Click2Extrude Metal 2017.3

Release Notes

Extrusion

Result Callouts

Post-processing has been enhanced to support display results at specified points. This feature is called callouts, and is used to query results accurately at any given node or point in the domain.

Bearing Profile Enhancements

Click2Extrude automatically extracts bearing profiles from the die assembly. Improvements have been made to this bearing profile extraction. In addition, the HM Batch interface has been enhanced to correctly identify the bearing profile corresponding to each hole.

Negative Billet Taper

Axial billet taper is often specified such that the temperature increases from the dummy block end to the die end. The application requires a positive temperature value to impose this taper. Under some circumstances, the taper can be in the opposite direction. Previous versions did not allow negative values for the taper temperature. This is now resolved, and the user can specify negative values as needed.

Bearing Regions with Choke

The application has been enhanced to detect bearing regions with choke more accurately. When bearing regions have choke, a different meshing strategy is used to create bearing and profile regions.

Quick Help for Dialogs

Access to context-sensitive help pages has been enabled for dialogs. When a dialog is open, pressing the **F1** key will open the respective help page in the browser.

SimLab Upgrade

Click2Extrude uses SimLab in the background for meshing. In this release, SimLab was upgraded to its latest available version (2017.1) to resolve critical meshing issues and improve meshing performance.

Tool Deflection

Improvements to Automatic BC Creation

Extrusion loads are applied to the surfaces of the tool assembly that comes in contact with the workpiece. These surfaces are identified automatically by the application when options such as *mapped loads* and *linearly interpolated loads* are used. These surfaces are tagged at the time of export. This tagging of load surfaces was improved and made identical to the methodology used for coupled models.

In addition, improvements were made to the specification of constraints in pin/bolt holes that are used to hold the die assembly.

Tool Deflection Meshing

The accuracy of tool deflection analysis has been greatly improved with second order elements. This option is now supported by both batch meshing tools (HM and SimLab). With one click, the user can choose the first order (faster) or second order (accurate) option.

Quenching

Units for Coolant Flow Rate

The coolant flow rate for spray cooling is specified in Liters Per Minute (lpm) for SI and Metric unit systems. It is specified in Gallons Per Minute (gpm) for the British unit system. In the previous release, flow rates were exported in Liters Per Minute for all unit systems. This bug is now resolved.

Resizing of Quench Box

When the Quench Box was resized in the previous release, line and nozzle set entities were not correctly redrawn along with the box modification. This issue has been resolved in this release.