

# PRESS RELEASE

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## AUSTRALIAN COMPOSITE'S UV CURABLE PREPREG SUCCESSFULLY TESTED AND CERTIFIED FOR USE IN WIND TURBINE BLADES

**MELBOURNE – October 28<sup>th</sup>, 2004** - Moorabbin based UV curable resin impregnated fibreglass provider, Australian Composites Pty Ltd, announced today that its AUSPREG UV technology has been successfully tested and certified for use in the manufacture of wind turbine blades.

To date, most wind turbine blades are manufactured using expensive resin infusion methods with high cost custom moulds and set ups or wet hand lay up which can require vast amount of energy by way of up to ten hours of oven curing time. The Auspreg UV technology involves the use of the company's pre-impregnated fibreglass materials which is laid into moulds and then cured within minutes using light under a vacuum bagging process.

Rob Clarke, General Manager of Grid Link Wind Turbines is delighted with the results. "We wanted to create a new form of blade manufacture which would reduce costs and provide improved structural properties and other benefits. Following many trials with Vacuum Bag Resin Infusion (VBRI) and Resin Transfer Moulding (RTM) it was found that a UV curing pre-preg procedure provided by Australian Composites Group was the most beneficial solution".

Grid Link's findings have been validated by independent testing of the finished turbine blades by The University of Melbourne who found many advantages to the finished product. In both wind tunnel as well as structural testing of the finished turbines, the University of Melbourne found an average of 20%-35% increase in all the major mechanical properties of the blades such as tensile, flexural and inter laminar shear strength was achieved. Wastage was reduced by 50%. Productivity in using the pre-impregnated fiberglass over wet hand lay up has increased by 95% and there were environmental improvements through high reductions in styrene emissions.

As AUSPREG UV is supplied in rolls up to 15m long and 1.27m wide, it provides manufacturers of small to mid sized turbine blades a ready material for quick and easy manufacturing. Clark continues, "The use of multiaxial stitched fabrics and polyester resin pre-impregnation had not previously been done. The ability to use a prepreg roll that combines high tech glass substrate and a 'B' staged, reduced and consistent resin, meant many difficult and time consuming trials saved. With The Specialty Group prepregs up to 35% resin reduction and therefore cost was encountered."

Grid Links' 5, 10, and 20 K/w turbines are slated for installation across Australia over the next 12 months, where light commercial entities and rural home owners intend generating their own electricity and reduce their reliance off the grid.

For more information, contact:

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*Figures 1,2, & 3 - Images of Grid Link Wind turbines installed across Victoria, Australia*



*Figure 4 - Image of a Grid Link Wind turbine blade being manufactured using Auspreg UV*