Hempel, trusted to protect wind turbines around the world

Standing at an impressive 140 metres high, Vestas' wind turbine stands at the Danish National Test Centre for large wind turbines, where it is producing electricity for around 7,500 homes. The impressive structure – which has a rotor area the size of three football fields – needs a robust coating system to protect it from the corrosive saltwater atmosphere.

A leading supplier to the wind energy industry since the very beginning, we have worked with many of the leading players to develop a specialist coatings assortment covering all wind turbine components. As a long-standing Vestas supplier and development partner, it was natural that Vestas ask us to provide a protective coating system for the V-164 8.0 MW prototype.

Due to the tower's size, special vehicles are required to move the pieces. As well as anti-corrosive protection, the coating system has to deliver excellent abrasion resistance in order to protect the tower during transport and installation. Vestas chose to use our standard protective coating system for wind turbines, which is proven to deliver excellent anti-corrosion performance, robust abrasion resistance and lasting weather and UV resistance.

windpower.hempel.com

Hempel, trusted to protect wind turbines around the world

At a glance	
Customer	Vestas
About	Vestas is one of only a few global energy companies dedicated exclusively to wind energy. It has offices in 24 countries and has installed wind turbines in 74 countries around the world.
Coating system	Hempadur 4774A Hempathane HS 5561B
Total litres	2,600 litres of paint

The challenge
With a total height of 140 metres, Vestas' V-164 8.0 MW wind turbine is specifically designed to reduce the overall cost of energy production. In addition, the tower's size means that special vehicles are required to move the pieces – and the coating system has to protect the tower during transport and installation.

The solution
Vestas chose a highly durable protective coating system for both the interior and exterior surfaces. The exterior surface is categorised as C5-I (high) according to ISO 12944, and our coating system comprised Hempadur 4774A, a self-priming high-build epoxy, followed by a layer of Hempathane HS 5561B, a two-component, aliphatic polyurethane finish. The internal surfaces have a lower corrosive categorisation and were coated with two layers of Hempadur 4774A.

As well as excellent anti-corrosive performance and rapid application properties, the system delivers excellent abrasion resistance to protect pieces during transportation and installation, and lasting weather and UV resistance. In addition, this coating system dries up to 30 per cent faster than equivalent three-coat systems, and so helps to reduce the overall cost of wind tower production.

The Hempel Group Head Office
Hempel A/S, Lundtoftegaardsvej 91, 2800 Kgs. Lyngby, Denmark
Tel: +45 4593 3800 Email: windpower@hempel.com
windpower.hempel.com