

Release Notes for RISACONNECTION

Version 5.0.1 Enhancements / Corrections

- Enhancements to the Flange Plate Moment Connections in tension:
 - Updated the Beam Flexural Rupture check for Flange Plate Moment connections in axial tension to be checked per AISC 360 equation F13-1.
 - Added a new Beam Tensile Rupture limit state to Flange Plate Moment connections which are in axial tension.
- Enhancements to the Seismic Moment Connections display:
 - Clearer status bar messages for input variables.
 - Replaced "FOR REFERENCE ONLY" with "n/a" flag to denote limit states that are not required by the AISC 341/358 but are still referenced in other checks.
 - Reported the unity check value for the "n/a" reference limit states where applicable for quick checking.
 - Expanded the Seismic Width to Thickness Ratios limit state checks to better show the limiting ratios.
 - Showed the governing unity check value for the grouped Seismic Beam Web and Seismic End Plate Shear limit states.
- Elastic Weld checks now will be shown as stress values rather than force values.
- Re-arranged Bolt Bearing calculations to be easier to read.
- Improved messaging when a connection could not be designed because the shape wasn't in the shape database in a combined RISAFloor/RISA-3D/RISACONNECTION model.
- Removed an over-conservative assumption which took the flange area at the center of the RBS for the Beam Flange Tensile Yield and Rupture limit states
- Corrected an issue where Extended Shear Tabs were being over-conservative with rotational ductility checks on thin beams with thin webs.
- Fixed an issue with Canadian shapes where the Bolt Group Eccentricity was erroneously not being ignored when it should be.
- Corrected the calculation for the Utilization Ratio, U, for rectangular HSS truss connections per AISC 360-10 Table K2.2.
- Updated the program to allow remote desktop connections for standalone versions.

Version 5.0 Enhancements / Corrections

- Seismic Detailing Checks added for Moment Connections per AISC 341-2010 and AISC 358-2010.
- Additions / Changes to HSS Design
 - Added HSS T Connections for Rectangular tubes.
 - Renamed some HSS connection limit states for consistency between connections.
 - Added new combined interaction limit state for HSS connections experiencing shear and moment.
 - Corrected formula for shear tab flexural plastification on HSS columns.
 - Made corrections to the calculation of utilization ratio (U) for HSS connections.
- Additions / changes for Bolted End Plate Moment Connections:
 - Added flush end plate moment connections per AISC Design Guide 16.
 - Added other extended end plate moment connections per AISC Design Guide 16.
 - Added a specialty 8 bolt unstiffened end plate moment connection similar to the MRE 1/2 connection from Design Guide 16.
 - Added Bolted End Plate Moment Connections to the CSA (Canadian) code.
 - Corrected an un-conservative issue with the column web yielding limit equation for bolted end plate connections near the top of the column.
 - Corrected an un-conservative error with Flange Weld Strength calculations for fillet welds on bolted end plate moment connections. Length of weld was over estimated by a value of k1.
- Shear connections can now be analyzed with channel beam sections.

- Brace connections can now be analyzed with channel brace sections.
- Added a (Global) Project Setting to allow the user to determine which panel zone shear capacity equation they want to use.
- Added a (Global) Project Setting to allow the user to use full eccentricity for shear connections if desired.
- Added an Angle Leg Bending limit state for certain angle shear connections in tension.
- Updated the beam bolt eccentricity calculations to consider reduced (or zero) eccentricity for specific configurations defined in the AISC design manuals for shear tab and double angle connections.
- Updated interface to use a ribbon toolbar.
- Improved / Increased bearing length for local web crippling checks on end plate connections per the guidance given in AISC Design Guide 13.
- Improved the program to ignore eccentricity for "conventional" shear connections for the CSA (Canadian) code using criteria similar to the AISC 13th edition.
- The program can now be used through Remote Desktop without licensing issues.
- Changed / Clarified the wording in the bolt prying check to eliminate confusion.
- Changes to Weld Access Hole dimensions per 2005 and 2010 versions of AISC 360.
- Corrected a display issue where the plate interaction equation shown in the results was incorrect. Internal calculations used a different (but correct) equation.
- Corrected an issue with Plate Flexural Buckling calculations for shear tabs where the program would over conservatively apply phi (or omega) twice.
- Corrected the program to take the bolt group coefficient (C) for slip critical connections.
- Corrected an issue where connections named with symbols (&, %, \$, et cetera) could cause a printing error or crash.
- Corrected an issue with bolt prying calculations for CSA (Canadian) code and single angle shear connections.
- Corrected an issue with the DXF export where the weld symbols for PJP and CJP were incorrectly displayed.