In-Depth Tips and Tricks for Advance Steel

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Class summary

In this class we will take an in-depth look at saving production tips and techniques for Advance Steel.
Key learning objectives

At the end of this class, you will be able to:

- Use little-known features in the modeling environment
- Create and manage the documentation more effectively
- Use the new features to maximize efficiency
- Understand practices for workflows with other Autodesk software
Little-known features in the modeling environment
Inserting columns

- Inserting columns in a continuous way
  - “Column” icon
  - Interrupt the command with Esc
  - Modify properties in dialog box

- Stretch multiple columns
  - Select columns
  - Hold down Shift
  - Select grips so that they are highlighted
  - Release Shift
  - Select a grip as the base grip
  - Move it vertically
Project Explorer

- Creating model & level views
  - Limit what is on screen
  - Display relevant objects in required area
  - Click the light bulb icon

- Inserting columns between two levels
  - Workplanes tab
    - Select a workplane for upper level
    - Select a workplane for lower level
  - Insert columns

- Displaying several model views
  - Select more than one bulb icon
Inserting beams

- Inserting beams in a continuous way
  - “Continuous Beam” icon
  - Interrupt the command with Esc
  - Modify properties in dialog box

- Mid Between Two Points osnap
  - Object Snap Mode
  - Easy way to find the mid point …
  - … without the need to draw construction lines
Quick Select

- **Quick Select command**
  - Creates a selection set based on filtering criteria
  - Enter QSELECT
  - Tools > Utilities > Quick Select

- **Example of use**
  - Select all elements from your 3D model
    - Find specific Advance Steel objects
    - Find (construction) lines
  - Change their properties
    - Color or layer
Connection Vault

- Connection Vault
  - Displays all automatic steel connections delivered with Advance Steel

- Favorites category
  - Get your preferred connections available in a “Favorite” category in the palette
  - For adding press ⭐ behind
  - For removing,
    - Press ✗ behind (in Favorites category)
    - Press ⭐ behind (other categories)
Copying Connections

- **Joint in a Joint Group**
  - Create by Template
  - Create by Template, multiple
  - Create Joint in a Joint group
  - Create Joint in a Joint group, multiple
    - Link a number of joints together
    - If one changes …
    - … they all change together.

- **Transfer properties from a joint to another one**
Railing macro

- Move posts individually
  - Post tab
  - Post offset along rail axis
  - Use the arrows to select the post
  - Value can be positive or negative

- Extend railing with grip point
  - Extend or shorten a railing
  - Ball grip at both railing ends
Railing joint handrail

- Insert a connection between two handrails
  - Connection Vault
  - Miscellaneous category
  - Railing joint handrail

- Elbow
- Miter cut
Creating Quick Views

- Creating Quick Views
  - On individual objects
  - On a complete assembly
  - On a connection

- Redisplay all
  - Click “All visible” icon
Search filter

- Locate various objects based on specific properties
- Search several model roles
  - Naming tab
  - Select several model roles
- Master joint of a joint group
  - Joint tab
  - Select Type of connection
  - Select Is Master
- Can be saved as a Query available in the Project Explorer
Create & manage the documentation
Switch between Advance and User branches

- Drawing Styles Tool Palette
  - With a single click
  - Easily switch between Advance branch ...
  - ... and User branch with this icon.

- Same behavior for:
  - Drawing Processes Tool Palette
  - BOM Templates Tool Palette
Auto Blow Up on Anchor Plan Drawing

- Get details bigger on Anchor Plan Drawing
  - Modify view scale
  - Ask for clipping X & Y
  - Modify clipping values
**Accessing & modifying prototypes**

- Open the folder containing Prototypes
  - With a single click
  - Output ribbon > Document Manager
  - Edit prototypes

- Know which prototype has been used
  - Document Manager
  - Prototype column

- Replace the prototype on a drawing
  - Labels & Dimensions > Parametric views
  - Change prototype file icon
Shop drawings creation

- Customize shop drawing file name
  - Drawing Process Manager
  - File Name Selector > Drawing Name

- Defaults controlling drawing creation
  - Management Tools
  - Drawing – General category
  - Defaults starting with “Behavior …”:
    - Main parts
    - Standalone parts
NC files settings

- **NC-DSTV file name**
  - NC settings dialog
  - Add any tokens if wanted
  - Modify the file extension if needed

- **NC-DXF file name**
  - NC settings dialog
  - Remove any file name extension
  - DXF Settings tab
BOM with Model Role information

- Customize a BOM template
  - Model role in the model
  - Function token in the BOM editor
  - Modify the sorting if needed

- Create the BOM
  - Use the customized template
  - Get model role information
Creating a Query for generating a BOM

- Project Explorer
  - Create new query
  - Using the Search tool
  - Save the query

- Create the BOM
  - Output > Lists > Create lists
  - Use predefined queries
  - Select the query in the combo-box
  - Generate the BOM
Use the new features to maximize efficiency
Rollover tooltip customization

- Customize User Interface (CUI)
  - Type CUI in the command line
  - Rollover Tooltips branch
  - Edit Object Type List (e.g. ASTBEAM)
  - Select Property Check Box(es)
  - Apply, OK

- Move the mouse cursor over objects
  - Tooltip appears with all information
  - Content depends on object type (beams, plates, bolts)

- Recently added: Approval & Fabrication data
Colorize model according to status

- Create your own queries
  - Search tool
  - Specific objects according to criteria
  - Assign color “By Approval Status”

- Run the query
  - OK in the Search tool dialog
  - Execute the query in Project Explorer

- Get the model automatically colorized
View native Advance Steel drawings in AutoCAD

- Advance Steel 2017 object enabler
  - Available on AKN
  - To be installed on the top of AutoCAD 2017

- Open native Advance Steel 2D drawings
  - In plain AutoCAD 2017
  - Or AutoCAD LT 2017
Dynamo Extension for Advance Steel

- Can be downloaded & installed from your Autodesk Account
- Create parametric complex structures
- Visual programming extension driving:
  - Model geometry (straight & curved beams, polygonal plates)
  - Object properties (materials, beam sections and user attributes)
Snap points on anchors

- Specific snap points on anchors:
  - Anchor bolt, washer and nut can be dimensioned
  - Dimensions are smart if “Preferred for dimension” snap point is selected

- Useful points for manual dimensions
Grid balloon placement control

- Grid line extension
  - Break the line
  - Snap point available

- Option to get balloon placement on the top of the view
Get background mask on drawings

- Masking objects behind
  - Label texts
  - Dimension texts

- Managed by settings:
  - Dimensions: set background per dimension style
  - Labels: new default in the Management Tools
User-defined formulas in BOMs

- Now available for external BOMs
- Templates customizable in BOM editor
  - New “Formula” token available
  - Basic & complex operations
- Multiple formulas in the same BOM
Workflows with other Autodesk software
Link Advance Steel - Revit

- Advance Steel Extension
  - Available on Autodesk App Store
  - Import/export/synchronize
    - Steel members
    - Steel connections

- Steel Connections for Revit
  - Available in your Autodesk Account
  - Access to a variety of steel connections
  - Integrated joint design (EC3 – AISC)
Link Advance Steel – Robot Structural Analysis Professional

- Robot - Advance Steel Link Extension
  - Available on Autodesk App Store
  - Import/export/synchronize steel members
  - Export calculation results for joint design (EC3 – AISC) in Advance Steel
  - SMLX file format

- Advance Steel
  - Import/export/synchronize
  - SMLX file format
Link Advance Steel – Navisworks

- Export the Advance Steel model
  - Export to Navisworks icon
  - Creates a 3D DWF file
  - Automatically launches Navisworks

- Result in Navisworks
  - File includes Advance Steel object properties
  - Assign scheduling tasks & rules to Advance Steel objects to perform a 4D simulation
Share an Advance Steel model on A360 Viewer

- **A360 Viewer**
  - Free online viewer
  - View designs in more than 50 file formats
  - 3D viewing & navigation tools
  - Work together more easily in an online workspace
  - [https://a360.Autodesk.com/viewer](https://a360.Autodesk.com/viewer)

- **Share an Advance Steel model**
  - Upload the native DWG file
  - Structural properties available
Share an Advance Steel model on BIM 360 Team

- **BIM 360 Team**
  - Centralized platform for communication, file sharing and design reviews
  - 3D viewing & navigation tools
  - [https://team.bim360.com](https://team.bim360.com)

- **Share an Advance Steel model**
  - Upload the native DWG file(s)
    - 3D model
    - 2D drawings
  - Structural properties available
  - Compare tool (NEW): changes between different versions of the same model
How did I do?

- Your class feedback is critical. Fill out a class survey now.
- Use the AU mobile app or fill out a class survey online.
- Give feedback after each session.
- AU speakers will get feedback in real-time.
- Your feedback results in better classes and a better AU experience.