Advance Steel: Automatic generation of drawings using Drawing Processes

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FTS Specialist, Autodesk Product Support
Hello,

I am Emy from Autodesk Technical Support team and I am happy to assist you 😊
Class summary

- **Drawing Process** – scope and use in detailing workflow
- Configure the Drawing Processes (DP) using **Drawing Process Manager** (DPM)
- The **most used options** and settings of DPM
- **Tips & Tricks** on using and configuring the drawing process
Key learning objectives

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

- Know the purpose and usage of drawing processes
- Configure the drawing processes and understand the settings and options
- Discover the most used options and settings
- Discover tips and trick on using and configuring the drawing processes
Drawing Process

- scope and use in detailing workflow
Single part element

Single part detail
Main part (assembly)

Main part (assembly) detail
Overview / erection detail
Main part with attached parts

One assembly detail

SP details for components
How to create a detail drawing manually:

→ Repeat for all elements!
Drawing Process (DP)

- A template with the rules to be applied for automatic creation of detail drawings
  - **Elements** to be selected for detailing
  - **Page format** and arrangement of details in page
  - **Drawing Style (DS)** to be used for each element
  - behavior when the detail doesn’t fit into the current page

Main purpose of Drawing Processes:

- to create the details automatically
Drawing Process Manager (DPM)

- Configure the Drawing Processes (DP)
DPM - Main dialog box
Flag for Quick documents
DPM – Drawing Process configuration
Drawing Process

Main definition (first Step)
- Select objects from 3D model
- Page format + DWG file settings
- Drawing styles to be used
- Additional scale settings

Additional Steps
Select objects from 3D model

- All / Selected
  - SP / MP / MP with attached parts / Cameras [type]

Example:
- Selected Mp Beam, position can be set

Sort elements:
**Page format + DWG file settings**

**Prototype:** name of the DWG file used as page template

**Close page:** when to close the page template
- on page full
- on next object
- on next mainpart

**Drawing name:** rule for automatic naming of the generated DWG file(s):
- text
- tokens:
  - %Flat
  - %PosNum
  - %SinglePartPosNum
  - %SequenceNumber
  - %Assembly
  - %Prototype
  - %ModelName
Questions ?
Drawing Process → Main definition (first Step)

- Select objects from 3D model
- Page format + DWG file settings
- Drawing styles to be used
- Additional scale settings
Drawing Styles used to generate details

<table>
<thead>
<tr>
<th>Order</th>
<th>Script</th>
<th>Model objects</th>
<th>Drawing style</th>
<th>DS override</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>---</td>
<td>Mp - Beam Cambered</td>
<td>Mainpart - CamberedBeam 110 CO</td>
<td>none</td>
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<tr>
<td>2</td>
<td>---</td>
<td>Columns, Function</td>
<td>Column - front, left, right</td>
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<td>Mp - Plate</td>
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<td>none</td>
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Script expression: False
Model object: True
Drawing style: False
Create detail
Next line / rule
Using Scripts

Example: Filter the Tube / Pipes beams

'Returns TRUE for Pipe profiles only

Function checkElement(Obj)
    checkElement = False
    'Verify only for beams
    If Obj.IsKindOf(kBeamClass) = True Then
        If Obj.getProfType.getDSTVValues.DSTVType = kRO Then
            checkElement = True
        End If
    End If
End Function

Example: Filter the attached parts

'Returns TRUE for attached elements only

Function checkElement(Obj)
    checkElement = False
    If Obj.IsAttachedPart = True Then
        checkElement = True
    End If
End Function
Additional scale settings

- **Scales**
  - Alternative scales: 1:1, 2, 5, 10, 15, 20, 25

- **Special scales for selection views**
  - None

(only for views with the scale depending on the main view scale)
Additional Steps
Questions ?
The most used options and settings of DPM
The most used options and settings of DPM

Detail style map(s)

![Detail style map](image)

- **Name:** Mainparts
- **Used settings:** Assembly
- **Type of used drawing styles:** Assembly

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The most used options and settings of DPM

Prototypes / Drawing file names

![Filename selector window](image)

**Page settings**

- **Prototype:** ASDETPROTO-A1.DWG
- **Close page:** On page full
- **Drawing name:** %Flat(03)_%Prototype-Detail.dwg
The most used options and settings of DPM

Alternative scales

Scales
Alternative scales: 1:5, 10, 15, 20

Special scales for selection views: None

(only for views with the scale depending on the main view scale)
The most used options and settings of DPM

Copy & Deep copy

Compact function
Tips & Tricks
Tips & Tricks

- Test the existing drawing processes output & settings
- Look to the drawing processes from other countries
- Review the existing options in DPM from time to time
Use the drawing processes as a checking tool

- 3D model
- Prototype settings
- Drawing Process configuration
- Drawing Style configuration
Tips & Tricks

- **Write down your remarks and ideas - right when you have them**
Configuring drawing processes for both types of object selection from 3D model.
Tips & Tricks

- Configure your “Auto page” processes

Diagram:
- Drawing Process
- Main definition (first Step)
  - Select objects from 3D model
  - Page format + DWG file settings
  - Drawing styles to be used
  - Additional scale settings
- Additional Steps
Study and improve the used Drawing Styles (DS)

Main purpose of Drawing Processes:
→ to create the details automatically

The content of the detail itself is governed by the Drawing Style
Tips & Tricks

- The drawing process should create details for all elements

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Questions ?
Session Feedback

- Via the Survey Stations, email or mobile device
- AU 2015 passes given out each day! 🌞
- Best to do it right after the session
- Instructors see results in real-time
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