

Development of manufacturing capabilities for high-quality cost-effective structural composites

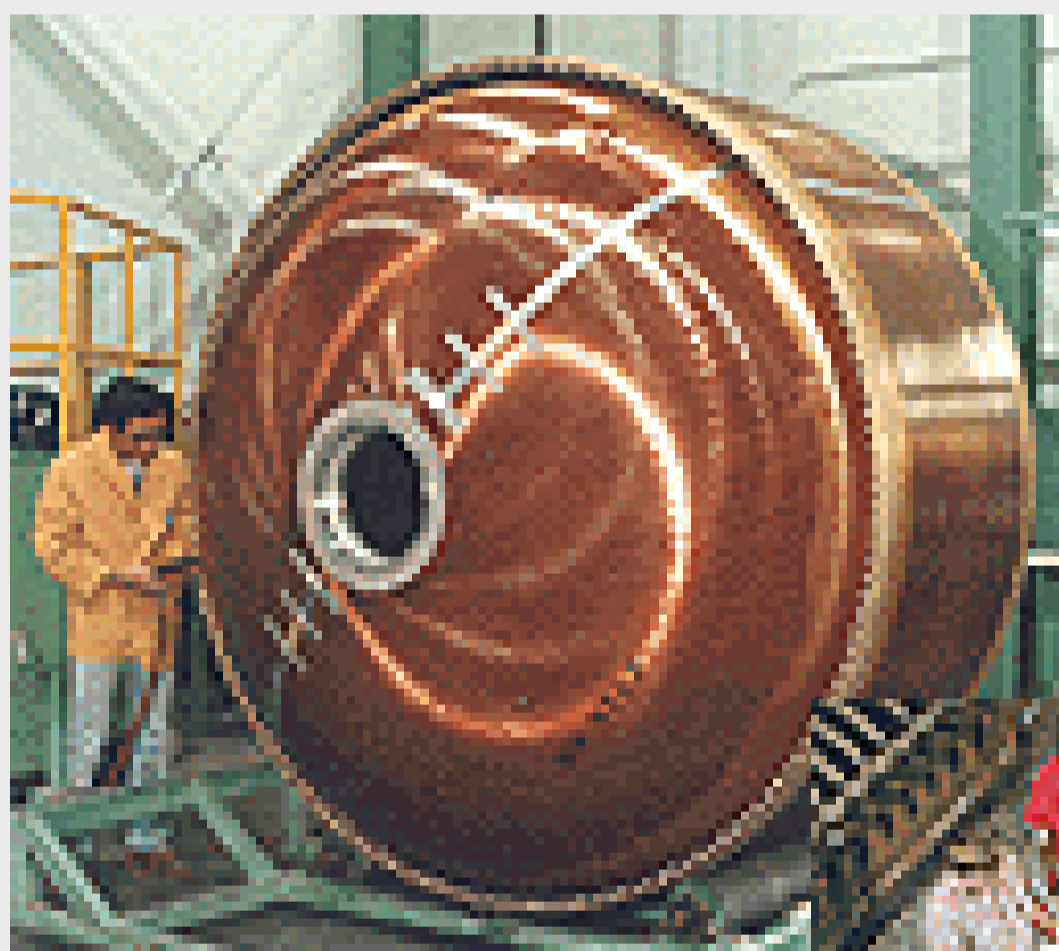
*A/Prof Tay Tong Earn, Dept of Mechanical Engineering,
Prof Quek Ser Tong, Dept of Civil Engineering*

Motivation: Presently, the fabrication of high-quality composites is prohibitively expensive for many industries. The latest technology of VARTM, on the other hand, offers a more cost-effective alternative that can deliver high-quality parts. For companies in Singapore to remain competitive, they must climb the technology ladder and offer a range of high-quality composite products in addition to traditional products

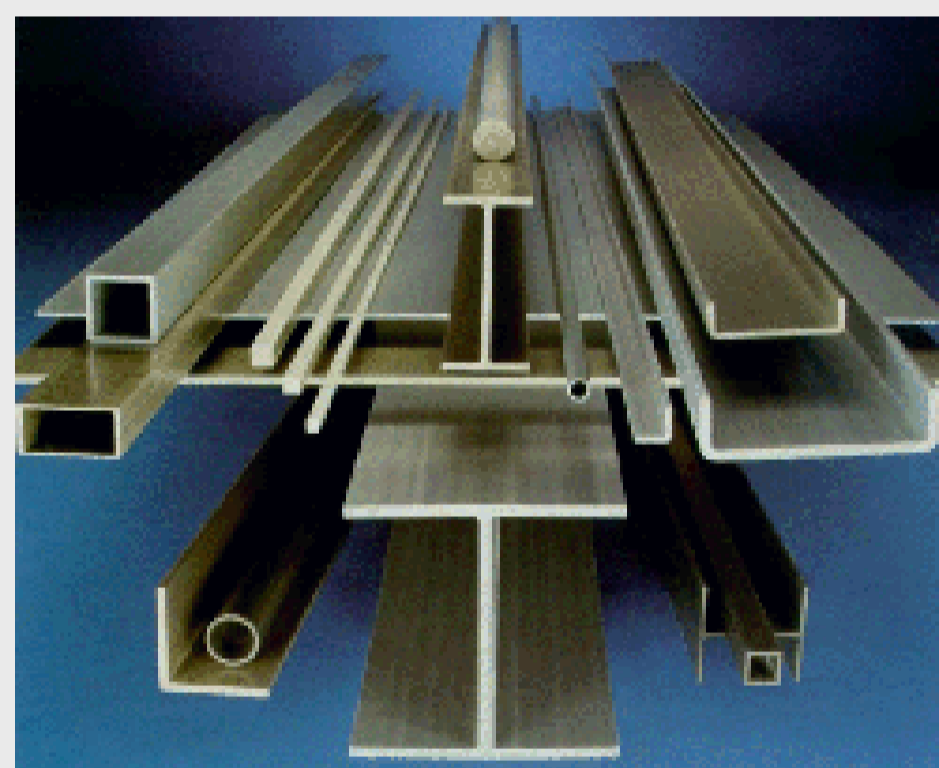
Objective & scope of project: To develop advanced vacuum-assisted resin transfer molding (VARTM) techniques and capabilities for high-quality and cost-effective structural fiber-reinforced composite materials and structures

Industrial significance: Composites are no longer confined to aerospace applications. Many products are now made of high-quality composites due to their excellent properties such as high specific strength and stiffness, fatigue resistance, durability and thermal stability. Composites will play an increasingly important role in our daily lives.

Target Industries: Aerospace, Automotive, Marine & Off-shore, Sports, Transportation, Energy.



Pressure Vessels



Composite Beams



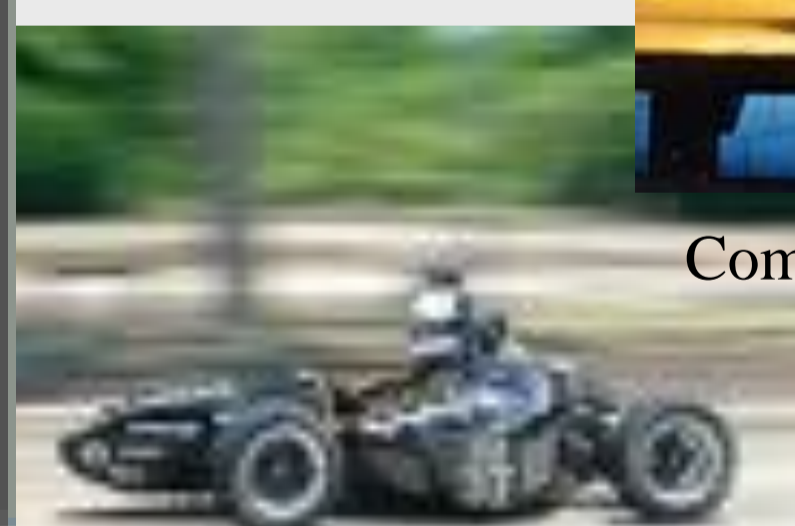
Composite Prosthesis



Wind Turbine Blades



Aircraft Components



Composite Chassis



Kevlar Composite Helmet



Composite Race Bikes



Graphite Fishing Rods

Fiberglass Boats

For further information, please contact:

Professor T.E. Tay

Tel: (65) 6516 2887, Fax: (65) 6779 1459, E-mail: mpetayte@nus.edu.sg