Advanced Solution for Sheet Metal Fabrication

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This class goes from start to finish to complete a sheet metal manufacturing workflow. We will start with importing the designs, utilizing material data, then perform an optimal nesting process, and finish with a CNC program to be used for manufacturing. Autodesk® TruNest provides an advanced and complete solution for sheet metal fabrication solution which supports water jet, plasma, laser cutters as well as routers and punch presses.
Key learning objectives

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

- importing the designs
- utilizing material data
- perform an optimal nesting process
- generate a CNC program to be used for manufacturing
Introduction to TruNest
Open the Application

- Double click the Icon to start TruNest Multi-tool
Login In to TruNest

- Username: admin
- Password: admin
- Click Login
Login In to TruNest

- Select Admin Group
- Click Login
Interface: Ribbon

- Ribbon is located at the top of the application
- Highly used functions are located in the Ribbon for easy access
Interface: Tree

- The Tree serves as the main entry to every workspace within TruNest
- Each node in the tree indicates how many other nodes are underneath it
Interface: Workspaces

- Workspaces are the main action areas of the interface.
- Each workspace serves a specific purpose within the application.
Interface: User and Groups

- The User Information drop down shows the current user and group.
- You can switch between groups to enable/disable features available to that group.
Importing the Design
Part Import

- Expand Part Import
- Click Automat in the tree
Part Import

- Click Select Files
- Find and open all *.IGS
Part Import

- Click AutoTranslateIGES

- Smartran Universal Translator will begin converting the file
Part Import

- Inspect the results of translation by double clicking each file name in the list.
Part Import

- Click AddParts in the tree
Part Import

- Select the Import function in the tool bar
- Click Import
Part Import

- Select prtasmby.csv
- Click Open
Part Import

- Click AddParts
Utilize Material Data
Part Assembly Review

- Click Part Assembly Review in the Ribbon
- Filter the Table by the VIMEK 630 Assembly
Part Assembly Review

- Click left-most cell in the table and use arrow keys to move up and down.
Inventory Review
Nest Default Review

### Nesting Results

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<th>Kerf T</th>
<th>Separation T</th>
<th>Punch T</th>
<th>Frame T</th>
<th>Plate Selection</th>
<th>Max Time</th>
<th>Removable (t)</th>
<th>Plate Fill</th>
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Nest Default Review

- Freeze the material column by clicking and dragging the left most column
- Scroll to the end of the table and set Deviation to 0
Optimizer Review

- Expand Optimizer Manager under the Database Manager node in the tree
- Click on Automatic Tabbing
Optimizer Review

- Expand Optimizer Manager under the Database Manager node in the tree
- Click on Sheetcutting
Perform an Optimal Nesting Process
Order Entry

- Click Order Entry node in the tree
- Enter Vimek 630 into the Assembly filter
- Select all filtered parts
- Click Add Orders on the right side to add them
Schedule Orders

- Click Schedule Orders node in the tree
- Select both materials
- Enter AU2015 for the Group Name
- Click Schedule
Create Nests

- Expand the Nests and AU2015 node in the tree
- Click Create Nests in the tree
- Select all available nests
- Click Yes
Review Nests

- Click the AU2015 node in the tree
- Use the arrow buttons in the tool bar to view all the nests created
Generate a CNC Program to be used for Manufacturing
Click Manage Nests under the AU2015 node in the tree
Under Manage Nests, select all plates and Click Post
Under Manage Nests, select all plates and Click BackPlot
Backplot

- Scroll through each material pull with the arrow buttons at the top of the tool bar.
Under Manage Nests, select all plates and Click Send
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