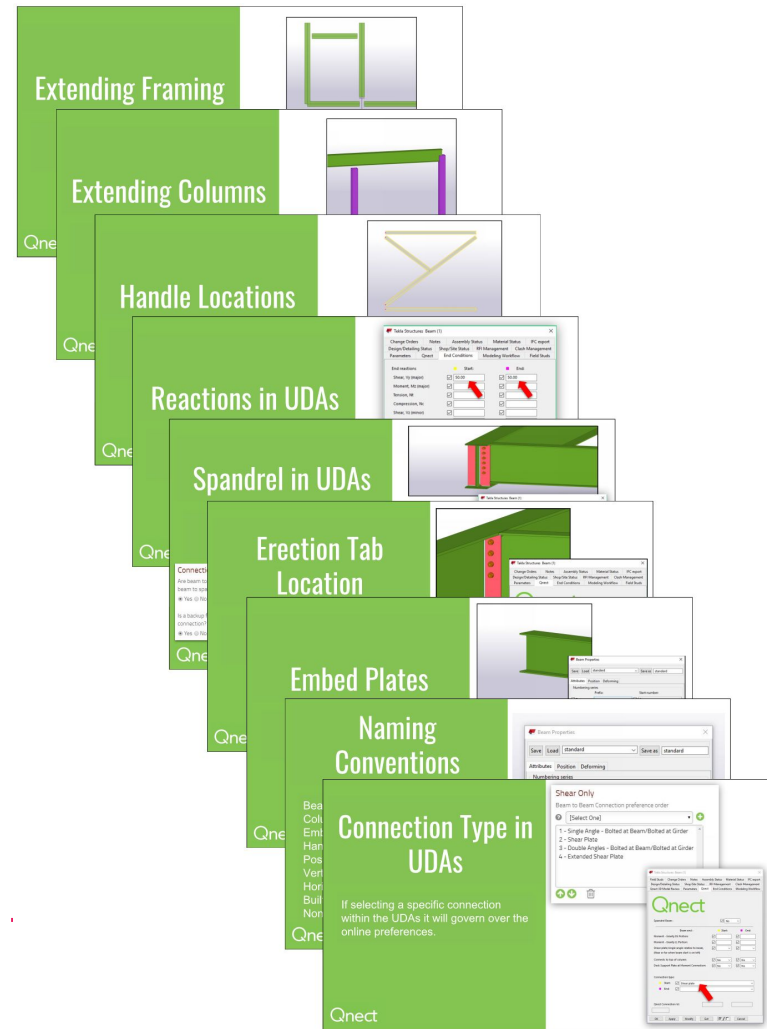


Model Preparation

Model Preparation Checklist

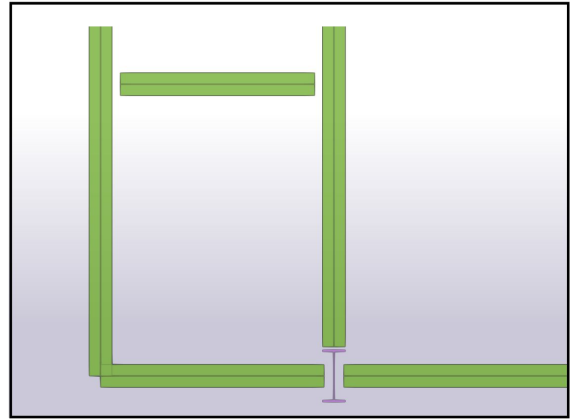
- Extending Framing
- Extending Columns
- Handle Locations
- Reactions in UDAs
- Spandrel in UDAs
- Erection Tab Location
- Embed Plates
- Naming Conventions
- Connection Type in UDAs

Qnect

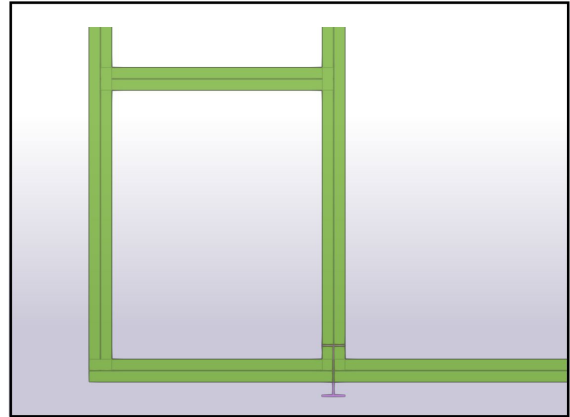


Extending Framing

Beam to Beam
Beam to Column
Cantilevers



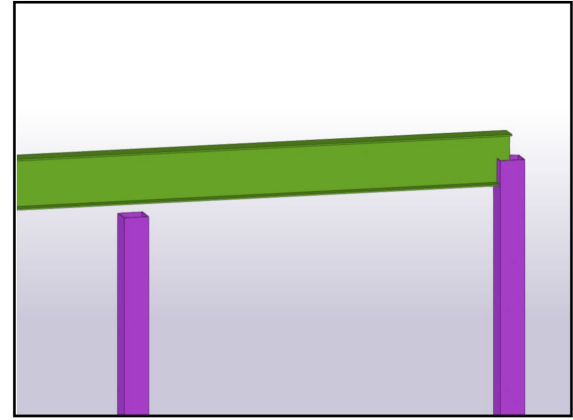
Incorrect



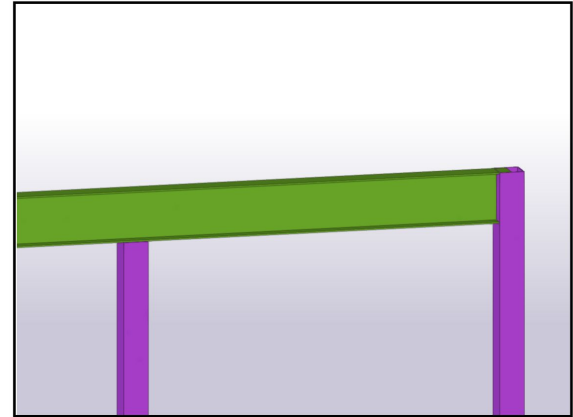
Correct

Extending Columns

Top of Steel Locations
Underside Locations



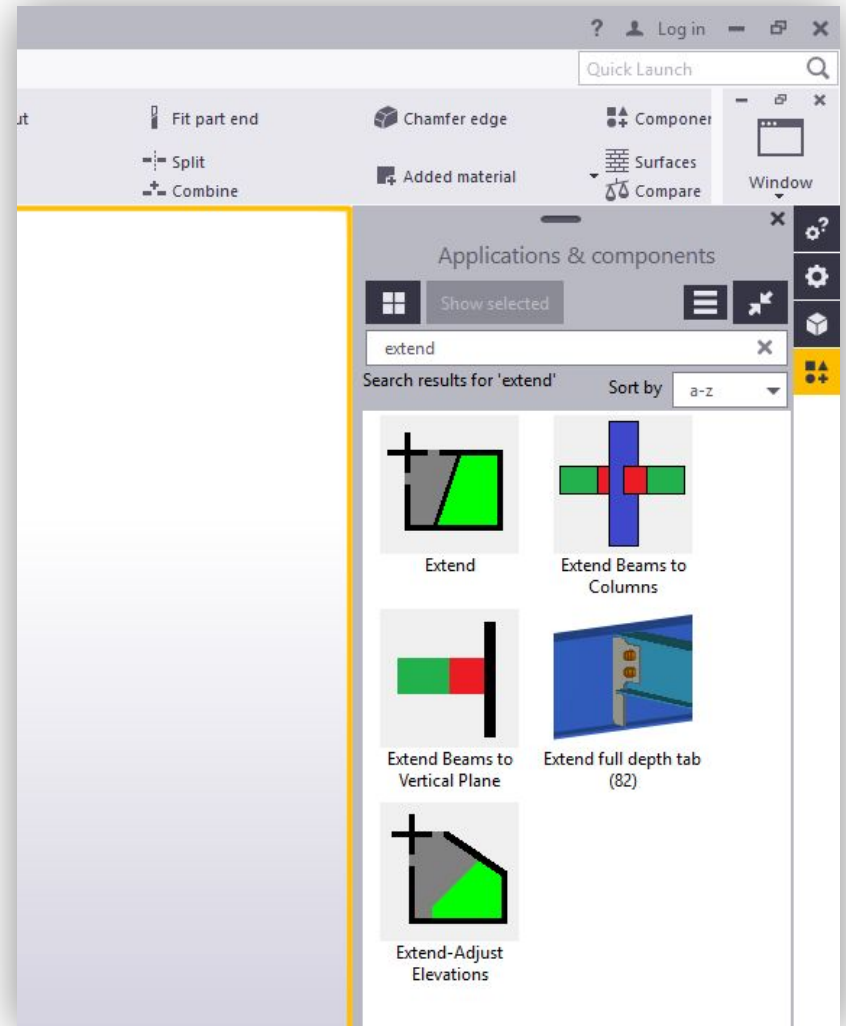
Incorrect



Correct

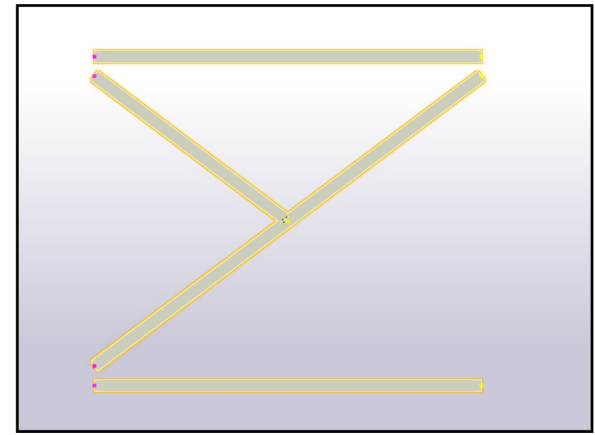
Extending Tools

- Tekla Macros
 - Extend
 - Extend Beams to Columns
 - Extend Beams to Vertical Plane
 - Extend-Adjust Elevations

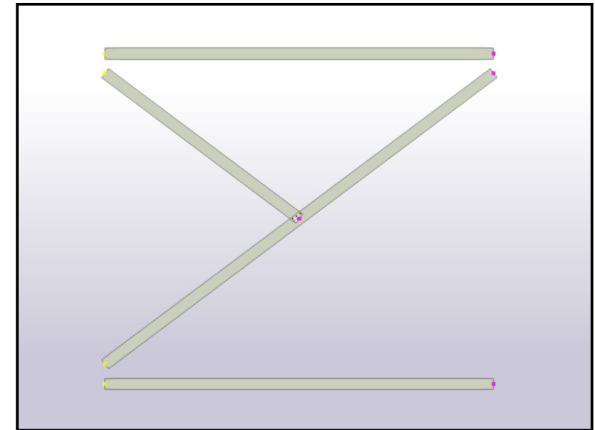


Handle Locations

Start Location
End Location



Incorrect

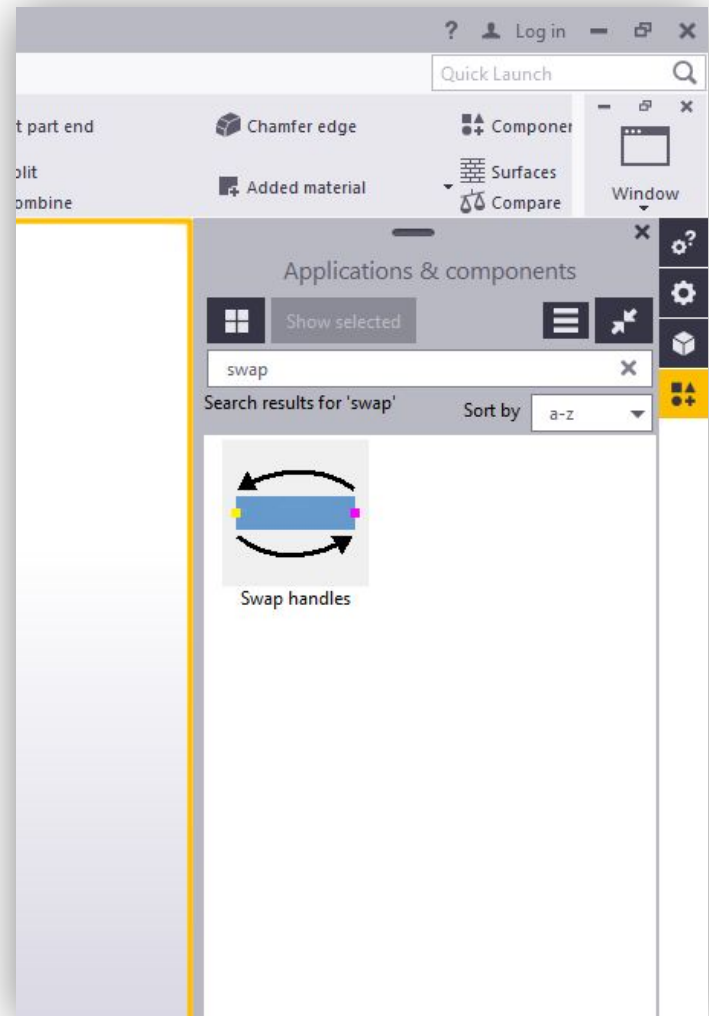


Correct

Handle Tool

- Tekla Macro
 - Swap handles

Very IMPORTANT:
When swapping handles UDA fields
will remain and will **NOT** follow your
handles.



Reactions in UDAs



Shear Reactions
Axial Reactions
Moment Reactions

Tekla Structures Beam (1)

Change Orders | Notes | Assembly Status | Material Status | IFC export
Design/Detailing Status | Shop/Site Status | RFI Management | Clash Management
Parameters | Qnect | End Conditions | Modeling Workflow | Field Studs

End reactions

	Start:	End:
Shear, Vy (major)	<input checked="" type="checkbox"/> 50.00	<input checked="" type="checkbox"/> 50.00
Moment, Mz (major)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Tension, Nt	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Compression, Nc	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Shear, Vz (minor)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Moment, My (minor)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Torsion, Mx	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Moment connection symbol ☒ No

Connection code ☒

Connection Capacity ☒

UDL code ☒

Connection Utility Ratio ☒

Object Utility Ratio ☒

End Preps for this Member

Turn off Auto End Prep in BOM ☒

Use this End Prep in BOM ☒

OK Apply Modify Get ☒ / ☐ Cancel

Reactions in UDAs



Shear Reactions
Axial Reactions
Moment Reactions

Tekla Structures Beam (1)

Change Orders | Notes | Assembly Status | Material Status | IFC export
Design/Detailing Status | Shop/Site Status | RFI Management | Clash Management
Parameters | Qnect | End Conditions | Modeling Workflow | Field Studs

End reactions

	Start:	End:
Shear, Vy (major)	<input checked="" type="checkbox"/> <input type="text"/>	<input checked="" type="checkbox"/> <input type="text"/>
Moment, Mz (major)	<input checked="" type="checkbox"/> <input type="text"/>	<input checked="" type="checkbox"/> <input type="text"/>
Tension, Nt	<input checked="" type="checkbox"/> 100.00	<input checked="" type="checkbox"/> 100.00
Compression, Nc	<input checked="" type="checkbox"/> 100.00	<input checked="" type="checkbox"/> 100.00
Shear, Vz (minor)	<input checked="" type="checkbox"/> <input type="text"/>	<input checked="" type="checkbox"/> <input type="text"/>
Moment, My (minor)	<input checked="" type="checkbox"/> <input type="text"/>	<input checked="" type="checkbox"/> <input type="text"/>
Torsion, Mx	<input checked="" type="checkbox"/> <input type="text"/>	<input checked="" type="checkbox"/> <input type="text"/>

Moment connection symbol ☒ No

Connection code ☒

Connection Capacity ☒

UDL code ☒

Connection Utility Ratio ☒

Object Utility Ratio ☒

End Preps for this Member

Turn off Auto End Prep in BOM ☒

Use this End Prep in BOM ☒

OK Apply Modify Get P / Γ Cancel

Reactions in UDAs

Shear Reactions

Axial Reactions

→ Moment Reactions

Tekla Structures Beam (1)

Change Orders | Notes | Assembly Status | Material Status | IFC export
Design/Detailing Status | Shop/Site Status | RFI Management | Clash Management
Parameters | Qnect | End Conditions | Modeling Workflow | Field Studs

End reactions

	Start:	End:
Shear, Vy (major)	<input checked="" type="checkbox"/> <input type="text"/>	<input checked="" type="checkbox"/> <input type="text"/>
Moment, Mz (major)	<input checked="" type="checkbox"/> 200.00	<input checked="" type="checkbox"/> 200.00
Tension, Nt	<input checked="" type="checkbox"/> <input type="text"/>	<input checked="" type="checkbox"/> <input type="text"/>
Compression, Nc	<input checked="" type="checkbox"/> <input type="text"/>	<input checked="" type="checkbox"/> <input type="text"/>
Shear, Vz (minor)	<input checked="" type="checkbox"/> <input type="text"/>	<input checked="" type="checkbox"/> <input type="text"/>
Moment, My (minor)	<input checked="" type="checkbox"/> <input type="text"/>	<input checked="" type="checkbox"/> <input type="text"/>
Torsion, Mx	<input checked="" type="checkbox"/> <input type="text"/>	<input checked="" type="checkbox"/> <input type="text"/>

Moment connection symbol ☒ Yes

Connection code ☒

Connection Capacity ☒

UDL code ☒

Connection Utility Ratio ☒

Object Utility Ratio ☒

End Preps for this Member

Turn off Auto End Prep in BOM ☒

Use this End Prep in BOM ☒

OK Apply Modify Get ☒ / ☐ Cancel

Spandrel in UDAs

Full Depth Shear
Max Bolt Rows Double Angle
Full Depth Backside Stiffener

Connection Preferences

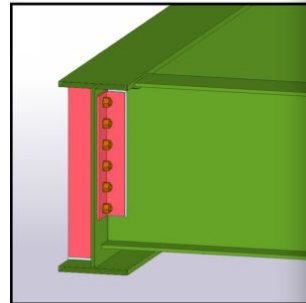
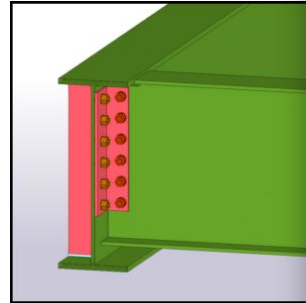
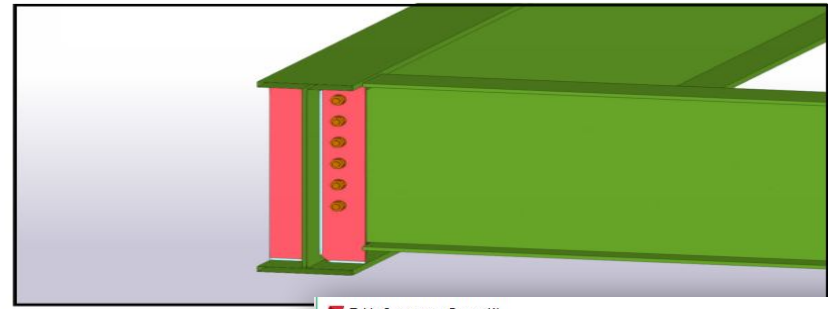
Are beam to spandrel beam shear plate connections to be Full Depth Shear Plates and beam to spandrel beam double angle connections to fill maximum bolt rows?

☒ Yes ☐ No

Is a backup full depth stiffener required at spandrel beams on opposite side of connection?

☒ Yes ☐ No

Qnect



Tekla Structures Beam (1)

Change Orders | Notes | Assembly Status | Material Status | IFC export
Design/Detailing Status | Shop/Site Status | RFI Management | Clash Management
Qnect Status | Parameters | Qnect | End Conditions | Modeling Workflow | Field Studs

Qnect

Spandrel Beam : ☒ Yes ☐ No

Beam end : ■ Start: ■ End:

Moment - Gravity DL Portion: ☒ ☐ ☒ ☐

Moment - Gravity LL Portion: ☒ ☐ ☒ ☐

Shear plate/single angle relative to beam,
(Near or far when beam start is on left) ☒ ☐ ☒ ☐

Connects to top of column: ☒ No ☐ No ☒ No ☐ No

Deck Support Plate at Moment Connection: ☒ none ☐ none ☒ none ☐ none

Connection type:

■ Start: ☒

■ End: ☒

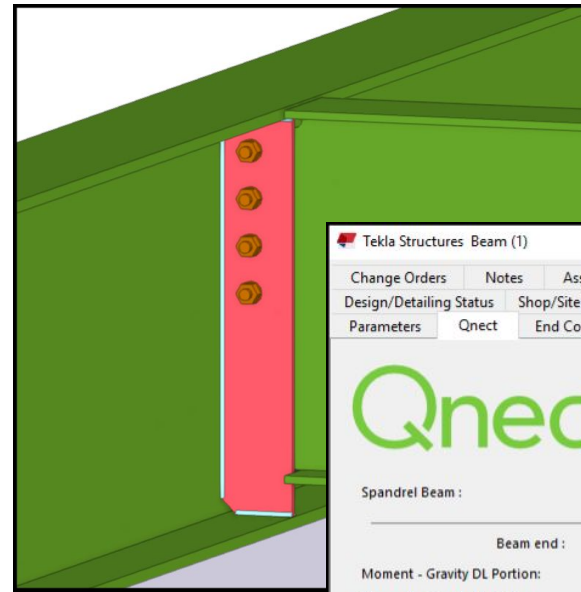
Qnect Connection id :

☒ / ☐

Erection Tab Location

➔ Nearside
Farside
Global (Coming Soon)

Qnect



Tekla Structures Beam (1)

Change Orders | Notes | Assembly Status | Material Status | IFC export
Design/Detailing Status | Shop/Site Status | RFI Management | Clash Management
Parameters | Qnect | End Conditions | Modeling Workflow | Field Studs

Qnect

Spandrel Beam : ☒

Beam end : ■ Start: ■ End:

Moment - Gravity DL Portion: ☒ ☒

Moment - Gravity LL Portion: ☒ ☒

Shear plate/single angle relative to beam,
(Near or far when beam start is on left) ☒ near ☒

Connects to top of column: ☒ No ☒ No

Deck Support Plate at Moment Connection: ☒ none ☒ none

Connection type:

■ Start: ☒

■ End: ☒

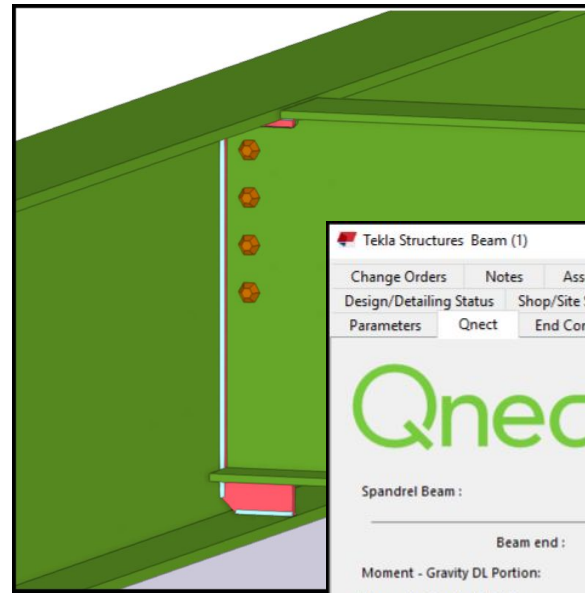
Qnect Connection Id :

OK Apply Modify Get ☒ ☐ Cancel

Erection Tab Location

Nearside
➔ Farside
Global (Coming Soon)

Qnect



Tekla Structures Beam (1)

Change Orders | Notes | Assembly Status | Material Status | IFC export
Design/Detailing Status | Shop/Site Status | RFI Management | Clash Management
Parameters | **Qnect** | End Conditions | Modeling Workflow | Field Studs

Qnect

Spandrel Beam : ☒ ▼

Beam end : ■ Start: ■ End:

Moment - Gravity DL Portion: ☒ ▼ ☒ ▼

Moment - Gravity LL Portion: ☒ ▼ ☒ ▼

Shear plate/single angle relative to beam,
(Near or far when beam start is on left) ☒ far ▼ ☒ ▼

Connects to top of column: ☒ No ☒ No ▼

Deck Support Plate at Moment Connection: ☒ none ▼ ☒ none ▼

Connection type:

■ Start: ☒ ▼

■ End: ☒ ▼

Qnect Connection Id :

OK Apply Modify Get Cancel

Erection Tab Location

Nearside
Farside



Global (Coming Soon)

Please select Shear Plate and Single Angle relative to beam web placement preference.

Horizontally oriented beams (angle ≤ 45 deg.)

End1 Near, End2 Far ▼

Vertically oriented beams (angle > 45 deg.)

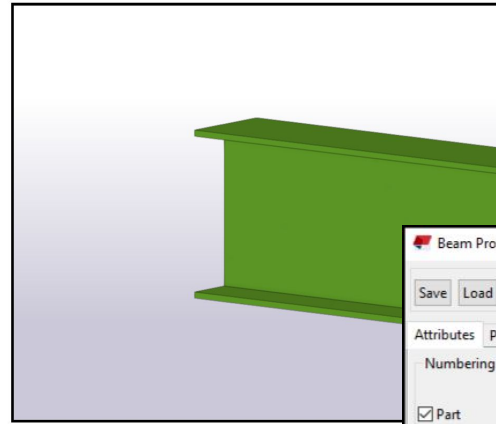
End1 Near, End2 Far ▼

Submit

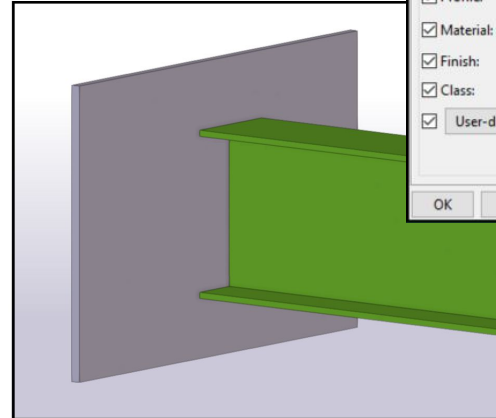
Embed Plates



Standard Embed
'Dummy' Embed



Incorrect



Correct

Beam Properties

Save Load standard Save as standard

Attributes Position Deforming

Numbering series

Prefix: Start number:

☒ Part ☒ 1

☒ Assembly ☒ 1

Attributes

☒ Name: EMBED_PLATE

☒ Profile: PL3/4X24"

☒ Material: A572-GR.50

☒ Finish:

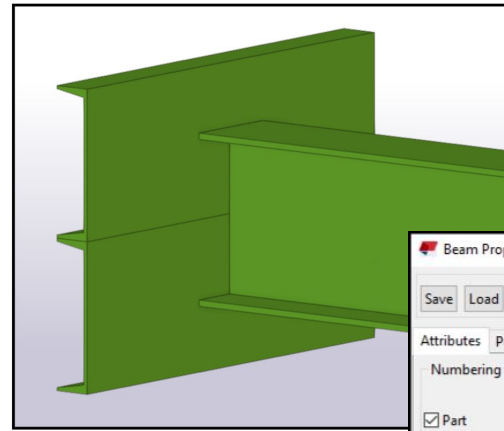
☒ Class: 99

☒ User-defined attributes...

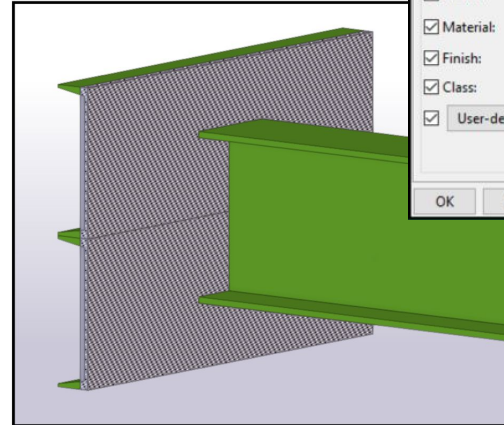
OK Apply Modify Get ☒ / ☐ Cancel

Embed Plates

Standard Embed
→ 'Dummy' Embed



Incorrect



Correct

Beam Properties

Save Load standard Save as standard

Attributes Position Deforming

Numbering series

Prefix: Start number:

☒ Part ☒ 1

☒ Assembly ☒ 1

Attributes

☒ Name: EMBED_PLATE

☒ Profile: PL3/4X24" Select...

☒ Material: A572-GR.50 Select...

☒ Finish:

☒ Class: 99

☒ User-defined attributes...

OK Apply Modify Get / Cancel

Naming Conventions

Beams = BEAM

Columns = COLUMN

Embeds = EMBED

Hangers = HANGER

Posts = POST

Vertical Braces = VBRACE

Horizontal Braces = HBRACE

Built Ups - BUILTUP

Non Composite = NON-COMPOSITE

Qnect

Beam Properties

Save Load standard Save as standard

Attributes Position Deforming

Numbering series

Prefix: Start number:

☒ Part P ☒ 1

☒ Assembly A ☒ 1

Attributes

☒ Name: BEAM

☒ Profile: W27X84 Select...

☒ Material: A992 Select...

☒ Finish:

☒ Class: 3

☒ User-defined attributes...

OK Apply Modify Get ☒ / ☐ Cancel

Connection Type in UDAs

If selecting a specific connection within the UDAs it will govern over the online preferences.

The image shows two overlapping windows from the Qnect software. The top window, titled 'Shear Only', is a 'Beam to Beam Connection preference order' dialog. It features a dropdown menu currently set to '[Select One]' with a green plus icon to its right. Below the dropdown is a list of four connection types: '1 - Single Angle - Bolted at Beam/Bolted at Girder', '2 - Shear Plate', '3 - Double Angles - Bolted at Beam/Bolted at Girder', and '4 - Extended Shear Plate'. At the bottom of this window are three icons: a green up arrow, a green down arrow, and a trash can. The bottom window is the main 'Qnect' application window, titled 'Tekla Structures Beam (1)'. It has a menu bar with options: 'Field Studs', 'Change Orders', 'Notes', 'Assembly Status', 'Material Status', 'IFC export', 'Design/Detailing Status', 'Shop/Shop Status', 'RFI Management', 'Clash Management', 'Qnect 3D Model Review', 'Parameters', 'Qnect', 'End Conditions', and 'Modeling Workflow'. The 'Qnect' logo is prominently displayed in green. Below the logo, there are settings for 'Spandrel Beam' (set to 'No') and 'Beam end' (with 'Start' and 'End' checkboxes). A table of settings follows, with columns for 'Start' and 'End' and rows for 'Moment - Gravity DL Portion', 'Moment - Gravity LL Portion', 'Shear plate/single angle relative to beam, (Near or far when beam start is on left)', 'Connects to top of column:', and 'Deck Support Plate at Moment Connection:'. Each row has checkboxes and dropdown menus. At the bottom, there is a 'Connection type' section with 'Start' and 'End' checkboxes and dropdown menus. A red arrow points to the 'End' dropdown menu, which is currently set to 'Shear plate'. Below this is a 'Qnect Connection Id' field with two input boxes. At the very bottom are buttons for 'OK', 'Apply', 'Modify', 'Get', a checkbox with a green checkmark, and 'Cancel'.

Shear Only

Beam to Beam Connection preference order

[Select One]

- 1 - Single Angle - Bolted at Beam/Bolted at Girder
- 2 - Shear Plate
- 3 - Double Angles - Bolted at Beam/Bolted at Girder
- 4 - Extended Shear Plate

Tekla Structures Beam (1)

Field Studs Change Orders Notes Assembly Status Material Status IFC export
Design/Detailing Status Shop/Shop Status RFI Management Clash Management
Qnect 3D Model Review Parameters Qnect End Conditions Modeling Workflow

Qnect

Spandrel Beam : ☒ No

Beam end : ☒ Start: ☒ End:

Moment - Gravity DL Portion: ☒ ☒

Moment - Gravity LL Portion: ☒ ☒

Shear plate/single angle relative to beam, (Near or far when beam start is on left) ☒ ☒

Connects to top of column: ☒ No ☒ No

Deck Support Plate at Moment Connection: ☒ No ☒ No

Connection type:

☒ Start: ☒ End:

Qnect Connection Id :

OK Apply Modify Get ☒ / ☐ Cancel

For more information please contact Qnect:

EMAIL: Marketing@Qnect.com

PHONE: 413.387.4375