

Autodesk® Robot™ Structural Analysis Professional 2010  
Autodesk® Robot™ Structural Analysis 2010

# Service Pack SP3 Enhancement List

for:

**Autodesk® Robot™ Structural Analysis 2010 software**  
**Autodesk® Robot™ Structural Analysis Professional 2010 software**

This service pack corrects the following issues in both products:

## General

- Errors in saving results of quadratic combinations and in collecting phases for large projects have been corrected.
- Error in auto-saving a file during print previewing has been fixed.

## Model Definition

- Kirchhoff's modulus G for timber members now displays the correct value.
- Wind load generation based on the NV65 for frames with intermediate columns has been corrected.
- CM66 load combinations are now generated correctly.
- Imperfection generation, defined in the local coordinates system of inclined bars, now functions correctly.
- Divergent transmission of the cladding elements' loads to the edges on which the linear releases were defined has been corrected.

## Analysis

- Application of preferred mass matrix settings during definition of the footfall analysis load case has been fixed.
- The load-to-mass conversion option for the footfall analysis has been activated.
- An error in the weighting of footfall analysis results when using the Wb weighting in the SCI method has been fixed.
- Unnecessary increase of mode numbers in the Sturm's check for models with deactivated mass directions has been fixed.
- Random error in the seismic analysis with the base shear activated has been fixed.

## Results

- Bar maps no longer display for bars that have not been loaded.
- Display of finite element stress map is now optimized when the modal quadratic combinations are saved with results.

## Steel Connections Design

### Dialog behavior:

- Application of the currently working language settings during the display of Help for the connections' dialogs has been fixed.
- Opening and saving a beam-to-beam connection using the endplates both function correctly.
- Unjustified change of the bolts row no longer occurs when the lower bracket for the frame knee is removed, and the beam-to-column connections have been fixed.

- Recognition of a beam cut in a beam-to-beam connection has been fixed.
- The undefined “Beam length for calculations” data has been corrected.

**Connection definition:**

- Problems with the import of tapered sections and their connection definitions have been fixed.
- Gusset plates are now generated correctly.
- Plates of sizes different from the beam-to-beam connection dialog data are now generated correctly.
- Fixed column base definition has been corrected.
- Stiffeners for the fixed column connections of columns made from hollow sections are now generated correctly.
- Distance between bolts in gussets and endplates is now recognized correctly.
- Excessive warnings about undefined stiffeners in the truss node connection are no longer generated.

**Connection verification:**

- Calculation of the rotational stiffness  $S_{j,ini}$  for beam-to-column and beam-to-beam connections has been fixed.
- EC3 beam-to-column connection with the endplate is now correctly checked.
- CM66 truss node connections are now correctly checked.
- Calculation of the effective width for the overlapping diagonal in truss tube connections has been fixed.
- Verification of the CM66 column base connections has been corrected.
- Stiffness calculation of the EC3 frame knee connection has been fixed.
- Endplate stiffness calculation of the EC3 beam-to-beam connection has been corrected.
- Efficiency ratio calculation for the truss connection using brackets has been corrected.

**Steel Members Design**

- Information on the code check tab (always related to the first verified member) has been corrected.
- Consideration of moving loads in the calculations has been fixed.
- Wrong internal forces for the tension-only members in the nonlinear analysis have been corrected.
- Correct steel strength values are now used for the Australian standard AS4100 (steels 400P&F t=12-20 mm and 450P&F t=32-50 mm).
- The I sections in pure compression for small compression forces are now classified correctly for the EN 1993-1-1 standard calculation.
- Lack of the yield strength reduction for increasing element thickness based on the Danish annex to the EC3 has been corrected.
- The proper formula for bidirectional bending code check based on the EC3 is now used.
- Default structure type as sway for the calculation of buckling parameters based on the EC3 has been fixed.
- Manual changes of the material coefficients for calculations based on the EC3 are now properly considered.
- Selection controls in the Indian Standard calculation methods' dialog box are now active.
- The lateral buckling C1 value based on the Spanish code SE-A:2006 is now calculated correctly.
- The “c” coefficient for the SNIP code design is now calculated correctly.

**Timber Design**

- Incorrect information on the code check tab (always related to the first verified member) has been corrected.

## Concrete Design

- Unnecessary display of “No error” no longer occurs when a project containing stirrups with pins is opened.
- Loss of information about the “cage method” based on the BAEL anchorage reinforcement pattern has been fixed.
- Calculation of beams with openings based on the BAEL code has been fixed.
- Change of results after the sequential calculations has been corrected.
- Collision of the top reinforcement bars in beams has been fixed.
- Selection of bars on the General tab of the reinforcement table now functions correctly.
- Wrong stamp sizes in the drawing tables have been corrected.
- Incorrect symbols of the closed stirrups have been fixed.
- Lack of information about the generated combinations based on ACI wall design has been fixed.
- The value of the reduction strength factor based on ACI wall design is now correct.
- Unjustifiably large value of the required reinforcement based on the BAEL slabs has been fixed.
- Very slow import from the Autodesk Robot software real reinforcement module has been corrected.

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