

I have a building that was designed as a special concentrically braced frame ($R = 6$). It is a one-story building, and most of the vertical braces were detailed to be shop or field welded. However, there are some horizontal connections that are to be field bolted. The AISC *Seismic Provisions for Structural Steel Buildings* require that the surfaces be prepared for slip resistance (Section 7.2), which we did. However, the contractor has accidentally painted over these holes, and the building is now erected. Would it be possible to use primer paint in place of a reduced coefficient of friction (lower than 0.33) to justify that the bolts have a lower than class A coating, but still satisfy the need to be slip-critical for the building?

Question sent to AISC's Steel Solutions Center

Primer paint is not a substitute for a reduced coefficient of friction. The AISC *Seismic Provisions for Structural Steel Buildings* require that the surfaces be prepared for slip resistance (Section 7.2), which we did. However, the contractor has accidentally painted over these holes, and the building is now erected. Would it be possible to use primer paint in place of a reduced coefficient of friction (lower than 0.33) to justify that the bolts have a lower than class A coating, but still satisfy the need to be slip-critical for the building?

Kurt Gustafson, S.E., P.E.
American Institute of Steel Construction

Is there any concern relative to using a cruciform column (symmetric column in both directions with one column web cut and welded to the other column web) in an SMF? If so, are there any design criteria or is there research regarding the use of this type of column? The column and beam combination in either direction are pre-qualified per FEMA 350.

Question sent to AISC's Steel Solutions Center

There is no concern relative to using a cruciform column in an SMF. The AISC *Seismic Provisions for Structural Steel Buildings* require that the surfaces be prepared for slip resistance (Section 7.2), which we did. However, the contractor has accidentally painted over these holes, and the building is now erected. Would it be possible to use primer paint in place of a reduced coefficient of friction (lower than 0.33) to justify that the bolts have a lower than class A coating, but still satisfy the need to be slip-critical for the building?

Sergio Zoruba, Ph.D., P.E.
American Institute of Steel Construction

I understand the capacity of a threaded rod in tension is equal to the gross (nominal) area times $0.33F_u$. Does the 0.33

factor include the effects of the potential for stripping of the threads of the rod through the nut placed at the rod end?

Question sent to AISC's Steel Solutions Center

The 0.33 factor is based on the assumption that the threads of the rod through the nut placed at the rod end are not stripped. The AISC *Seismic Provisions for Structural Steel Buildings* require that the surfaces be prepared for slip resistance (Section 7.2), which we did. However, the contractor has accidentally painted over these holes, and the building is now erected. Would it be possible to use primer paint in place of a reduced coefficient of friction (lower than 0.33) to justify that the bolts have a lower than class A coating, but still satisfy the need to be slip-critical for the building?

Sergio Zoruba, Ph.D., P.E.
American Institute of Steel Construction

How do you design anchor rods for combined loads of tension, shear, and bending? What equation do you use to combine the forces?

Question sent to AISC's Steel Solutions Center

Anchor rods are designed for combined loads of tension, shear, and bending. The AISC *Seismic Provisions for Structural Steel Buildings* require that the surfaces be prepared for slip resistance (Section 7.2), which we did. However, the contractor has accidentally painted over these holes, and the building is now erected. Would it be possible to use primer paint in place of a reduced coefficient of friction (lower than 0.33) to justify that the bolts have a lower than class A coating, but still satisfy the need to be slip-critical for the building?

The design of anchor rods for combined loads of tension, shear, and bending is based on the AISC *Seismic Provisions for Structural Steel Buildings*. The AISC *Seismic Provisions for Structural Steel Buildings* require that the surfaces be prepared for slip resistance (Section 7.2), which we did. However, the contractor has accidentally painted over these holes, and the building is now erected. Would it be possible to use primer paint in place of a reduced coefficient of friction (lower than 0.33) to justify that the bolts have a lower than class A coating, but still satisfy the need to be slip-critical for the building?

eel in erchange

M de Seel C c i

