FIN PLATE

FIN PLATE SHEAR CONNECTION

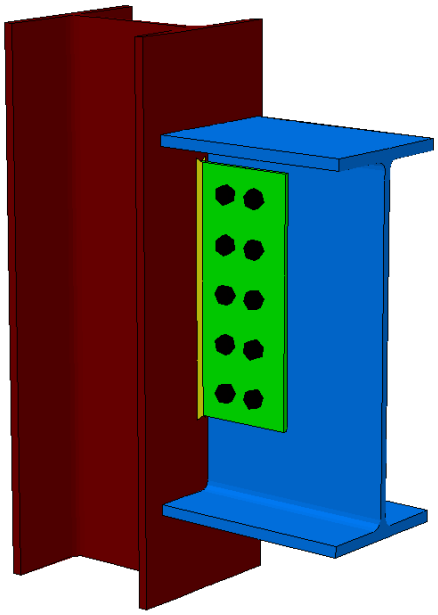
DESIGN | DETAILING | S18

Summary

Fin Plate designs the connection between a beam and a column subjected to axial and shear forces without bending. The module uses a fin plate welded to the column and bolted to the beam to transfer forces between beam and column.

What makes this module special?

- Automatic bolt sizing and spacing
- Design a connection about the column's strong and weak axes
- View connection from several angles
- Detailed calculations



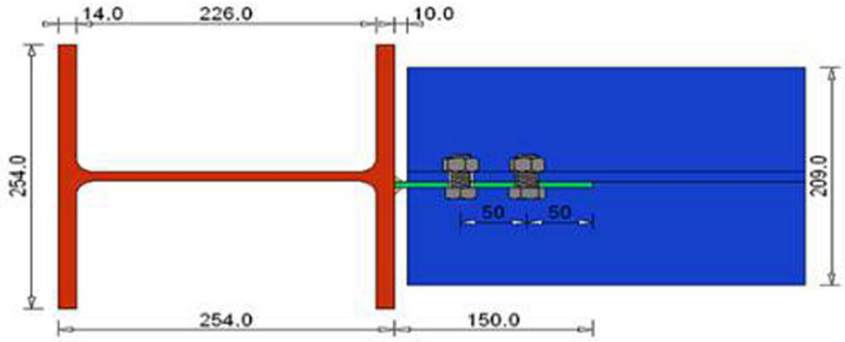
Detailed Description

Fin Plate can analyse connections that transmit end shear and axial force. The designed connections are considered simple connections that have negligible resistance to rotation and is thus incapable of transmitting significant moments at ultimate limit state.

The modules make the following assumptions:

- The centre line of the beam and column are in the same plane
- The connection transmits end shear only
- Bolts have normal clearance holes
- All bolts have threads in their shear planes

The module allows you to enter I or H-sections and orientations with the relevant design loads. The layout of the bolts on the connecting member is defined by entering their number and spacing. The module also provides automatic bolt sizing and spacing options to quickly get a workable bolt layout. To verify that you have defined the connection geometry as you intended, the module lets you view it from several angles either using dimensioned elevations or the 3D view.



After the analysis you can view the design output on a Calcsheet with the complete design calculations.

Supported Codes

Design Codes

- AISC - 1999 LRFD
- AISC 360-16 LRFD
- AS 4100: 2020
- BS5950 – 1990
- BS5950 – 2000
- CAN/CSA – S16.1-94
- Eurocode 3 – 2005
- SABS 0162 -1984
- SABS 0162 – 1993