

Pultruded Vertical Axis Wind Turbine Blade



1994 EPTA Pultrusion Awards World Heavyweight Pultrusion and Most Ingenious Product

1995 SPI Composites Institute Award of Excellence—Energy

This composite pultruded blade has successfully accomplished a 50% energy output upgrade for an existing wind turbine formerly outfitted with segmented extruded aluminum blades. The turbine's rated power has been increased to over 300 KW and survival wind speed has been increase to 130 miles per hour. This new advanced turbine is a major breakthrough in the drive to achieve low cost renewable energy production. The blades are supplied in single section length of 160 feet. Installation costs are reduced due to the avoidance of assembly required for the pre-bent aluminum sections. Each blade weighs 3,247 pounds, making it the largest single pultruded composite part ever manufactured. The cross section is a hollow air foil shape with three internal shear webs and a chord of 27 inches. Each wind turbine uses three blades for a total pultrusion weight of nearly 5 tons per turbine.

Materials: Proprietary vinyl ester resin with 42 plies of triaxial knitted fabric using PPG HYBON® roving and spun bonded polyester TREVIRA® surface veil

Properties: A 50% energy output upgrade for an existing wind turbine formerly outfitted with segmented extruded aluminum blades

Size: Section is a hollow air foil shape with three internal shear webs and a chord of 27 inches. Wall thickness is .35 inches.

Weight: Three blades each weighing 3,247 pounds for a total weight of 4.87 tons per turbine

For additional information write or call:

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