

## UNIT 49: Common Errors

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### **Visual Fortran run-time error forrtl: severe (157); Program exception - access violation**

This error normally occurs just at the end of a simulation. An error of this type usually indicates that the mold did not fill completely with liquid metal during the filling simulation. Possible reasons for this may be as follows:

1. There may be a thin feature of the casting model, which is thinner than the dimension of a single node. This is often seen with thin ingates. When this occurs, the feature may disappear because it is smaller than the thickness of one node; later during filling, there may be no path for the flow of liquid metal from one part of the casting to another, or from the gate into the casting. One solution to this problem is to mesh the model with smaller nodes; this will increase simulation time. Another solution is to artificially increase the thickness of the feature so that it is at least the same thickness as one node. Normally for gates, this will not greatly affect the solidification, but will allow the liquid metal to flow.
2. If the model is constructed in such a way that there are gaps between separate shapes, it is possible that the system will place mold material in the gap between the shapes, and liquid metal may not be able to flow across the gap. Be sure that in models, all shapes are in contact. It is better to plunge one shape into another, rather than leave a gap.

### **Meshing Error: Mold too thin for one row of nodes**

This error occurs during meshing, when the user has selected either the Rectangular Mold or Shell Mold options. This indicates that the thickness of the mold is less than the dimension of one node. Possible solutions would be to either increase the mold thickness or decrease the node size.

### **Priority Error: Overlapping materials with the same priority were found**

This message occurs during meshing. It refers to the fact that two or more shapes of different materials were overlapping in the model, and that these shapes had the same priority number. When shapes of different material overlap, the priority numbers must be different. SOLIDCast will mesh the material in the overlap region with the shape which has the lowest priority number. Priority numbers can be changed by selecting a shape and then selecting Edit... Edit Selected Shape. In the SOLIDCast Workbook document, see UNIT 30: Priority Numbers: Intersecting Shapes.

### **Simulation runs but casting does not cool down**

Stop the simulation and check the setting in Materials List ... HT Coefficients. If the "Use Internal HT Coefficients" box is checked, then you must have valid numbers for all material-to-material HTC's. If you are running a sand casting or investment casting simulation, normally the "Use Internal HT Coefficients" box should be turned OFF. If this is turned ON and HTC's are 0, then the casting will never cool down.