Hempatop Direct 700
Stamåsen Wind Park

The park was inaugurated in September 2013 and consists of 26 wind turbines, each with an installed capacity of 2.3 MW corresponding to a total installed capacity of 60 MW.

The turbines were constructed as bolted shell towers, produced at Andreasen Towers situated in Nyborg, Denmark for Siemens Gamesa Renewable Energy and were coated with Hemparea DTM 55973 in 2012.

The turbines are shell towers meaning that the towers are constructed from smaller units of coated steel that then are bolted together at site to form the final turbines. This means that the coating process can be done in a line process where very fast curing and fast build-up of hardness is essential. Hempatop Direct 700, the upgraded version of Hemparea DTM 55973 is a low VOC, fast curing, high-build solution for protecting steel. Can be used for one-coat direct-to-metal applications and applied either on zinc metallized surfaces or over Hempel's Avantguard products for severe corrosion environments.

Working with this advanced lean coating system, the applicator is able to improve productivity, reduce labour costs and VOC emissions during application without compromising on asset protection.

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Service performance

In 2021 the wind park was visited to conduct an inspection in order to evaluate the performance after 9 years in service. The performance is of special importance since the present Hempatop Direct 700 is the upgraded version of Hemparea DTM 55973.

The inspected towers in Stamåsen Wind Park are in excellent condition. There can be found no areas with breakdown and no indications of beginning breakdown in the coating system on any of the eight towers (30 per cent of the turbine towers at Stamåsen) in the survey.

The stability of the coating system, being paint directly on blasted steel, paint on metallising or paint on the conversion pre-treated nuts is also well proven at the limited areas of mechanical damage. There is no spread of damage, no corrosion creep and extremely limited red or white rust.

The DFT show a paint system that is very robust toward big variations in thickness. The low thickness areas prove is an efficient barrier against water and corrosion. The high thickness areas are proof of a system that is very robust against the overapplication that often occur in industrial applications.

The gloss level has as expected dropped, a bit more facing south than facing north. There is not tendency of chalking.

Project details	
Owner:	Statkraft
Location:	Strömsund and Sollefteå, Sweden
Tower manufacturer:	Andreasen Towers, Nyborg, Denmark
Year of the project:	2012
Coating specification:	1 X 200 µm dry Hemparea DTM 55973 + 80 µm Thermal sprayed zinc on the bolted areas
Wind turbine towers:	bolted shell towers, height of tower 115 m, diameter of rotor 113 m

The Hempel Group Head Office
Hempel A/S, Lundtoftegaardsvej 90, 2800 Kgs, Lyngby, Denmark
Tel: +45 4593 3800 Email: hempel@hempel.com **hempel.com**