Autodesk® Moldflow® Insight 2012

AMI Paddle Shift Analysis

Autodesk®

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A paddle shift analysis is used to predict shifting between the upper and lower cavities of the leadframe due to pressure imbalances.

A paddle shift analysis is run as part of the microchip encapsulation molding process. The Paddle Shift analysis calculates the deformation of the paddle due to the pressure difference in the two sub-cavities separated by the leadframe. Microchip Encapsulation calculates the pressure in the cavity. The leadframe deformation due to pressure differences in the cavity can be calculated either internally in Autodesk Moldflow Insight using the Warp module or externally using Abaqus.

3D Microchip Encapsulation also supports a Dynamic Paddle Shift simulation where the paddle shift is recalculated several times during filling. This analysis can provide a more accurate prediction of the final paddle shift when large deformations occur. The dynamic paddle shift analysis includes an option to perform Core shift analysis during pressure iteration, which is valid if the paddle has been modeled using 3D elements. However, if the paddle has been modeled using shell elements, the additional Core shift analysis cannot be performed.

Paddle shift analysis

A paddle shift analysis is used to predict shifting between the upper and lower cavities of the leadframe due to pressure imbalances.

Running a Paddle shift analysis

Ensure you have specified microchip encapsulation as your molding process.

1. Click **Home tab > Molding Process Setup panel > Analysis Sequence**.
2. In the **Select Analysis Sequence** dialog, select **Fill+Pack+Paddle Shift** or **Fill+Pack+Dynamic Paddle Shift** and then click **OK**.
3. If these options are not visible, click **More** to show more analysis options.
4. If necessary, double-click from the Study Tasks pane to change the Material properties.
5. If necessary, double-click from the Study Tasks pane to edit the Process Settings properties.
6. Double-click **Start Analysis!** from the **Study Tasks** pane, or **Home tab > Analysis panel > Start Analysis**.

NOTE: Click  **Home tab > Analysis panel > Job Manager > Abort Job** to abort the analysis.