# Quick user guide for the Dual Mesh function

The advantage of using dual-mesh is that the detail can be filled with a slightly smaller mesh solution and then solidify with a higher solution, to ensure as high accuracy as possible using minimum time. Mold filling is not sensitive to how many elements there are in a section, it is therefore possible to use less/larger elements in mold filling than in solidification. The rule is that if the cell size for mold filling is 5 mm, the cell size should be 2.5 mm for solidification, i.e. the mold filling solution should be divided by 2.

1. Start by setting up a simulation as usual, to run both mold and solidification simulation. (According to the Quick user guide on how to set up simulations.)
2. Create the simulation file for the solidification, set mesh resolution f.x. 2.5 mm (in Build Mesh).
3. Save this sim-file as ....stelning.sim
4. Do not close Initial settings. Change the mesh resolution adapted to mold filling, i.e. change the mesh resolution to 5.0 mm.
5. Save this sim-file as ....fyllnad.sim
6. Open the Flow & Solid module.
7. The mold simulation is automatically loaded since it was saved last.
8. Go to Simulate in the main menu and choose AutoSimulate.
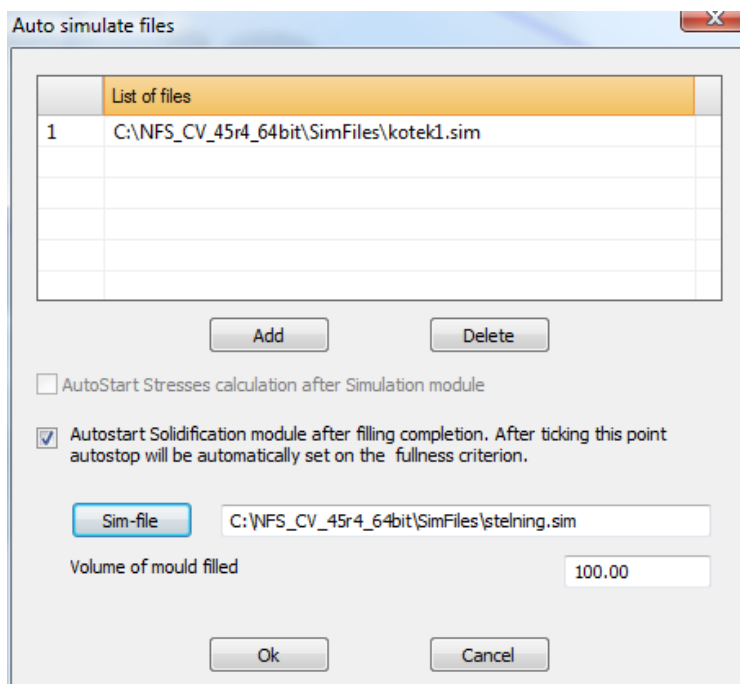
9. It is now possible to start and run the simulation as usual. When the mold filling is finished the sim file will automatically be switched to the solidification file and the simulation will continue. Temperature distribution, possibly even solidified, etc. will be imported into the finer mesh resolution.
10. Note that after finished simulation, the results for mold filling and solidification will be saved in two separate result files that can be started in the Browser just like any other results.