacity) that is less than or equal to the true failure design strength.
   a. True
   b. False

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6. True or False: F_y was changed to F_u in the 13th Edition Manual (and continued in the 14th), based on research performed by J. Swanson at Georgia Tech, to improve the fit of the theory to the test data.
   a. True
   b. False

7. True or False: The prying action formulation of the 14th Edition Manual can be used in the AISC Specification Appendix 3 to estimate the prying force q for fatigue problems.
   a. True
   b. False

8. True or False: The Manual prying action formulation provides an optimal solution; that is, the largest available applied tension T for a given fitting thickness t, or the minimum required fitting thickness t for a given applied tension T.
   a. True
   b. False

9. True or False: The change from F_y to F_u in the 13th Edition Manual (and continued in the 14th) did not require a change from the yield resistance factor of 0.9 to a fracture resistance factor of 0.75 because the observed fitting failure mode was yield, not fracture.
   a. True
   b. False

10. True or false - At a bracing connection, use of end plate connections provides little erection tolerance, but the connection does not need to be checked for prying.
    a. True
    b. False