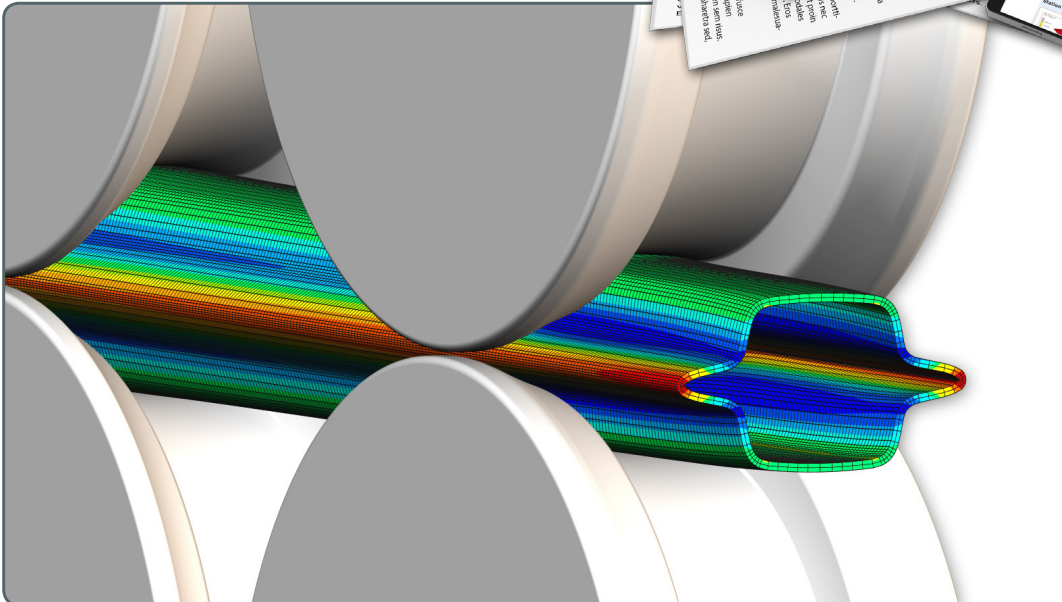


COPRA® FEA RF 2020.2



Release Notes

COPRA® Finite Element Analysis for Roll Forming



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COPRA® FEA RF

What's new in version 2020.2

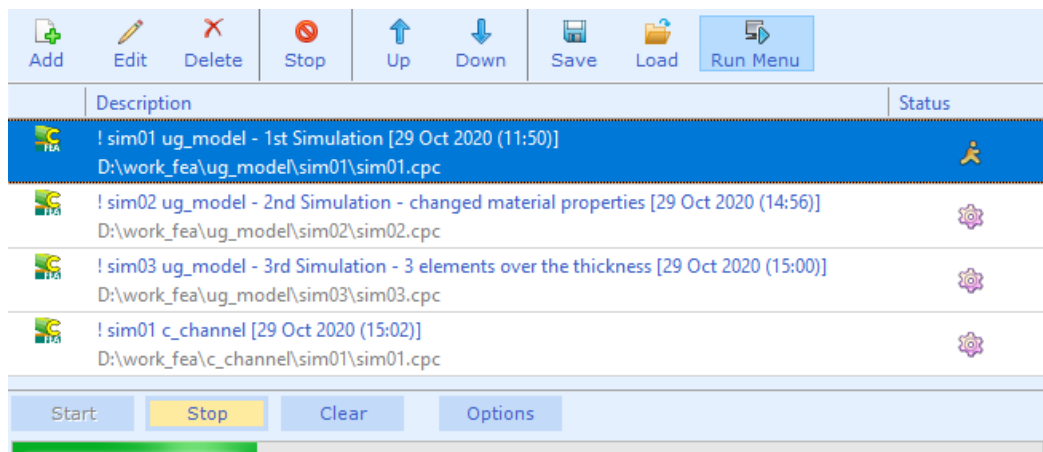
With over 20 years of FEA simulation experience in research and industry our specialists have contributed to the COPRA® FEA RF continuous improvement. The target of the new 2020.2 version is to:

- Increase number of functionalities available for simulations
- Improve the general usability of the software
- Enhance overall performance of the software in regard to its speed

NEW

Simulation Queue:

Prepare your simulations and start them from a Queue. Allows to sequentially simulate different projects, materials, meshes or any other required parameter avoiding idle times.



IMPROVED

Advanced Restart Available for Simulations with Friction and Driven Rolls:

Advanced restart is now made available for simulations using friction and driven rolls. The continuous increase of use-cases where an advanced restart is available makes it possible to use it in simulations containing any, or combinations, of the following features:

- Friction and Driven Rolls
- Shaft Deflection
- Symmetrical Welding with Welding Addition
- Mesh Imported from COPRA2FEA

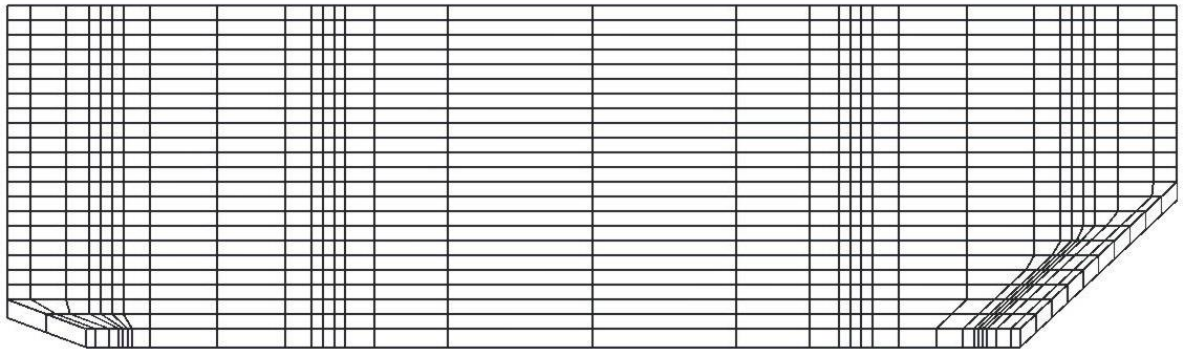
IMPROVED

Manual Mesh Modification - Improved Chamfer Creation:

Chamfer creation method is improved: one can define the width and length of the chamfer and its location (left side/right side/both) on the leading end of the sheet.

The improved chamfer creation functionality is particularly relevant for projects where an unsymmetrical chamfer is required – the user, in a two-step-approach, can independently create the left and right side chamfers.

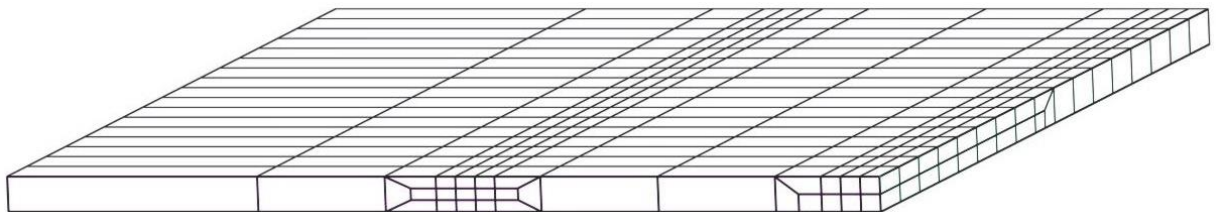
Additionally, it is now possible to create a chamfer when restarting a simulation, smoothening the entry in a specific station.



NEW

Manual Mesh Modification - Local Refinement in Thickness Direction:

This new functionality allows to easily create locally refined mesh regions (e.g. the elements of a specific bending area) in thickness direction. Transition elements will be automatically introduced in order to ensure a correct mesh topology.



NEW

Hole Meshing Capabilities - Punch Holes in Bending Zones:

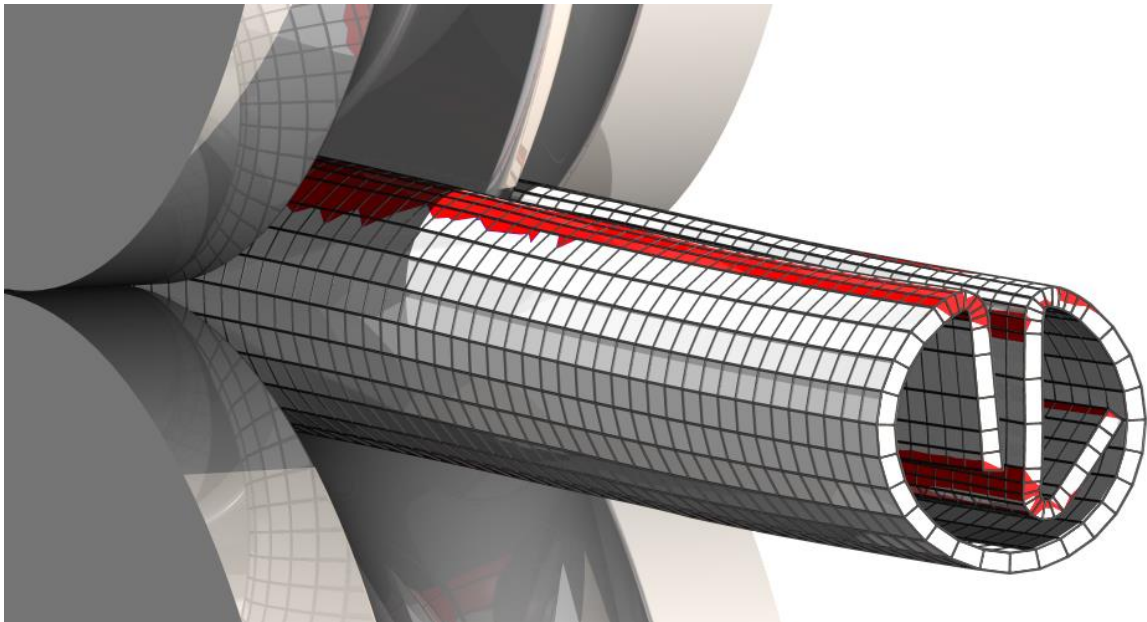
A long-term requested feature is made available in this version of COPRA® FEA RF - punch holes located inside bending zones, the same way it already happened with punch holes outside bending zones, are meshed.

NEW

Prediction of Wear Areas in the Profile

With this new feature users can get a better insight on the forming process and the areas of the profile where to expect surface defects. This knowledge facilitates the optimization of the forming process with focus on minimizing surface defects.

Prediction of wear related topics are included both in driven simulations – Total Wear, Total Wear Station, Relative Sliding Velocity Vector, Wear Rate Sliding Vector and Contact Exposure – and non-driven simulations – Contact Exposure.

**Additional Developments and Notes**

- + *CPC - Additional information is provided about the progress, stability and quality of the simulation*
- + *Mesh modifications can now be made in every direction*
- + *Mesh modifications can now be reversed using the Undo function*
- + *Easier handling of deformed/original mesh when preparing advance restarts by placing markers on nodes*
- + *Marc / Mentat 2020.0 included (also for COPRA® FEA RF WireRolling)*
- + *General usability improvements*



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FEA



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