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### WINDS OF CHANGE...

## RENASTE® REVOLUTIONISES WINDBLADE MANUFACTURING IN THE NETHERLANDS

RenPaste combined with CAD/CAM and CNC technology delivers 20% cut in production time and minimises required labour

RenPaste® Seamless Modelling Paste from Huntsman Advanced Materials, has literally revolutionised manufacturing processes for one of the Netherlands leading tooling and prototyping companies, Vostermans Tooling and Prototyping BV.

Using RenPaste SV/HV 4503, combined with the latest CAD/CAM systems and CNC machines, Vostermans have been able to produce the models to make the moulds for wind turbine blades, measuring up to 46m in length, faster and more cost effectively than has been previously possible.

RenPaste SV/HV 4503 is used for the face layer of the model - the critical surface that will define the dimensions and surface quality of the mould tool, and then the final composite part.

Working from CAD/CAM data, the RenPaste is machine applied to a backing structure made from low cost substrate blocks that have been CNC milled to the required dimensions. This gives a virtually void-free layer of paste, applied to the right thickness – 15 to 20 mm provides the best balance of cost efficiency and performance.

After application of the RenPaste SMP, the model assembly is allowed to cure at room temperature for one day. In applications where the model is to be used at elevated temperature a stepwise post cure up to the working temperature is recommended.

After curing, the SMP layer is milled to its final dimensions. The milling is controlled by the original CAD model data to ensure accuracy, which in this case was critical as the maximum tolerances for the model were  $\pm 5$ mm over the entire 46m length.

A minimal hand polishing of the pattern then gave the fine, smooth surface finish required. The final step of the model building process was a spray coating of sealer as a base for application of the release agent prior to production of the composite mould tool.

“These wind blade models had to meet a range of demanding criteria and be produced to a tight timescale,” explained Rob Luijten, Location Manager at Vostermans Tooling & Prototyping BV. “The best time to test wind blades is in the Spring. This meant that the model had to be finished, the mould completed and the rotor blades produced in time for the test period ‘window’,

“Using RenPaste materials rather than traditional methods enabled us to cut overall production time of the model by up to 20%. The model was also of a high and sustained quality throughout its 46m length, providing a smooth and seamless working surface. This in turn reduced the labour time required to complete the project.

“The combination of RenPaste materials with CAD/CAM and CNC technology not only delivers benefits to our customers, “ continued Rob Luitjen. “It has enabled us to differentiate the services Vostermans provides from those of our competitors and also opened up new markets we were unable to service before.”

For further information on RenPaste and Huntsman Advanced Materials, go to [www.huntsman.com](http://www.huntsman.com) and click on Advanced Materials.

### *ENDS*

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Digital picture(s) are available on request, please email: [kate@tregartha-dinnie.co.uk](mailto:kate@tregartha-dinnie.co.uk)

#### **Editor's Note**

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