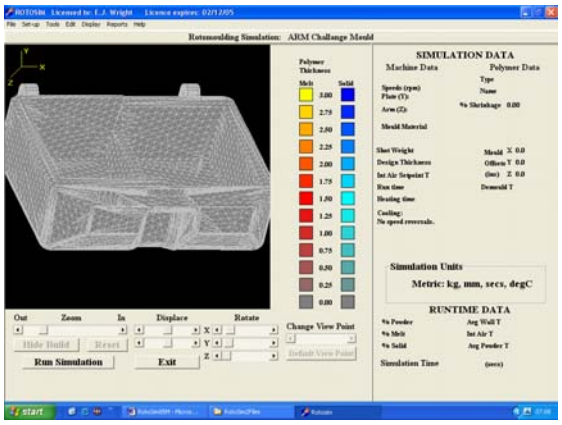
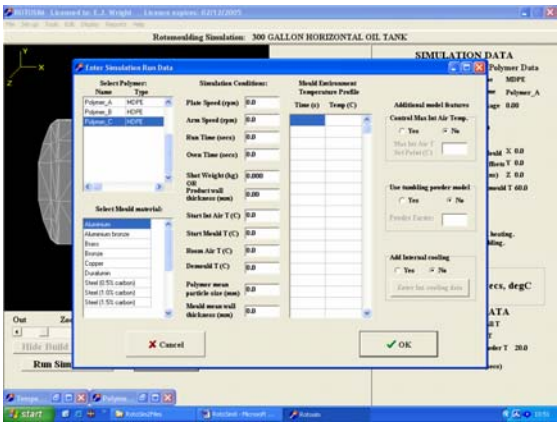
RotoSim®

RotoSim is a computer program for simulating the operation of a rotational moulding machine. The program runs on a laptop or PC using the MS Windows operating system.

RotoSim enables the user to load a file containing the image of their mould and then set this up to be moulded on a typical biaxial or Rock & Roll rotational moulding machine. Alternatively one of the demonstration mould files already available within the program can be used as an educational tool. This is a great way to explore quickly the effects of the various moulding conditions available to the moulder.





Wall Thickness Distribution

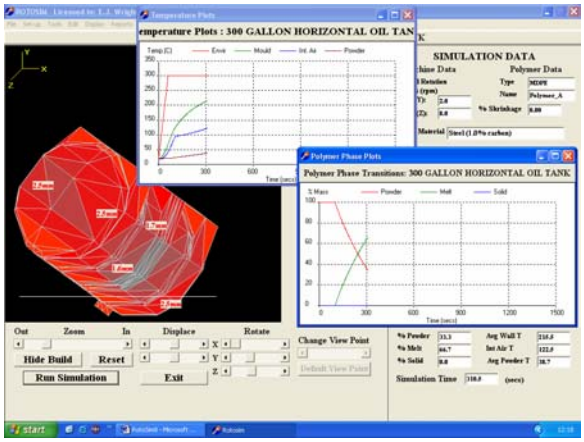
Based on user-friendly “pop-up” windows, the program allows the user to set up all the conditions available on a typical moulding machine. The program will then predict the wall thickness distribution for the moulded part under the selected conditions. If the distribution is not what is desired, the user can then explore different moulding conditions - for example, different speed ratios, different mould orientations on the machine, different oven temperatures and times, etc.

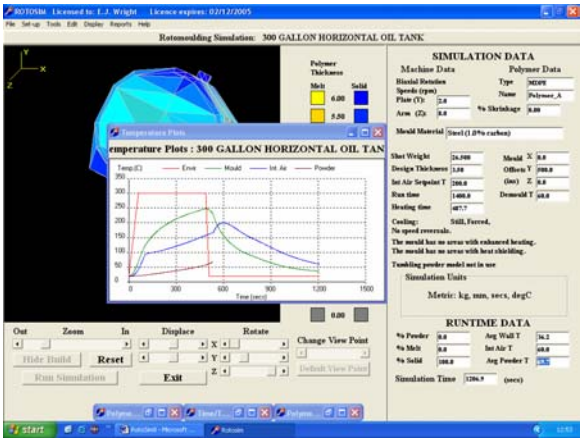
Processing Conditions

The program will also predict the time-temperature graphs for the mould and the air temperature inside the mould. This enables cycle times to be predicted. RotoSim can also be used to identify the best processing conditions for a particular part – the desired Peak Internal Air Temperature can be set by the user and the program will work out the machine cycle parameters to achieve this condition.

RotoSim is compatible with all of the popular CAD packages used by moulders to design rotomoulded parts. It is an invaluable tool that allows many of the critical design and moulding parameters to be decided before going to the expense of making the mould.

The program is based on the research expertise gained by the research teams at the Queen's University of Belfast, Northern Ireland and the accuracy of the predictions have been tested by moulders throughout the world.





Training Needs

RotoSim is also an excellent training tool for those in educational establishments or for those who are new to the industry. The simulation behaves like a real rotational moulding machine, with real moulds and allows the user to understand how changes in the moulding conditions affect the quality of the moulded part.