STY+

Typified steel connections

The STY+ program is used for the design of bolted, moment-bearing beam connections of the IH series and articulated I-beam connections of the IS series, optionally in conjunction with beam notches IK, according to the DSTV guidelines "Typified connections in steel building construction", edition 2013.

Static Systems

IH connection

- Moment-bearing connection with flush end plate or end plate protruding on one or both sides as well as two or four vertical rows of screws
- Beam-to-beam connection
- Connection of beam to continuous column with dimensioning of the column cross-section
- Connection of girder via column with dimensioning of the girder cross-section
- Screw strength classes 8.8 and 10.9

IS connection

- Hinged connection to sheet metal (as a connection with any component)
- Articulated connection to support web
- Articulated connection to the girder web without notching (i.e. connected in the middle of the web)
- Articulated connection to the girder web with notch (on one side or on both sides)
- Hinged connection to sheet metal with notch (on one side or both sides)
- Screw strength classes 4.6 and 10.9

Cross sections

- I-Profile as default profile

Loads

IH connection

- Design internal forces from normal force, moment and shear force and, if applicable, reverse moment
- It is possible to enter several design internal force combinations
- Small, negligible normal force Nd with verification of its application limit N/Npl < 0.05

IS connection

- Design value of the shear force Vz
- It is possible to enter several design internal force combinations

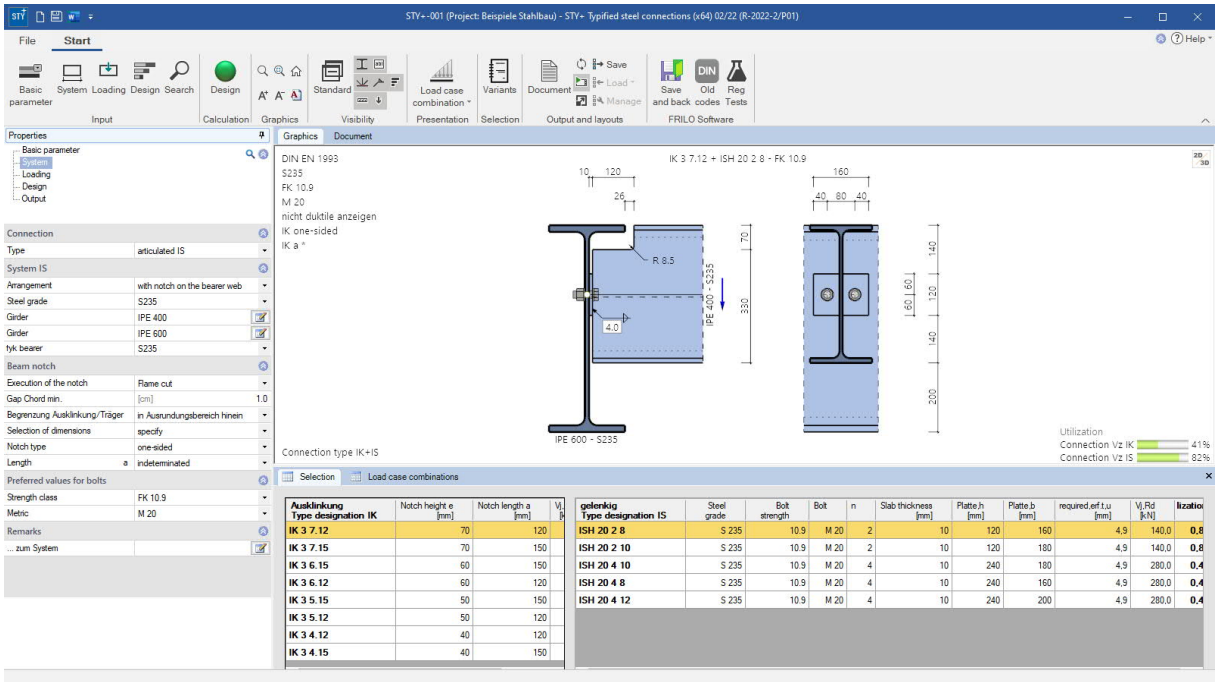
Material

- Mild steel: S235 and S355

Design

For the design, the program uses the stored DSTV catalogue, which corresponds to the ring binder "Typified Connections in Steel Structures", 2013 edition.

The connections are calculated using the component method, in which the connection is broken



down into its individual basic components. For each of these components, e.g. column web under tension or bolts under tension, the load capacity is determined. The overall strength results from the composition of the individual components.

All connections from the DSTV catalog that are permitted for the entered system are listed. This list can be further restricted to the required connection types by specifications such as connection type, material, screw strength or size. The associated utilization rates are determined for each connection type listed and a clear representation of the details including a 3D model and 2D drawing is provided.

Standards

- DIN EN 1993
- DSTV-Ringbuch Ausgabe 2013