

**FEATURED TECHNOLOGY:**

**H-VARTM: Heated Vacuum Assisted Resin Transfer Molding**

**INVENTOR(S):**

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**STATUS:**

Active Invention Disclosure

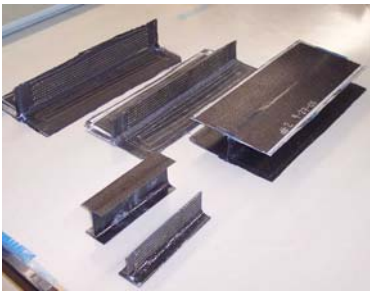
**TECHNOLOGY DESCRIPTION:**

In the past few years, resin transfer molding (RTM), vacuum-assisted RTM (VARTM), and its derivative processes have been gaining popularity in industries such as aerospace, infrastructure, automotive, and the military. In fact, RTM was originally introduced in the mid 1940s but met with little commercial success until the 1960s and 1970s, when it was used to produce commodity goods like bathtubs and computer keyboards.

Researchers at A&T have developed a new procedure for manufacturing composites. The procedure is an improvement to the Vacuum Assisted Resin Transfer Molding (VARTM) process. The process allows manufacturers to use above room temperature high viscosity resins to manufacture composites without the use of autoclave, oven and/or press. This new procedure improves upon the fiber volume fraction and the dimensional stability throughout the composite panel. There are fewer voids and lower porosity than the conventional VARTM procedure. The process can even be modified to be used from simple flat panels to complex shapes. It also decreases the cost and production time in the manufacturing of composites.

**END USE/APPLICATIONS:**

Composites Manufacturing, Aerospace, Infrastructure, Automotive, Military, Commodity Goods, Civil Support Structures, Nautical Vehicles



**MISSION:**

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