

Problem definition

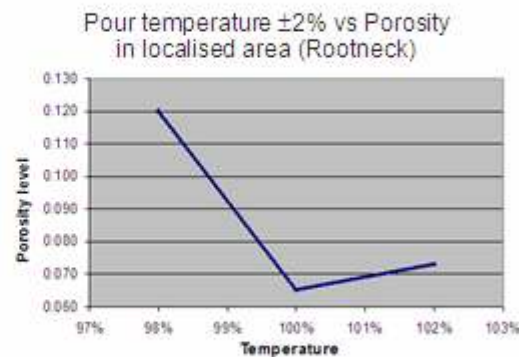
Due to the casting process complexity, the nominal conditions do not represent what is truly seen in production every day. Due to process variation, it is not uncommon for shell thickness to vary by 20%, alloy pour temperatures by 6% and Shell temperatures by 10%.

Process modelling

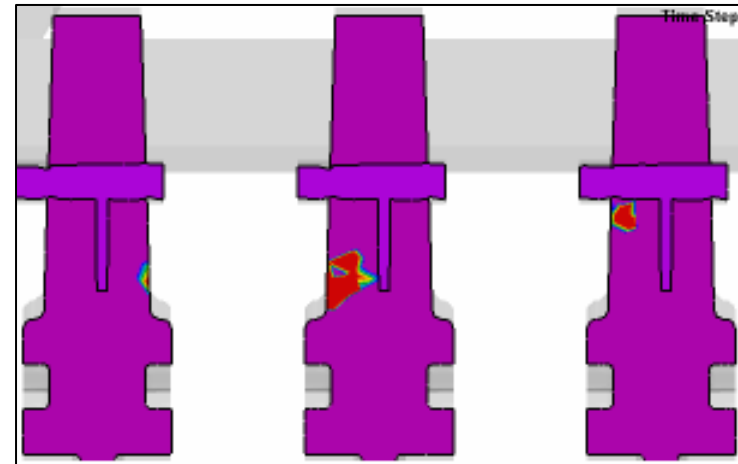
At Sim-Cast we are able to consider some of the process variation in order to produce solutions that work in nominal and everyday conditions.



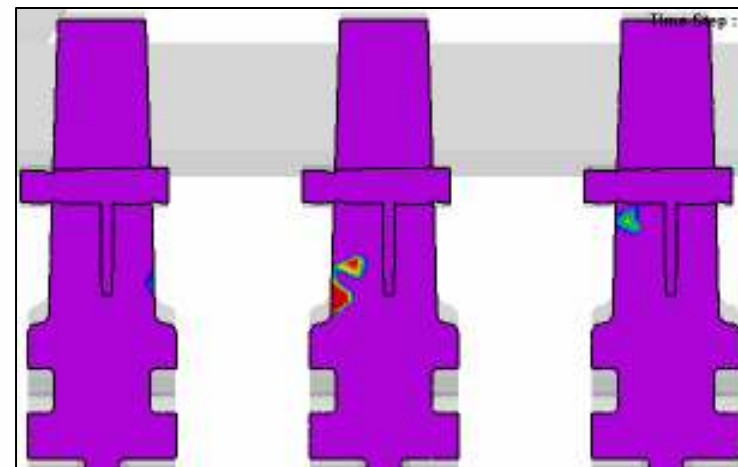
Porosity when alloy pour temperature is nominal



Defect prediction



Porosity – Low alloy pour temperature -2%



Porosity – High alloy pour temperature +2%