

Offshore wind references



World-leading supplier

We are a world leader in supplying the wind energy industry with a full range of high performance coatings for all parts of offshore wind turbines.

The first offshore wind turbine park was erected in 1991, with turbines coated and protected by Hempel. Since then we have continued to develop a range of protective coatings for offshore turbines all over the world.

Our coatings offer proven excellent anti-corrosion protection and high durability solutions, and all of our offshore wind turbine coatings systems are NORSOK certified.

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Offshore wind references

Vindeby

Company name (Owner): DONG Energy
Location: NW Coast of Lolland, Baltic Sea
Country: Denmark
Year: 1991
Total number of turbines: 11
Power rating of the wind turbines: 450kW

Coating system	DFT
Metallisation	120µm
Epoxy / polyurethane	475µm

Tunoe Knob

Company name (Owner): DONG Energy
Location: East Coast of Jutland
Country: Denmark
Year: 1995
Total number of turbines: 10
Power rating of the wind turbines: 500kW

Coating system	DFT
Metallisation	80µm
Epoxy / polyurethane	390µm

Utgrunden

Company name (Owner): Vattenfall Europe Windkraft GmbH (Vattenfall AB)
Location: Baltic Sea
Country: Sweden
Year: 2000
Total number of turbines: 7
Power rating of the wind turbines: 1,50mW
Foundation: Monopile not Hempel

Coating system	DFT
Epoxy / polyurethane	345µm

Middelgrunden

Company name (Owner): DONG Energy, Middelgrundens Vindmollelaug

Location: North Sea

Country: Denmark

Year: 2001

Total number of turbines: 20

Power rating of the wind turbines: 2,00mW

Coating system

Metallisation / epoxy / polyurethane

Horns Rev

Company name (Owner): DONG Energy, Vattenfall Europe Windkraft GmbH (Vattenfall AB)

Location: North Sea

Country: Denmark

Year: 2002

Total number of turbines: 80

Number of turbines Hempel: 5

Power rating of the wind turbines: 2,00mW

Foundation: Monopile

Coating system

Coating system	DFT
Metallisation	80µm
Epoxy / polyurethane	390µm

Arklow

Company name (Owner): GE Energy, SSE Renewables Holdings Limited, ACCIONA Energia

Location: Arklow, Irish Sea

Country: United Kingdom

Year: 2002, 2003

Total number of turbines: 7

Power rating of the wind turbines: 3,60mW

Coating system

Coating system	DFT
Epoxy / polyurethane	320µm

Offshore wind references

Nysted

Company name (Owner): DONG Energy, PensionDanmark, Stadtwerke Lübeck GmbH, SEAS – NVE Energy Group
Location: South of Lolland, Baltic Sea
Country: Denmark
Year: 2003
Total number of turbines: 72
Power rating of the wind turbines: 2,30mW
Foundation: Concrete

Coating system (Towers)

Metallisation / epoxy / polyurethane

Samsø

Company name (Owner): Samsø Municipality, DIFKO A/S
Location: South of Lolland, Baltic Sea
Country: Denmark
Year: 2003
Total number of turbines: 10
Power rating of the wind turbines: 2,30mW
Foundation: Monopile

Coating system (Towers)

Metallisation / epoxy / polyurethane

North Hoyle

Company name (Owner): RWE npower renewables
Location: Liverpool Bay, North East Wales
Country: United Kingdom
Year: 2003
Total number of turbines: 80
Number of turbines Hempel: 30
Power rating of the wind turbines: 2,0mW
Foundation: Monopile not Hempel

Coating system (Towers)

Metallisation / epoxy / polyurethane



Nysted

South of Lolland, Baltic Sea
Denmark, 2003



Kentish Flats

North Sea off the coast of Kent, South East England
United Kingdom, 2004, 2005

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Scroby Sands

Company name (Owner): E.ON Climate & Renewables GmbH

Location: North Sea, Southern North Sea (Thames)

Country: United Kingdom

Year: 2004

Total number of turbines: 30

Power rating of the wind turbines: 2,0mW

Foundation: Monopile not Hempel

Coating system (Towers)

Metallisation / epoxy / polyurethane

Kentish Flats

Company name (Owner): Vattenfall Europe Windkraft GmbH (Vattenfall AB)

Location: North Sea off the coast of Kent, South East England

Country: United Kingdom

Year: 2004, 2005

Total number of turbines: 30

Power rating of the wind turbines: 3,0mW

Coating system (Transition Pieces)

Epoxy / polyurethane

DFT

560µm

Coating system (Towers)

Metallisation / epoxy / polyurethane

Barrow

Company name (Owner): Centrica Renewable Energy Limited, DONG Energy

Location: East Irish Sea, south west of Walney Island, Barrow-in-Furness, Cumbria

Country: United Kingdom

Year: 2005, 2006

Total number of turbines: 30

Power rating of the wind turbines: 3,0mW

Coating system (Transition Pieces)

Epoxy / polyurethane

DFT

900µm

Coating system (Towers)

Metallisation / epoxy / polyurethane

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Measuring Mast Arkona Becken

Company name (Owner): E.ON Energy Projects GmbH
Location: Baltic Sea
Country: Germany
Year: 2006

Coating System (Steel shaft)	DFT
Epoxy / polyurethane	1070µm

Egmond Aan Zee

Company name (Owner): Shell Wind Energy Ltd, Nuon (Vattenfall AB)
Location: Egmond Sea
Country: Netherlands
Year: 2006
Total number of turbines: 36
Power rating of the wind turbines: 3,0mW
Foundation: Monopile

Coating System (Transition Pieces)	DFT
Epoxy / polyurethane	550µm

Coating system (Towers)
Metallisation / epoxy / polyurethane

Burbo Bank

Company name (Owner): DONG Energy
Location: Liverpool Bay, Merseyside, Irish Sea
Country: United Kingdom
Year: 2006, 2007
Total number of turbines: 25
Power rating of the wind turbines: 3,6mW
Foundation: Monopile

Coating System (Transition Pieces)	DFT
Metallisation / epoxy / polyurethane	1050µm

Coating system (Towers)
Metallisation / epoxy / polyurethane



Burbo Bank

Liverpool Bay, Merseyside, United Kingdom
2006, 2007. Source: Siemens AG

Offshore wind references

Lynn & Inner Dowsing

Company name (Owner): GLID Wind Farms Topco Ltd., Centrica Renewable Energy Limited, TCW Group, Inc.

Location: NOff the coast of Lincolnshire in the entrance to The Wash

Country: United Kingdom

Year: 2007

Total number of turbines: 54

Power rating of the wind turbines: 3,6mW

Foundation: Monopile

Coating system (Transition Pieces)	DFT
Epoxy / polyurethane	800µm

Q7 (renamed Princess Amalia)

Company name (Owner): Eneco Energie

Location: Egmond Sea

Country: Netherlands

Year: 2007

Total number of turbines: 60

Power rating of the wind turbines: 2,0mW

Foundation: Monopile

Coating system (Transition Pieces)	DFT
Epoxy / polyurethane	560µm

Coating system (Towers)
Metallisation / epoxy / polyurethane

Robin Rigg

Company name (Owner): E.ON Climate & Renewables GmbH

Location: Solway Firth, midway between the Galloway and Cumbrian coasts, Irish Sea

Country: United Kingdom

Year: 2007

Total number of turbines: 60

Power rating of the wind turbines: 3,0mW

Foundation: Monopile

Coating system (Transition Pieces)	DFT
Epoxy / polyurethane	800µm

Gunfleet Sands

Company name (Owner): DONG Energy, Marubeni Corporation, Development Bank of Japan

Location: Northern Thames Estuary 7 km off Clacton-on-Sea, Essex

Country: United Kingdom

Year: 2008

Total number of turbines: 49

Power rating of the wind turbines: 3,6mW

Foundation: Monopile

Coating System (Transition Pieces)	DFT
Epoxy / polyurethane	810µm

Rhyl Flats

Company name (Owner): RWE Innogy GmbH, Greencoat UK Wind PLC, Green Investment Bank

Location: Liverpool Bay, Wales

Country: United Kingdom

Year: 2008

Total number of turbines: 25

Power rating of the wind turbines: 3,6mW

Coating System (Transition Pieces)
Epoxy / polyurethane

Alpha Ventus

Company name (Owner): E.ON Climate & Renewables GmbH, EWE AG, Vattenfall Europe Windkraft GmbH (Vattenfall AB)

Location: North Sea

Country: Germany

Year: 2008

Total number of turbines: 12

Coating System (Jacket, Cable and main deck)	DFT
Epoxy / polyurethane	680µm
OSS: Epoxy / polyurethane	320µm

Coating System (Transition Pieces)	DFT
Epoxy / polyurethane	320µm



Thornton Bank

Phase 1, 2 and 3. North Sea
Belgium, 2008, 2010

Source: Hans Hillewaert

Offshore wind references

Thanet

Company name (Owner): Vattenfall Windkraft GmbH (Vattenfall AB)

Location: Thanet district, Kent, North Sea

Country: United Kingdom

Year: 2008

Total number of turbines: 100

Power rating of the wind turbines: 3,0mW

Coating system (Transition Pieces)	DFT
Epoxy / polyurethane	850µm

Thornton Bank

Phase 1:

Company name (Owner): Dredging, ENV & Marine Eng (DEME), EDF SA, Socofe, Nuhma, RWE Innogy GmbH (RWE AG), Societe Regionale d'Investissement de Wallonie, Marguerite Fund

Contractor: Lemants Belgium

Location: North Sea

Country: Belgium

Year: 2008

Number of carbon steel Boat Landings: 12

Power rating of the wind turbines: 6,15mW

Coating system (Transition Pieces)	DFT
Epoxy	550µm

Phase 2 and 3:

Company name (Owner): Dredging, ENV & Marine Eng (DEME), EDF SA, Socofe, Nuhma, RWE Innogy GmbH (RWE AG), Societe Regionale d'Investissement de Wallonie, Marguerite Fund

Contractor/subcontractor: Smulders for Jackets, Willems for main platforms, lemants Belgium for apperturances

Location: North Sea

Country: Belgium

Year: 2010

Number of turbines phase 2: 30

Number of turbines phase 3: 18

Total number of turbines: 48

Power rating of the wind turbines: 6,15mW

Coating System (Jacket)	DFT
Epoxy / polyurethane	660µm

Research platform:

Fino 2:

Company name (Owner): BMWi

Location: Baltic Sea

Country: Germany

Year: 2007

Coating System (Platform)	DFT
Epoxy / polyurethane	550-750µm
Coating System (Mast)	DFT
Epoxy / polyurethane	320µm

Research platform:

Fino 3:

Company name (Owner): BMWi

Location: Baltic Sea

Country: Germany

Year: 2008

Coating System (Platform, Mast)	DFT
Epoxy / polyurethane	580-830µm
Dulux system (Hot dip galvanization plus coating)	

Offshore wind references

Bard 1

Company name (Owner): BARD Holding GmbH, Ocean Breeze Energy GmbH & Co. KG.

Location: North Sea

Country: Germany

Year: 2010

Total number of turbines: 80

Power rating of the wind turbines: 5,0mW

Foundation: Tripile

Coating System (Tripiles)	DFT
Epoxy / polyurethane	680µm

Coating System (Towers)	DFT
Epoxy / polyurethane	320µm

Baltic 1

Company name (Owner): EnBW Energie Baden-Württemberg AG, Albwerk GmbH & Co. KG, Electricity plant Mittelbaden AG & Co. KG, ENEREGIO GmbH, Ostürttemberg DonauRies EnbW AG, Energy Calw GmbH, Energy and water Supply Bruchsal, ENRW energy Rottweil GmbH & CO. KG, e.wa riss GmbH & Co. KG, FairEnergie GmbH, Stadtwerke Düsseldorf AG, Stadtwerke Esslingen am Neckar GmbH & Co. KG, Stadtwerke Ettlingen GmbH, Stadtwerke Fellbach GmbH, Stadtwerke Schramberg GmbH, Stadtwerke Sindelfingen GmbH, Stadtwerke Sinsheim supply GmbH & Co. KG, Technical Schussental GmbH & Co. KG, ZEAG Energie AG

Location: Baltic Sea

Country: Germany

Year: 2010

Total number of turbines and towers: 21

Power rating of the wind turbines: 2,3mW

Foundation: Monopile

Coating System (Monopile, Transition Pieces)	DFT
Epoxy / polyurethane	660µm

Coating system (Towers)
Metallisation / epoxy / polyurethane

Baltic 2

Company name (Owner): EnBW Energie Baden-Württemberg AG

Location: Baltic Sea

Country: Germany

Year: 2014, 2015

Total number of turbines and towers: 80

Power rating of the wind turbines: 3,6mW

Foundation: Monopile

Also OSS (Offshore SubStation)

Coating System (Monopile, Transition Pieces)	DFT
Epoxy / polyurethane	660µm

Coating system (Towers)
Metallisation / epoxy / polyurethane



Bard 1

North Sea
Germany, 2009, 2010



Walney 2

Walney Island off the coast of Cumbria
United Kingdom, 2011

Offshore wind references

Greater Gabbard

Company name (Owner): RWE npower renewables, SSE Renewables Holdings Limited

Location: Inner Gabbard and The Galloper banks, North Sea

Country: United Kingdom

Year: 2010

Total number of turbines: 140

Power rating of the wind turbines: 3,6mW

Coating System (Permanent Offshore Meteorological Station)	DFT
Epoxy / polyurethane	660µm

Walney 1

Company name (Owner): DONG Energy, Scottish and Southern Energy,

Ampère Equity Fund (Tripos Bank), PGGM

Location: Walney Island off the coast of Cumbria

Country: United Kingdom

Year: 2010

Total number of turbines Walney 1: 51

Power rating of the wind turbines: 3,6mW

Foundation: Monopile

Coating System (Transition Pieces)	DFT
Epoxy / polyurethane	Total min. 1050µm

Walney 2

Company name (Owner): DONG Energy, Scottish and Southern Energy,

Ampère Equity Fund (Tripos Bank), PGGM

Location: Walney Island off the coast of Cumbria

Country: United Kingdom

Year: 2011

Total number of turbines Walney 2: 51

Power rating of the wind turbines: 3,6mW

Foundation: Monopile

Also OSS (Offshore SubStation)

Coating System (Jacket, Cable and main deck)	DFT	Coating System (Transition Pieces)
Epoxy / polyurethane	Total min. 830µm	Metallisation / epoxy / polyurethane

Offshore wind references

Le Carnet (44 St Nazaire)

Company name (Owner): Alstom Power
Country: France
Year: 2011
Total number of turbines: 1
Power rating of the wind turbines: 6mW

Coating System (Foundation)	DFT
Epoxy / polyurethane	830µm

West of Duddon Sands

Company name (Owner): Scottish Power Renewables, Dong Energy
Location: Walney Island Cumbria
Country: United Kingdom
Year: 2012, 2013
Total number of turbines: 108
Power rating of the wind turbines: 3,6mW
Foundation: Monopile

Coating System (Transition Pieces, Monopile)
Epoxy / polyurethane

Global Tech 1

Company name (Owner): HEAG Südthessische Energy Ltd., Norderland Project GmbH, Stadtwerke München GmbH, Esportes Offshore Beteiligungs GmbH, Axpo International S.A., Windreich AG, FC Wind 1 GmbH, FC Wind 2 GmbH, GTU I GmbH
Location: North Sea
Country: Germany
Year: 2012, 2013
Total number of turbines: 80
Power rating of the wind turbines: 5mW
Foundation: Tripod
Also OSS (Offshore SubStation)

Coating System (Tripods)	DFT
Epoxy / polyurethane	670µm

Coating System (Towers)	DFT
Epoxy / polyurethane	320µm





Borkum West 2

North Sea – Borkum Island, Germany
Source: Trianel GmbH

Offshore wind references

Teeside

Company name (Owner): EDF Energy Renewables

Location: North Sea, Teesbag

Country: United Kingdom

Year: 2012

Total number of turbines: 28

Number of turbines Hempel: 28

Power rating of the wind turbines: 2,3mW

Coating System (Transition Pieces)	DFT
Epoxy / polyurethane	670µm

Borkum West 2

Company name (Owner): Trianel GmbH

Location: North Sea – Borkum Island

Country: Germany

Total number of turbines: 40

Power rating of the wind turbines: 5,0mW

Foundation: Tripod

Also OSS (Offshore SubStation)

Coating System (Tripods)	DFT	Coating System (Towers)	DFT
Epoxy / polyurethane	670µm	Epoxy / polyurethane	320µm

Borkum Riffgat

Company name (Owner): ENOVA Energieanlagen GmbH, EWE AG

Location: North Sea

Country: Germany

Year: 2012

Total number of turbines: 30

Number of turbines Hempel: 27

Power rating of the wind turbines: 3,6mW

Coating system	DFT
Epoxy / polyurethane	670µm

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Meerwind Süd

Company name (Owner): Windland Energieerzeugungs GmbH, Blackstone Group
Location: North Sea
Country: Germany
Year: 2012
Total number of turbines: 80
Power rating of the wind turbines: 3,6mW
Foundation: Monopile
Also OSS (Offshore SubStation)

Coating System (Transition Pieces)	DFT	Coating System (Towers)
Epoxy / polyurethane	Total min. 680µm	Metallisation / epoxy / polyurethane

Northwind

Company name (Owner): Sumitomo Corporation Europe Holding Limited, Parkwind NV, Aspiravi Holding NV
Location: Vlaanderen, North Sea
Country: Belgium
Year: 2013
Total number of turbines: 72 + 2 substation
Number of turbines Hempel: 43
Power rating of the wind turbines: 3mW
Foundation: Monopile not Hempel

Coating System	DFT
Epoxy / polyurethane	660µm

Westermost Rough

Company name (Owner): DONG Energy, Marubeni Corporation, UK Green Investment Bank
Location: Withernsea Humberside
Country: United Kingdom
Year: 2014
Total number of turbines: 35
Power rating of the wind turbines: 6mW

Coating System	DFT
Epoxy / polyurethane	1150µm



WR-Z01

WR-Z01

M10
B14172

G D E

SCALES

SCALES

Westermost Rough substation

Withernsea Humberside
United Kingdom, 2014



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Since 1915 Hempel has been producing protective coatings that help customers to safeguard their assets whilst keeping them looking their best. Today we are a world-leading supplier of trusted solutions in the Protective, Decorative, Marine, Container and Yacht markets. Employing over 5,000 people, across 80 countries worldwide, with 27 factories and more than 150 stock points globally. This includes many recognised brands like Crown Paints, Blome International Inc, Schaepman and Jones-Blair.

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