

Tylstrup Onshore Wind Farm

PPG's coating solution is still effective and intact after 20 years in service

Case study

The Customer

Wind World towers constructed at Ørskov Shipyard and coated by Skagen Sandblæseri, Denmark

The Location

St. Vildmose nearby Tylstrup in Jutland Denmark (farming fields)

The Challenge

Outdoor weathering, ice, sun and airborne animal manure

The Solution

PPG SIGMACOVER™ 256
PPG SIGMACOVER™ 435
PPG SIGMADUR™ 520
(PPG SIGMASHIELD™ 460 for foundations)

The Benefits

- Reliable system
 - Easy to apply and fast drying
 - Topcoat with good color and gloss retention
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The Result

- For nearly 20 years, our coating system is still effective and completely intact
 - Lower maintenance costs due to long term performance
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The Customer

This project is one of many from that period (around 100 towers were coated by PPG then). Wind Tower manufacturer Ørskov Shipyard, only maintains ships today and Skagen Sandblæseri is not active in tower coatings anymore, however they are in blades.

The Challenge

Apart from the site being a corrosion environment similar to C3-4, there is a slight risk of coating degradation caused by airborne animal manure pushing the corrosion class closer to a C4-5I environment.



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The Solution

PPG supplied protective coating systems for each area of the structure, which were applied during modular construction by Skagen Sandblæseri at Ørskov Shipyard in Denmark

The foundations were coated with a very strong coating, namely PPG SIGMASHIELD 460 which is a glassflake reinforced epoxy coating. All 15 wind towers were primed with PPG SIGMAZINC 102 zinc epoxy primer, coated with PPG SIGMACOVER 435 and finished with PPG SIGMADUR 520 semi-gloss conventional polyurethane topcoat on the outside and for the insides, only primed with PPG SIGMAZINC 102 zinc epoxy primer and coated with PPG SIGMACOVER 456.

The Results

After nearly 20 years in service, a thorough inspection was carried and the wind towers were still in excellent condition with no coating breakdown, yet some only some chalking and algae on the north sides (see picture).

The initial dryfilmthickness as pr. specification (260µ dft for the outside) is still intact – with an average of 320µ dft measurement on the towers inspected.

Gloss level was down to ca. 5, vs. initial expected gloss level of a newly applied PPG SIGMADUR 520 would be ca. 40-50. However, PPG is satisfied that a conventional polyurethane semi-gloss topcoat as the coating is intact corrosion wise and the color retention outstanding.



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