

Marking Up Tekla BimSight

(/tekla/index.php/competencies-tekla/271-marking-up-tekla-bimsight)

Details

Category: T1-Competency (/tekla/index.php/competencies-tekla)

bimsight (/tekla/index.php/component/tags/tag/54-bimsight)

<https://youtu.be/FPp5Y1E4n1M> (<https://youtu.be/FPp5Y1E4n1M>)

Key Points

1. Select Plane to Markup
2. Add markup
3. Add note to markup
4. Make Note Public
5. Save



FULLY COMPETENT



HAVE USED
BUT NOT FULLY COMPETENT



AWARE BUT NEVER USED



WAS NOT AWARE.
WILL GAIN AWARENESS BY MYSELF
WITHIN 2 WEEK



DONT KNOW WILL NEED HELP

T1.0-Autocad Competency

(/tekla/index.php/competencies-tekla/197-comptency-for-employees-with-less-than-2-year-experience)

Details

Category: T1-Competency (/tekla/index.php/competencies-tekla)

Layer Commands

1. Using Layer filters
2. Sorting by layer name
3. Sorting by layer color
4. Restoring Layer states
5. Layer II tools from Autocad tool bars
 1. Layer Walk
 2. Layer freeze
 3. Isolate layers
 4. Un Isolate Layers
 5. Lock Layers
 6. Unlock Layers.
 7. Changing layer of selected items to another Layer
 8. Changing layer of selected entities to current layer
6. Changing the name of a layer.

Xref Command

1. Set Units of Autocad
2. Set measurement units in autocad to show fractional measures for US drawing
3. Setting Ucs origin
4. Setting ucs orgin, X axis and Y axis
5. Wblock command
6. Xrefing command
 1. With absolute path
 2. With Relative path
 3. Changing xref Path(Command redir)
 4. Layer filter.
7. Reporting of missing Xrefs.

Viewport Layers

1. Hiding viewport layers from Layer dialog box
2. Isolating Viewport layers using LayerII tools
3. Wblocking from Viewport after isolating layers.

Creating Reference Models from Architectural drawings

1. Drawing X Lines from plan
2. Trimming Xlines
3. Setting UCS using 3 points, object, 1 point.
4. WBlocking after setting UCS
5. Setting Path of Wblock
6. Project Plan grid lines to section and elevation Views.
7. Using Viewport layers to Wblock
8. Checking for dimensions which are not to scale using custom lisp program
9. Using of filters.

10. exploding layers
11. Scaling of PDF converted drawings
12. Using PDF Underlay in Autocad to Scale
13. Getting rid of short lines (Using Custom Macor)
14. Changing Layer Colors

Setting Dimension Style

1. Inserting standard drawing DIM-OZ
2. Inserting Standard drawing DIM-US
3. Restoring Dimension Style
4. Setting Dimension Scale
5. Setting Round off values
6. Using Ordinate dimensioning (running dimensioning in Autocad)

Measuring Slopes

1. Understanding Slope when given as a ratio example 1:80
2. Converting Slope ratio to Degrees.
3. Drawing Slope ratio in autocad and measuring Angle
4. Finding angle using Calculator when Slope ratio is given.
5. Setting precision for measuring Angles.

Plan command

1. Issue Plan command
2. See effects of plan command when ucs is turned

Scaling command

Use of Autocad Design Review Tool to Convert later version to earlier version - 1 Point

Using Undo

1. Using Undo -> Mark

Ability to use Print2CAD to convert pdf documents to Autocad files. -

T1.1.1-Points, Cuts, Fit, Split

(/tekla/index.php/competencies-tekla/203-t1-points)

Details

Category: T1-Competency (/tekla/index.php/competencies-tekla)

Add points

1. Add Points along a line
2. Add points at 100 mm along a line
3. Add Point at -100 mm along line
4. Add Points at 100 3* 100 2*50 Along a line
5. Add Points perpendicular to a line
6. Add Points in Plan view. Now change the view to orthogonal plane (press CTRL and P, or cycle through CTRL and P till you get to an orthogonal view) and now add a point. The point should be coloured in red.
7. Identifying points on View plane with color of point (Yellow if the point is on view plane red if point is away from view plane)
8. Add Points at intersection of 2 lines (A line can be defined by 2 pick points)
9. Project a point to a line
10. Add equispaced points between 2 pick points (Like Autocad divide command)
11. Add Points
12. Create Construction line
13. Create construction line while locking: x, y and z coordinates. (Press x, y or z when creating the line to lock the coordinates).
14. Create a circle by clicking centre point and a point on circumference.
15. Create a point by Clicking centre point and keying in a point co-ordinate in relation to centre point (press r key to bring up dialog box for key board input in relative mode).
16. Add Points anywhere.

Fits cuts Splits and joins

1. Difference between fit and a cut (/tekla/images/ModellingTips/fitpartfunction.jpeg)
2. Line cut
3. Fit
4. Polygon cut
5. Create 2 polygon cuts with one side matching. Any problems? (Sometimes the entire part disappears. Be aware of this issue).
6. Customise tool bar to add Split member tool bar button and combine tool bar button to Detailing Tool bar
7. Part Cut (Generally should not be used. But in some cases very useful)
8. **Cutting of plates Always the edge should be perpendicular to the plate face**
9. Combining Disconencted parts. (ie with gap in the middle)

T1.1.2-Modelling (/tekla/index.php/competencies-tekla/202-t1-modelling)

Details

Category: T1-Competency (/tekla/index.php/competencies-tekla)

Understanding of Various fields in Beam Properties Dialog box

1. Numbering Series Properties
 - Part Prefix
 - Assembly prefix
 - Start No (Always from xx1 example 1,101, 201) Never 100, 50 etc
2. Attributes
 - Name
 - Profile
 - Material
 - Finish (Hot dip galvanize, Paint etc)
 - Class (color) We reserve class 8 for existing members.
All plates 99. All Chemset Plates 96. Check Tek1 Standards.
3. Understanding Fields on Position Tab - Watchoutforsettingofcurrentco ordinate system.
 - On Plane Left, Middle, Right (Watch for setting of Co-Ordinate system)
 - Rotation
 - Depth
4. End Offsets
 - DX, DY (other offsets not usually used)
5. Curved beams (Used only for curved beams)
 - Number of segments + Radius (Usually curving only in xy plane)
6. Deforming - Not used.
7. Short cut Keys for navigation
 - ALT+Middle Button
 - SHIFT + Middle Button
 - CNTRL + Middle Button
 - Page Down
 - Page Up
 - Arrow Keys

Modelling of columns

1. Understanding Levels
 - Top Level
 - Bottom Level
2. Understand how RLs of columns does not depen on the z value of the View opened but only on the top and bottom RL
3. Modify top and bottom RLs of selected cols without changing other properties

Work Plane

1. Set Work plane with one point +insnappingtool bar from drop select Work Plane
(Tip-By setting work plane from drop down you can draw beams in plan view at different RLs in the same view)
2. Set work plane using 2 Points.
3. Set work plane to a sloping beam and increase the length of the beam without changing slope (Useful for extending rafters and sloping beams and plates.

4. Set work plane to top of part and open a view on top the part.

Modelling of Beams

1. Double clicking beam icon and setting beam properties
2. Check shear plates are on same side of the beam at both ends and also similar on all beams **(New)**

Modelling of plates

1. Modelling of plates
2. Adding nodes via modify command
3. Adding chamfer to a corner - See Example (</tekla/index.php/49-general/210-chamfers>)
4. Adding Radius to a corner
5. Checking root radius of a beam and adding Chamfer so that there is no Clash. Chamfer to be greater than root Radius

Modelling Stiffners

1. Clearance required for PFC UB and UC stiffners (Australian and US)-Tip if the stiffner is same size and the gap. It will not go in.

Member Colors

1. Use member colors as per the attached table (</tekla/index.php/modelling/206-member-colours>)

Reference Model.

1. Create reference model file in M/ProjectFolder
2. Insert Autocad reference model.
3. Insert IFC reference model
4. Insert BIM reference model.
5. Replacing one reference model with another.
6. Using MODIFY button in reference model dialog box to update changes to autocad or ifc reference model (Pls watch this video -<https://youtu.be/LMslv7R-Op0> (<https://youtu.be/LMslv7R-Op0>))

Inquire Assembly

1. Use of inquire assembly button, and understand the colours.

Gal Holes

Gal Holes Design Guide Lines PDF 1

(https://drive.google.com/file/d/1B4tiwHZcYT__9XI7V9uBB5O4HPf4ISFe/view?usp=sharing)

Gal Holes Design Guide PDF

(<https://drive.google.com/file/d/1Y2Gc8PSk0X52rQybMLWBWeXLzRXWr-hs/view?usp=sharing>)

US Standard Parts

Be Familiar with US Standard parts. These items are to be used in Australian Detailing as well (Download PDF) (https://drive.google.com/file/d/1okkg1mv6QEKmBIKw6qjtb-QqvQA8M_Jp/view?usp=sharing)

T1.1.3-Views (/tekla/index.php/competencies-tekla/199-t1-1-3-views)

Details

Category: T1-Competency (/tekla/index.php/competencies-tekla)

Grid

1. Prepare text file with X dimensions and labels - See this example (/tekla/index.php/modellingtips/200-grid-text-file-example)
2. Set Z origin point to the lowest Rounded off value (Rounded off to 100) which is used in drawing. Example if Lowest RL for the drawing 95345 Z origin value is to be set to 95300
3. On large jobs where we are doing only small portion, decide which grids to create.
4. Label Grids.
5. Move grid after creation
6. Check grid dimension by creating a drawing.

Setting rotation point of model

1. Setting rotation point of model using "V" command or "r" command

Views -1

1. Create Views along grid lines
2. Show any view which is created using view list
3. Delete views from View List
4. Create Views with 2 points
5. Create Basic view at given RL in XY Plane
6. Create Basic View in XZ plane at the Y value of a part
7. Create Basic View in YZ plane at any given Value
8. Set view up depth and down depth
9. Save View properties with name.
10. Apply Thin View properties (UP 200 DOWN 200) + WIRE FRAME and save as THIN.

Views-2 (Object Representation and filters)

1. Create View filter based on class
2. Create View filter based on profile
3. Create view filter based on part Name
4. Create View filter based on Assembly Name
5. Create View filter Based on Class AND profile
6. Create View filter based on class OR profile.

Views-3 Properties Representation

1. Set Representation to check Loose Plates.
2. Set Representation to check bolt size.
3. Set view properties to wire frame
4. Set view properties to Rendered

Views-4 Shading Modes

1. Set shading mode to full shading for parts (CNTRL+4)
2. Set shading mode to full shading for components(SHIFT+4)
3. Set shading mode to partial for parts and components(CNTRL+2, SHIFT+2)
4. Set shading mode to black(CNTRL+3, SHIFT+3)
5. Show only components as shaded(CNTRL+1, SHIFT+4)

6. Clash check shading mode (CNTRL+5, SHIFT+5)
7. Wireframe shading mode(CNTL+1, SHIFT+1)

Views-5 Creating views on part plane

1. Check rotation of part from object properties and create view of part with THIN View property Applied.
2. Toggle between isometric and Orthogonal mode of viewing using CNTRL+P
3. Create View of part on TOP Plane
4. Create View of part on Front Plane

Views-6 - Fitting Views

1. Fitting Views with 2 Points
2. Fitting View to selected parts in selected View -
3. Using short cut for fitting view to parts (If there is No short cut add ALT+S as short cut.

Views-7- Moving Views

1. Using Move Linear to Move the RL of a view
2. Open a view at footing RL, set view properties to Thin. Draw a beam
3. Move the View in Z direction by 1000 mm draw another beam. Check Beam RLs

Views-8 Display properties

1. Show only parts
2. Show only components
3. Do not show welds
4. Do not show cuts
5. Show bolts exact
6. Show Bolts Fast

Views-9 Hiding Objects

1. Able to hide objects. (<https://www.youtube.com/watch?v=qsfyR9px6Kg>)
2. Able to hide objects but allowing only their centre lines to be visible.

T1.1.4-Selecting (/tekla/index.php/competencies-tekla/211-t1-1-4-selecting)

Details

Category: T1-Competency (/tekla/index.php/competencies-tekla)

Selecting Parts

1. Window selections (Left to Right)
2. Crossing Window Selection (Right to Left)



3. Select parts in Assemblies

4. Select assemblies



5. Selecting Points
6. Selection Filters
7. Object Selection Filters - Bringing up CNTRL+G
8. Select Object Handles by Clicking
9. Selecting Object Handles using Select Object then ALT+Crossing Window Selections

T1.2.1-Drawing (/tekla/index.php/competencies-tekla/205-t1-drawing)

Details

Category: T1-Competency (/tekla/index.php/competencies-tekla)

Welding

1. Welding Symbols as per page 8 of the pdf file in lesson **Welding (/tekla/index.php/drawing/174-welding-symbols)**
2. Annotating FSBW welds
3. Annotating Site Weld
4. Modelling Site weld
5. Editing example drawing to have necessary and sufficient dimensions. (Ask for example Bench Mark model.

Other Drawing items

1. creation and editing of Anchor bolt plan - Ask for Bench Mark Model
2. Creation of Drilling drawing for chemsets and true bolts
3. Creation of E Plan drawing for Site Cleats
4. Creation of E Plan drawing for CAST IN PLATES.
5. Put the section details in the right place. See here (/tekla/index.php/lessons-learned/215-drawing-lesson-where-to-put-details).
6. Correctly place section arrows. See here (/tekla/index.php/lessons-learned/216-drawing-lesson-where-to-put-sections).
7. How to orthogonally move construction lines (and other lines too). See here. (/tekla/index.php/lessons-learned/217-drawing-lesson-how-to-orthogonally-move-lines)

Applying filters

1. Apply a filter to delete only dimensions and part marks.
2. Apply a filter to delete only dimensions part marks and welds
3. Apply a filter to delete only text

Dimensioning

1. Able to add correct dimensions (http://www.pages.drexel.edu/~rcc34/Files/Teaching/MEM201%20L5-Fa0809-SpDimensions_RC.pdf) and avoid basic errors (http://www.maelabs.ucsd.edu/mae_guides/cad/dimensioning/dimensioning_fundamentals.htm).
2. Adding angular dimensions (<https://www.youtube.com/watch?v=XnOCfedoULM>).
3. Adding and removing (<https://www.youtube.com/watch?v=6bsi40Jex9Q>) individual dimension points.

Miscellaneous

1. Closing all drawings (<https://www.youtube.com/watch?v=NhvKk6EJXJM>) before making changes to one's model
2. Aligning Views and text using drawing tools

T1.2.2- Drawing Work Bench (/tekla/index.php/competencies-tekla/198-basic-tekla-competency-for-employees-with-no-tekla-experience)

Details

Category: T1-Competency (/tekla/index.php/competencies-tekla)

Employees with more than 2 years of Tekla experience must pass this before they can earn anymore competency

To pass this compency you must get 100% on all blue color items.

Drawing Work Bench.

- How to create drawings.
- how to check for missing drawings.

Drawing List - 14 Points

1. Short Cut for Bringing up drawing list (CNTRL +L)
2. Filtering drawing list for assembly, Part and GA drawings
3. *Invert Button Use*
4. Show All button Use
5. Selecting on objects in model from drawing list
6. Selecting of Parts in drawing list by selecting parts in model.
7. Locking and Unlocking drawings
8. *Freezing and Unfreezing drawings*
9. Switchin Issue on and off
10. *Setting Revision of drawings*
11. *Saving revision of drawings*
12. *Searching for a drawing given a drawing number or name*
13. Finding all the assemblies on which a part is used, using the drawing list.
14. Finding all the part drawings of an assembly
15. *Setting the Name of a drawing*

Mark Change Symbols - 3 Points

1. Identification and use of Remove Mark change symbols and tool bar button
2. Identification and use of Remove Dimension change symbols tool bar button
3. Identification and use of Remove Associative note changes tool bar button

Drawing Tools in drawing editor

1. Draw a line
 - a. Draw Solid line
 - b. Draw Centre Line
 - c. Draw Dashed line
 - d. *Draw Line with one Arrow head*
 - e. Draw line with 2 arrow heads.
2. Draw a rectangle
3. Put Hatch in a rectangle
4. Draw Cloud
5. *Drawing a cloud with ortho command (short cut key "o")*
6. *Draw 3 Point arc.*
7. *Setting Fill Styles for cloud Polygon, polyline in drawing*
8. *Create View from View (Adding tool bar in Custom Tool bar)*

Drawing setting using the Menu Drawings & Reports -> Drawing Settings

1. Setting Tek1_Plate as template for creating Plate drawings
2. Setting Layout Scales for drawing and ability to explain how scales in layout affect drawing scale along with view scales.
3. setting of View Scale in drawing
4. **(Skip this one for the time being:** Ability to explain how a beam with 100, 500, 1000 mm length with no cut part setting can fit into an A4 drawing with a view scale 2.5 by setting layout scale at maximum scale possible)
5. Ability to set specified size in drawing sheet.
6. Ability to identify the rotation of a main part.
7. Ability to: create drawings from the back view (or front view) as the case may be, such that all single part drawings that are created will always have the parts being looked at from the end
8. n Assembly drawings.
9. Ability to set default properties of section view and save the properties before creating the section.

Selection filters in drawing.

1. Select All dimensions
2. Select all Notes and part marks
3. Select only parts and add part mark
4. *Select only views to move views without affecting position of part mark or dimensions*
5. Select Multiple views and change scale of all views without changing other properties.
6. Hide selected grid lines from drawing.
7. Use of CNTRL key to invert selection.
8. Select all welds.
9. *Ability to show selection filter dialog using short cut key (CNTRL + G)*
10. *Add a filter on primary part to add Part Mark*

Editing of drawing Lines

1. *Move a line in x direction by specified distance using keyboard input*
2. *Move a line in y direction by specified distance*
3. *Use of Ortho command*
4. *Trimming of drawing lines*

Editing of drawings

1. Hide/Show drawing elements
2. Add Assembly Mark
3. Add bolt mark
4. Remove bolt mark
5. Add filters to drawings to show only
 - a. Beams
 - b. Column Assemblies (Full Assembly - [Assembly property-> Name = COL*])
 - c. Show/Hide certain parts by Position Number
 - d. Show/Hide certain parts by Position series
 - e. Show/Hide certain parts by Phase
 - f. Show/Hide certain parts by profile
 - g. Show/Hide certain parts by class
 - h. Show/Hide certain parts by material
 - i. Show/Hide certain parts by Name
6. Remove weld mark
7. *Add ASSEMBLY_BOTTOM_LEVEL user defined field in Anchor bolt plans*
8. Add RL mark
9. *Rotate Views*

10. Change View Depth
11. Show Center line of a part
12. Switch on and off Orientation mark
13. Create Section View
14. Add bolt mark to a bolt using size.
15. *Add associative mark to show Part profile, Name, assy mark, part mark, RL*
16. *Create view of selected area in Drawing View (Must add tool bar button)*
17. Change view scale
18. Remove cut part
19. Set cut part with minimum cut length
20. Produce a grating drawing.
 - a. Requirement is Grating by itself on the Assembly drawing plus another view in the same drawing showing supporting members, dimension and profile.
21. Editing of Column drawing
22. Editing of truss drawing
23. *Creation and editing of Anchor bolt plan*
24. Applying selected properties of one drawing to another in the drawing list.
25. Ability select all beams except Rafters and Cols and create drawing.
26. *Ability set from drawing setting Purlin single part drawing template.*
27. *Add weld notation*
28. Check purlin hole centre distance of Victorian purlins (for 150 mm 70 mm hole distance.
29. Check purlin drawing to see whether bridging holes are put correctly (bridging hole and purlin holes should be same centre distance)

T1.2.3-Dimensions and Notes (/tekla/index.php/competencies-tekla/208-t1-3-3-dimensions-and-notes)

Details

Category: T1-Competency (/tekla/index.php/competencies-tekla)

Adding linear dimensions

1. Saving dimension styles
2. Restoring saved dimensions
3. Adding Horizontal dimensions (All dimensions from Left right - Normally)
4. Setting dimension style to running dimensions
5. Adding and removing (<https://www.youtube.com/watch?v=6bsi40Jex9Q>) individual dimension points.
6. Setting dimension Start Point
7. Adding angular dimensions (<https://www.youtube.com/watch?v=XnOCfedoULM>).
8. Adding parallel Dimensions
9. Adding Aligned dimensions
10. Adding perpendicular dimension
11. Adding Curved Dimensions (/tekla/images/pdf/F106.pdf)
 1. PF58.pdf (/tekla/images/pdf/PF58.pdf) PF58-1.pdf (/tekla/images/pdf/PF58-1.pdf)
12. Adding fake dimensions

Dimensioning - Theory

1. Able to add correct dimensions (http://www.pages.drexel.edu/~rcc34/Files/Teaching/MEM201%20L5-Fa0809-SpDimensions_RC.pdf) and avoid basic errors (http://www.maelabs.ucsd.edu/mae_guides/cad/dimensioning/dimensioning_fundamentals.htm).

Notes:

1. When you put in a dimension think whether the welder can use a measuring instrument use your dimensions
2. The tools the welder has is usually (Click here to see some measuring Instruments) (/tekla/index.php/2-uncategorised/209-measuring-instruments)
 - Measuring tape
 - Scale
 - Right square
 - Protractor
 - Clinometer

Excercises

Create drawings for Some Window headers and Facia Trusses of cooper Street Model (Download Mode (<https://www.dropbox.com/sh/5n23fox9vrmw804/AADNdwaOB7d-sGHodDIBbpTMa?dl=0>))

Please see markups and pdf and markups from this link (/tekla/index.php/lessons-learned/212-truss-drawing-for-cooper-street)

Model could be available on you network or can be downloaded this link

Click me to download model

T1.2.4 - Purlin Plan (/tekla/index.php/competencies-tekla/213-t1-2-4)

Details

Category: T1-Competency (/tekla/index.php/competencies-tekla)

Purlin Plans

1. Items to show on Pulin Plan (All items installed by Purlin Installer)

Purlins
Bridging
Fly Bracings
Sag Rods

2. Member Marks for Purlin Plan

Mark Number only (At T2 level detailer must understand number setting which affect bridging)
Changing representation of members from full Profile to Line only
Applying filters to show only members installed by Purlin installer
Changing model colors so that Girts and fly bracings from walls do not show in purlin plan (Use of filters is required)
Changing model colors so that (Girts and Purlins from One Wall does not show up on the Girt elevation on the next wall.

Creating reports for Purlin Bundle (Assembly list of all purlins in one bay So that purlin manufacturer can create bundles of purlins to be lifted on to roof)

For purlin Drawings - Purlins and Bridging can be shown in Lines, Show fly bracing in full Profile.

3. Checking for lapping length (Generally 900 mm. Rule is 15%)
4. Checking for purlin length (Maximum is 12 meters. If purlins are modelled over 12 meters length, detailer must question)
5. Checking for Span length.
6. Checking for Unsupported purlin bays. (All purlin bays must have at least one bridging going to a structural member or floor. Otherwise purlins have no strength)

T1.3.1-BIM (/tekla/index.php/competencies-tekla/219-t1-3-1-bim)

Details

Category: T1-Competency (/tekla/index.php/competencies-tekla)

Reading BIM Markups

1. Reading Notes
2. Reading attached documents
3. Measuring in BIM
4. Checking dimensions in BIM

Creating BIM Markups

1. Creating BIM export of Entire model with Reference Model
2. Creating BIM export of Entire model without Reference Models
3. Creating BIM export of Selected parts and Selected Reference Models
4. Creating Markups in BIM (watch you tube video)
5. Attaching Documents in BIM

URL for how to add BIM Sight markup

<https://youtu.be/v0aGVzcaFgw>

T1.3.2 - Open Office (/tekla/index.php/competencies-tekla/214-t1-open-office)

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Ask someone if you don't know - you will learn much better if someone is teaching you.

Creating Links

Watch this video if you don't know how to do this:

1. Link to the internet
2. Link to another file on your computer.
3. Link to another part of your current document
4. Link to a new document.
5. Able to remove links.

Using Formulas for addition and subtraction

1. Using OpenOffice or excel to create Grid
 2. Copy/Paste with Transpose
 3. Calculation of Z grid Height using Formula
- Capable of using functions: https://www.youtube.com/watch?v=-cA_x7RV0iw

T1.6-Standard Plate Thicknesses. (/tekla/index.php/competencies-tekla/107-standard-plate-thicknesses)

Details

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These are standard Plate thicknesses (Not Flat Bars)

These sizes become important when modelling Plate parts in Bins Chutes etc. Make sure you do not put plates Larger than the standard plate thicknesses which can be purchased.

Click Here (/tekla/images/lessonsLearned/StandardPlatethicknesses.pdf) to download PDF for Standard Plate Thicknesses.

T1.7-Miscellaneous Modelling Commands (/tekla/index.php/competencies-tekla/204-t1- miscellaneous-modelling-commands)

Details

Category: T1-Competency (/tekla/index.php/competencies-tekla)

1. Switch Co-ordinate system to World Co ordinate system (Using Tool bar button)
2. Inquire Part
3. Inquire Assembly and find the main part.

Selection Parts

1. Press ALT key and select a part to to select full asseby.
2. Select a part and press CNTRL key and select everything to invert selection.
3. Press Shift Key and select parts one by one to add to selection set.
4. Crossing selection from Left to right
5. Crossing selection from right to left
6. Bringing up Selection Filter (CNTRL + G)
7. Setting properties of selection filters to select parts with color, parts with a profile

Selection Tool Bar

1. Select only points
2. Select Only Cuts
3. Select only Parts
4. Select only Bolt Groups
5. Delete a bolt from a bolt group (Select Single bolt filter)
6. Select Only welds

Reports

1. Drawing Creation Check report
2. Material List
3. Part List
4. Bolt Summary

Understanding Bolting of parts dialog box

1. Start Point dx. (other values not normally used)
2. Bolt size
3. Bolt standard (Check drawing for bolts to be used)
4. Bolt Type (Site or shop) Create a shop bolt and then create an assembly drawing
5. Bolt Tolerance (Create the member drawing to check)
6. Understand cut length.
7. Understand the use of negative cut length
8. Understand how to create a hole without bolt using the bolt command
9. Bolt distance X and Bolt distance y.
10. Creating Slots (parallel, Even and Odd)
11. Creating slots on all bolted parts
12. Creating slots on only one part
13. Bolting parts at 500 mm away (Set cut length to over 500) If parts are over the cut length no bolting will be created.

Welding of parts

1. Which part to select first
2. Reading the prompt when welding parts
3. Selecting multiple parts to weld to a main part
4. Inquire bolt
5. Set a part as main part of an assembly. (Tip usually the largest part is the main part of the assembly)
6. Effect of Main part on drawing, Assembly name and Assembly mark

T1.9 Deliverables. (/tekla/index.php/competencies-tekla/241-deliverables)

Details

Category: T1-Competency (/tekla/index.php/competencies-tekla)

Basic Deliverables on IFC

1. Excel Material List
2. Excel Assy List
3. Excel Part List
4. Excel Assy Part List
5. Excel Bolt summary
6. Excel Erection Bolt List
7. Excel Drawing List
8. NC files for shafts - All US companies need this. Now more australian companies are needing this.
9. NC dxf files for plates.
10. PDF Drawings
11. 1:1 cad export of drilling drawing if there are any. (Surveyor will need this)
12. 1;1 cad export of AB plan drawing (Surveyor will need this)

T2.1-Open Office or Excel (/tekla/index.php/competencies-tekla/220-t2-1-open-office-or-excel)

Details

Category: T1-Competency (/tekla/index.php/competencies-tekla)

- Knowledge of the use of the following functions: <https://www.youtube.com/watch?v=CnerZRHfBbs> (<https://www.youtube.com/watch?v=CnerZRHfBbs>)

Using Functions in Open Office or Excel

Average
Max
Min
Sum
Rank
If Statements
Vlookup
Countif
Or statements
Concatenate

- Capable of using formulas.
- Relative and absolute cell references. https://wiki.openoffice.org/wiki/Documentation/OOo3_User_Guides/Calc_Guide/Creating_formulas (https://wiki.openoffice.org/wiki/Documentation/OOo3_User_Guides/Calc_Guide/Creating_formulas) and also see <https://www.youtube.com/watch?v=Dj2uXe3ZEPs>

(Use SHIFT and F4 to easily cycle through the absolute and relative cell references otherwise you will be typing in the dollar signs when typing in cell references: e.g. in \$A\$4 - and this can get quite tedious.

T2.2 Search in PDF Files (/tekla/index.php/competencies-tekla/230-t2-2-search-in-pdf-files)

Details

Category: T1-Competency (/tekla/index.php/competencies-tekla)

Searching for a term in all pdf files in a folder.

You can search for a term in a set of pdf files using advanced search. Please make sure you know how to search for a word in a set of pdf files.

If the pdf is coming from a scan this search will not work



T2.3 Drawing Creation Check (/tekla/index.php/competencies-tekla/244-t2-3-drawing-creation-check)

Details

Category: T1-Competency (/tekla/index.php/competencies-tekla)


How to Check if all drawings are created.

Points to note.

1. Loose part single parts do not have A type Assy drawings. Single part drawing (W type) take Assy Mark
2. If it is not a loose part (ie if the assembly consists of more than 1 member) then it must have a single part drawing

All member must have a drawing with an Assembly Part Mark. The drawing may be W type or A type depending upon whether part is LOOSE or not.

Reports to Run

1. DrawingCreationCheck report with filters
2. Use Primary part does equal 1 filter to select not primary part. All these parts must have an "A" type Assembly drawings.
3. Also from the report all W type with Assembly Mark Nos must have a drawing.
4. All A type drawing Nos in the Drawing creation check report may not have a drawing. ie if it is a LOOSE part, then there will be NO A Type drawing.
5. Depending upon the nature of work, we may or may not create all W type drawings.
6. **Important thing is there has to be atleast 1 drawing for all members where the drawing No is assembly mark**
7.  Primarypart

T2.4 Multi Drawings (</tekla/index.php/competencies-tekla/256-t2-4-multi-drawing>)

Details

Category: T1-Competency (</tekla/index.php/competencies-tekla>)

[multidrawing](/tekla/index.php/component/tags/tag/30-multidrawing), (</tekla/index.php/component/tags/tag/30-multidrawing>)

Rules for single part Multi Drawing

1. Maximum of 16 drawings per sheet
2. Try to put only one type of profile on a sheet
3. if it is a plate (Not a flat bar) then as much as possible only 1 thickness on one sheet
4. Add member profile along with part mark.

When number of drawings per sheet if only one type of profile is used falls below 6 then

1. Put different profiles on one sheet
2. You have to group similar profiles together on the sheet.

Example (</tekla/images/lessonsLearned/MULITI-DRAWING.pdf>) drawing

T2.5 RFI No.1 When precast is involved (/tekla/index.php/competencies-tekla/273-detailing-where-precast-is-involved-rfi-no1)

Details

Category: T1-Competency (/tekla/index.php/competencies-tekla)

Precast, (/tekla/index.php/component/tags/tag/59-precast)

RFI No 1

1. Please provide with Marking plan and Elevation
2. Please confirm Panel thickness are same as shown on Structural Drawings and not going to be different
3. Please confirm fixing of rakers is as per structural drawing or different.
4. Please confirm your preference of fixing rakers and wall ties as
 - a. As per structural drawing
 - b. True bolt
 - c. Ferrules below Wall tie/Raker
5. Please confirm whether you have standard Panel Clips if yes, please provide drawings.
6. Please confirm gap of Panels from Cols
7. Please confirm whether precaster is using standard Cast in plates. Please provide drawings.
8. Please confirm whether we have to provide Cast in Plate drawings
9. Please confirm whether you are using standard purlin cleats. If yes please provide drawings.
10. Please confirm your preference for rod bracing/Hook Lok bracking.
11. We provide 1:100 slope for gutters and 65 mm below gutter for gutter support. Please provide information if this does not suit you.
12. Do you require Stich plate drawings. If you use standard Please provide.
13. Please respond to RFIs asap.

T2.6 Approval Steps for Australian Steel (/tekla/index.php/competencies-tekla/275-t2-6-approval-drawings)

Details

Category: T1-Competency (/tekla/index.php/competencies-tekla)

Procedure for approval drgs from 25/7/17

ALL APPROVAL DRGS MUST INCLUDE, CAD EXPORT, IFC EXPORT, BIM MODEL, PDF AND 3D PDF.

1. Approval 1 - Slab drawing where steel is connecting showing RL, Set Down Hob. RFI whether Col will sit on hob or slab considering hob width.
2. Approval 2- Col Stick Model - with Base plate - Show Slab, Anchor Bolt Plan, Embedment, Anchor bolt drawings.
3. Approval 3- Place members, Show Gutter, doors and windows, Garage door Operings. Mark relevant Steel RLs
4. Approval 4 - Submit Final Approval

When precast is Involved

1. Approval 1 - Slab drawing where steel is connecting showing RL, Set Down Hob. RFI whether Col will sit on hob or slab considering hob width, Precast Walls, Bottom RL for Precast panels. RFI No 1 (<http://tek1.com.au/tekla/index.php/competencies-tekla/273-detailing-where-precaster-involved-rfi-no1>) must be issued.
2. Approval 2- Col Stick Model - with Base plate - Show Slab, Anchor Bolt Plan, Embedment, Anchor bolt drawings.
3. Approval 3- Place members, Show Gutter, doors and windows, Garage door Operings. Mark relevant Steel RLs
4. Approval 4 - Submit Final Approval

T2.7 - AB Plan for Residential (/tekla/index.php/competencies-tekla/277-t2-1-ab-plan-for-residential)

Details

Category: T1-Competency (/tekla/index.php/competencies-tekla)

AB PLAN, (/tekla/index.php/component/tags/tag/19-ab-plan)

1. RFI site setout point first up because no one will mark all grid lines
2. Please use a running dimension.
3. Dimension from site set out point/From site setout point to one grid and then running dimension from there.
4. Show stud walls in Anchor bolt plan (either from Tekla model or by switching on walls from reference model)