Autodesk® Moldflow® Insight 2012

AMI Export for Defect Visualization

Autodesk®

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You can look at a photo-realistic rendering of your digital prototype by exporting your model and selected results to a file and importing it into Autodesk Showcase.

Autodesk Moldflow products are used to predict how well a certain mold design will fill, and where defects such as sink marks or weld lines might occur. To visualize how the part might actually look in real life and assess whether these defects are really of concern, the part model and selected results can be exported as an ASCII FBX file (*.fbx), which can be imported into Autodesk Showcase.

Figure 1: Showcase rendering of digital simulation predicting sink marks and again following design optimization.

There are several options when exporting your file for import into Autodesk Showcase. You can export

- Part surface only,
- Part surface with warpage,
- Part surface with sink marks,
- Part surface with both warpage and sink marks.

This feature is available for Dual Domain and 3D models.

NOTE: Because this feature requires surface geometry information from 3D CAD data, it is not available for Midplane models. The geometry model must be in one of the following formats for export:

- STL
- Surfaces
- CAD bodies

Export for defect visualization

You can export your model and see a photo-realistic rendering of it using Autodesk Showcase.

Export for defect visualization

To export your model for defect visualization in Autodesk Showcase, you must have completed an analysis and have results available.

CAUTION: To export the model geometry successfully, surfaces and CAD faces must be displayed as Solid or Transparent. Display as Net is not allowed. Verify the model display options. Click (**View tab > Appearance panel > Entities**), and ensure that the **Surface** option is set to **Solid** or **Transparent**.

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1. Click (**Results tab > Export and Publish panel > Defect Visualization**) to open the **Export for Defect Visualization** dialog.
2. In the Layers panel, activate the layer that contains the geometry entities, for example **Stl Representation**, and deactivate all other layers.
3. In the model pane, select the geometry entities on your model that you would like to export. All the selected entities will be highlighted and entered automatically into the **Geometry** box in the **Defect Visualization** dialog.
4. In the Layers panel, activate the layer that contains the mesh entities, for example **New Triangles**, and deactivate all other layers.
5. In the model pane, select the mesh entities on your model that are associated with the parts of the model you would like to export. All the selected entities will be highlighted and entered automatically into the **Mesh** box in the **Defect Visualization** dialog.
6. Click **Browse** and navigate to the folder in which you would like to save your *.fbx file.
7. Type a unique name in the **File name** box, then click **Save**.
8. Decide whether you want to include sink marks or warpage results in your exported file, then in the **Include** section of the dialog box, click the checkbox next to the appropriate defect.

   You can include **Sinkmark** results, **Warpage** results, both or neither.
9. Select the units you would like to use, and the scale factor.
10. Click **Apply** to export your file.
11. Click **Close** close the dialog.

To view your results in Autodesk Showcase, open Showcase, click **File > Import Models** and navigate to the folder in which you saved your exported file. Select the file, then click **Open** and the model will appear in the

window. Select appropriate materials and lighting to generate a photo-realistic rendering and see whether these defects are significant.

Export for defect visualization

This dialog is used to export your model for visualization in Autodesk Showcase.

To access this dialog, click (**Results tab > Export and Publish panel > Defect Visualization**).

NOTE: The **Defect Visualization** dialog is also accessible from the Application menu (**> Publish > Defect Visualization**).

Defect Visualization dialog

Digital prototypes of your model can be exported to Autodesk Showcase for photo-realistic rendering.

CAUTION: To export the model geometry successfully, surfaces and CAD faces must be displayed as Solid or Transparent. Display as Net is not allowed. Verify the model display options. Click **Default Display** (**Viewer** toolbar) and ensure that the **Surface/CAD Face** option is set to **Solid** or **Transparent**.

Select the entities you would like to export. You can select part surface only, or you can include sink marks and/or warpage. Assign a scale factor and units, then browse to the location in which you would like to save the file and assign a unique name.