Principle of the CRTM process

Phase 1: Injection

Phase 2: Gap closing

Phase 3: Compaction

One Dimensional Analysis of Phase 2

Pap

Influence of the process parameters on the displacement, adapted amount of resin

Finite differences:

Lims: tfill=2.9s
tfill=2.7s

Phase 1: parametric study

Gap size influence on filling time (s):

Future work

1) Modeling phase 2 and 3 in 2D for complex geometries

2) Verify the results:
on a larger scale experiment
on more complex parts

ACKNOWLEDGEMENTS

This work is supported with funds from the National Science Foundation (NSF) in conjunction with the Department of Energy under Grant DMI-0521789