Click2Extrude 2016 Release Notes

Today's extrusion companies are required to coextrude profiles made of multiple polymers with metal inserts in shorter product development cycles while simultaneously reducing their production costs. Click2Extrude is a simulation tool developed to analyze and validate the design of these coextrusion dies and process.

The HyperXtrude solver enables production engineers to analyze material flow and heat transfer inside a die during extrusion to validate die designs which in turn helps to reduce or eliminate costly and time-consuming die trials.

Click2Extrude is easy to use CAD based interface. You won't be required to complete steps such as meshing or boundary condition creation manually. All these operations are completely done in the background with no user intervention.

Key Features

Key features of Click2Extrude 2016 include:

Choked Bearing

Click2Extrude can automatically handle bearing regions with choke

Variable Bearing Start

Models with bearing starting at different Z-coordinates (variable bearing start) is supported and this will require manual manipulation of bearing region.

Charge Weld Analysis

With a click of a button, any model can be submitted for transient analysis and charge weld analysis is automatically enabled.

Billet Skin Tracking

While creating the billet, a skin layer can be added with no additional effort. This automatically enable billet skin tracking analysis, which is used for predicting back end defects, butt length, and any potential issues with the die design.

Starter Billets

Multi-cycle analysis with different billet lengths for each cycle up to five cycles.

Tapered Billet Heating

Click2Extrude now supports specification of tapered heating: axial, lateral, and radial. Specification used can be different from cycle to cycle up to a maximum of five cycles. For axial taper, five linear taper zones are supported.

Tool Deflection Analysis

This release supports an easy to use tool deflection interface. You can import the model, specify constraints, and submit for analysis. The load surface will be automatically determined. This analysis supports mapped loads, linearly interpolated loads, and manually specified constant surface loads. In addition, you can do either an elastic analysis or an elasto-plastic analysis.

Bearing Optimization Analysis

Easy to use interface for setting up bearing optimization

Ram Speed Control

In a full cycle analysis, based on the computed load curve and press tonnage, ram speed can be automatically restricted during the ram acceleration stage to meet the press tonnage requirements.

Coupled Analysis

This release enables coupled extrusion and tool deflection analysis. Extrusion analysis is performed by HX solver and it will automatically call OptiStruct to perform tool deflection analysis. Results from tool deflection analysis is used to consider the effect of deflection on bearing gap opening and thereby, on the predicted profile nose cone.

Press Database

Allows you to load press data. It enables Click2Extrude to verify data consistency and check whether the extrusion assembly under study works with the selected press.

Post-Processing

Results visualization for analysis types.