



## CASE STUDIES COMPOSITES GENIUS AT WORK

### RENEWABLE ENERGY EQUIPMENT APPLICATIONS

Composite materials are a natural fit for the new breed of products that are emerging for various renewable energy technologies. Strong, light, durable and highly configurable – and often the greenest option as well! For new product rollouts, the variety of process options supports affordable prototyping and economical scaling of production.

MFG has been involved in product innovation for the wind energy business since the earliest days. Today the company is the industry's most experienced and knowledgeable composites supply partner for turbine blades, nacelles and spinners. (Visit [MFG Wind](#) for the whole story on our OEM and aftermarket offerings). In the last decade we have been actively supporting customers who are developing products for solar energy and electric vehicles – applying our brain trust from the wind, electrical utility and automotive markets.

#### Solar Energy Products

- **Description of the product:** Solar Racking, Solar Dishes, Solar Housings
- **Process and material:** UV resistant, light weight, flame retardant
- **Special Genius:** Process capabilities, material development
- **Secondary services:** Machining, Painting
- **Customer satisfaction criteria:** Core development

#### Electric Vehicle Battery Enclosure

- **Description of the product:** Electric Vehicle Battery Enclosure
- **Customer:** Wrightspeed
- **Process and material:** Twin wall, vacuum resin-infused product incorporating high thermal resistance core material.
- **Special genius:** Customer had demanding space, structural and thermal requirements. Vehicle design constraints required that 600 lbs. of batteries be contained between narrow structural members while maintaining an extremely high R-value. The MFGW solution provided a highly structural enclosure with integrated vacuum insulation that reduced the wall thickness to only ¼ required for conventional materials, permitting customer to better utilize allowable vehicle space.
- **Secondary services:** Product design, tooling design and fabrication, prototype production parts.
- **Customer satisfaction criteria:** MFG convert customer-provided concepts to a product composite-optimized production design.

### **Off Shore Wind Projects**

- **Description of the product:** Off Shore Wind Turbine Buoyancy Tank
- **Process and material:** Resin infused glass/polyester design incorporating novel assembly and installation features.
- **Secondary services:** Design optimization and cost reduction.
- **Special Genius:** MFGW possess the practical knowledge and capability to both develop and produce large custom composite solutions.

**We welcome the opportunity to discuss how MFG could be of service to you.**

**To learn more about our custom molding services, please contact one of the two composites experts below.**

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