Port of Cuxhaven

Base Port for the Offshore-Wind Industry And Maritime Gateway

Offshore Wind China Conference
31st May 2012, Shanghai

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Member of the Board - Port Association of Cuxhaven

Cuxhaven/Germany

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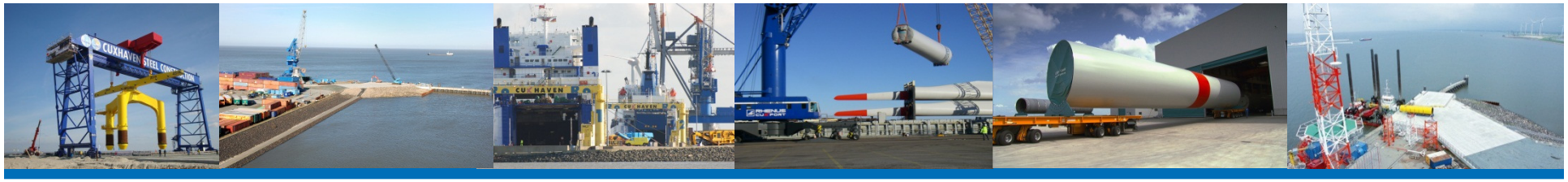
Hafenwirtschaftsgemeinschaft CUXHAVEN

Agentur für Wirtschaftsförderung Cuxhaven Landkreis Cuxhaven



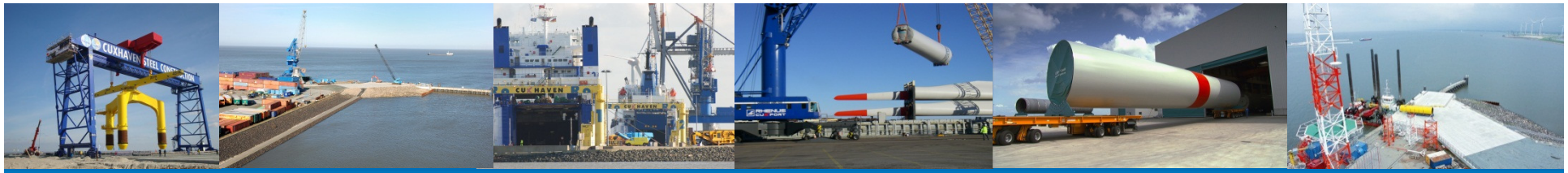
Agenda

1. Offshore Wind Energy in Germany

2. The Tasks of Offshore Base Ports

3. Cuxhaven as Offshore Base Port and Maritime Gateway

4. Summary – What can Cuxhaven offer to the Chinese Offshore Windenergy Industry

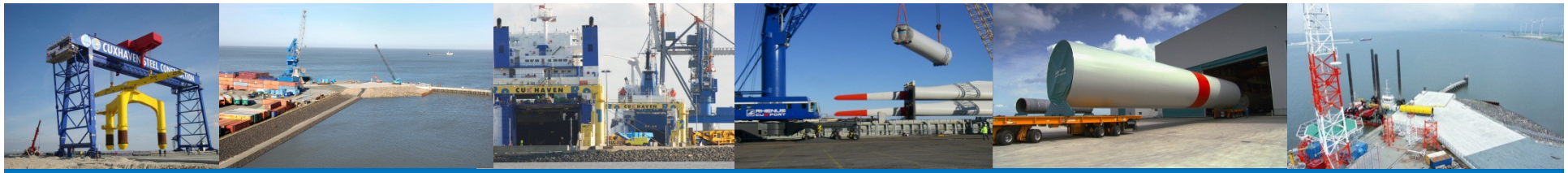


1. Offshore Wind Energy in Germany

- By 2030, the share of electricity generated from wind power is to be increased from its present level of around 5 % to at least 25 % (onshore: 10 %, offshore: 15 %).

- The German Government plans to have 10,000 MW offshore wind capacity installed by 2020.

- The long-term target for offshore wind is up to 25,000 MW by 2030.

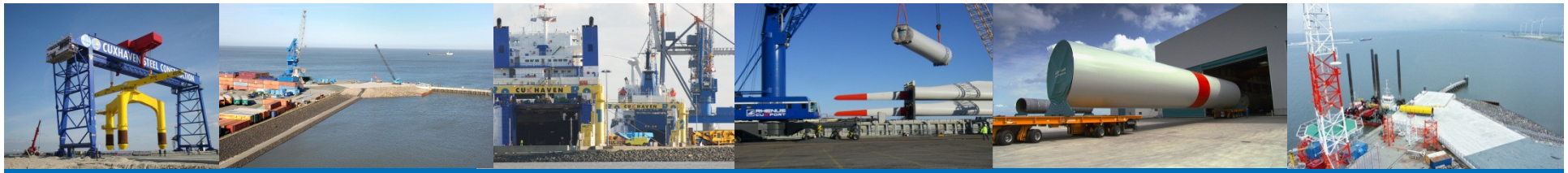


1. Offshore Wind Energy in Germany

German Challenge: 25,000 MW by 2030

- Approx. 5,000 turbines
- abt. 85 North Sea-, abt. 30 Baltic projects
- Investments: 60-100 Billion €
- 30% investment for turbines
- 70% investment for foundations, logistics, ….

and the European Market: 4 times as big!



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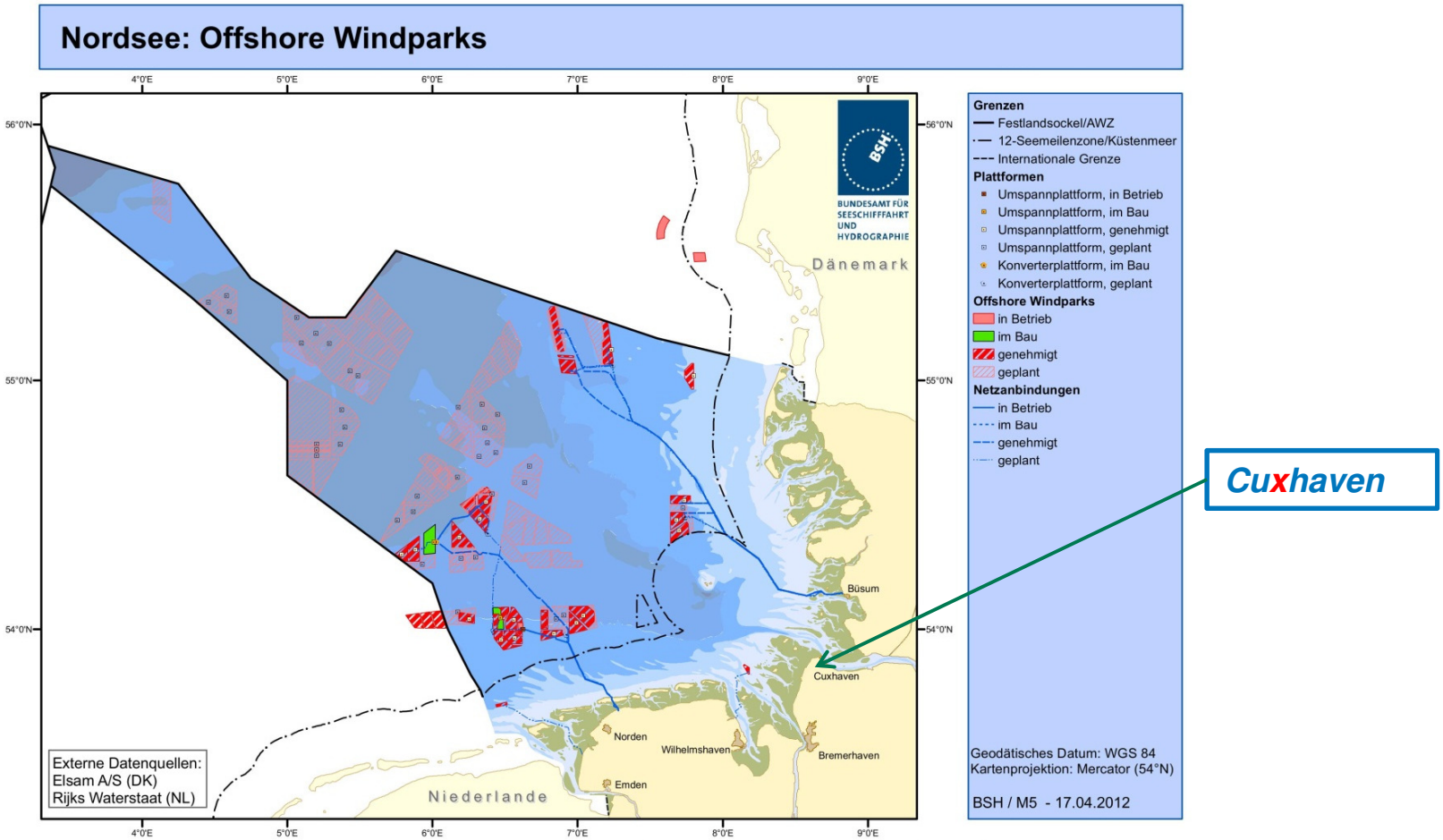

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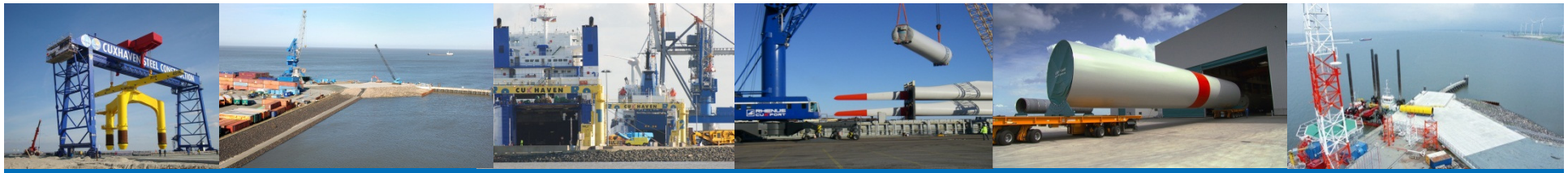
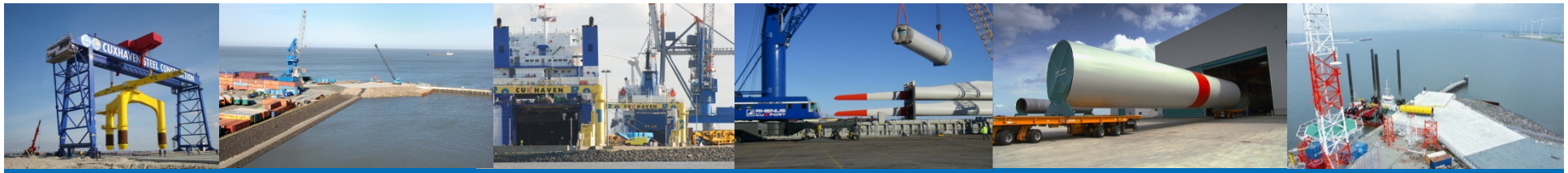


2. The Tasks of Offshore Base Ports

- Production Port for Manufacturers of Offshore Turbines or Foundations

- Installation and Assembly Port for Offshore Windfarm Projects

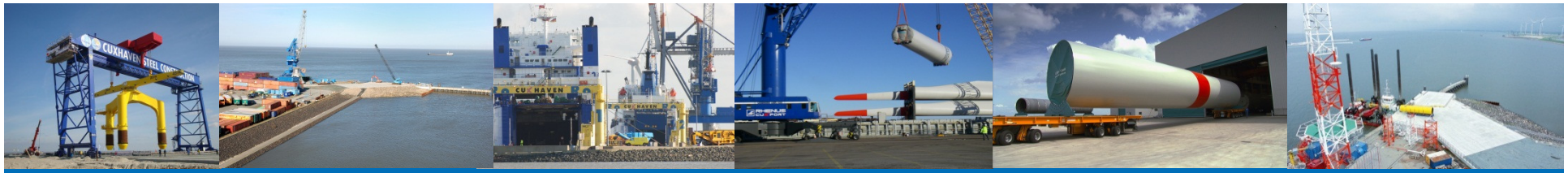
- Port for Service and Maintenance of Offshore Windfarms



2. The Tasks of Offshore Base Ports

Requirements for Production/Installation Ports

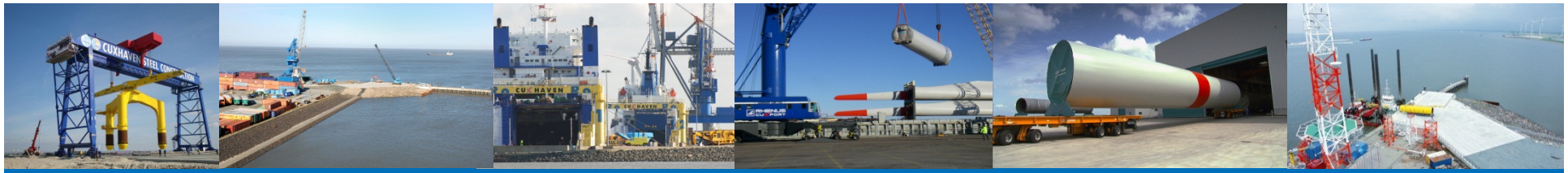
- Large industrial and commercial real estate areas close to deep-water port;
- Barrier-free, heavy-load roads from the production site to the port area;
- Port suitable for jack-up vessels, good seaside access (deep draft, wide navigation fairway, no locks), proximity to offshore windfarm locations;
- Large storage areas and preassembly sites adjacent to the deepwater quay with heavy load capability;
- Experienced port operator;
- Trimodal hinterland connection: road, railway, inland waterway.



3. Cuxhaven as Offshore Base Port and Maritime Gateway

Why Cuxhaven?

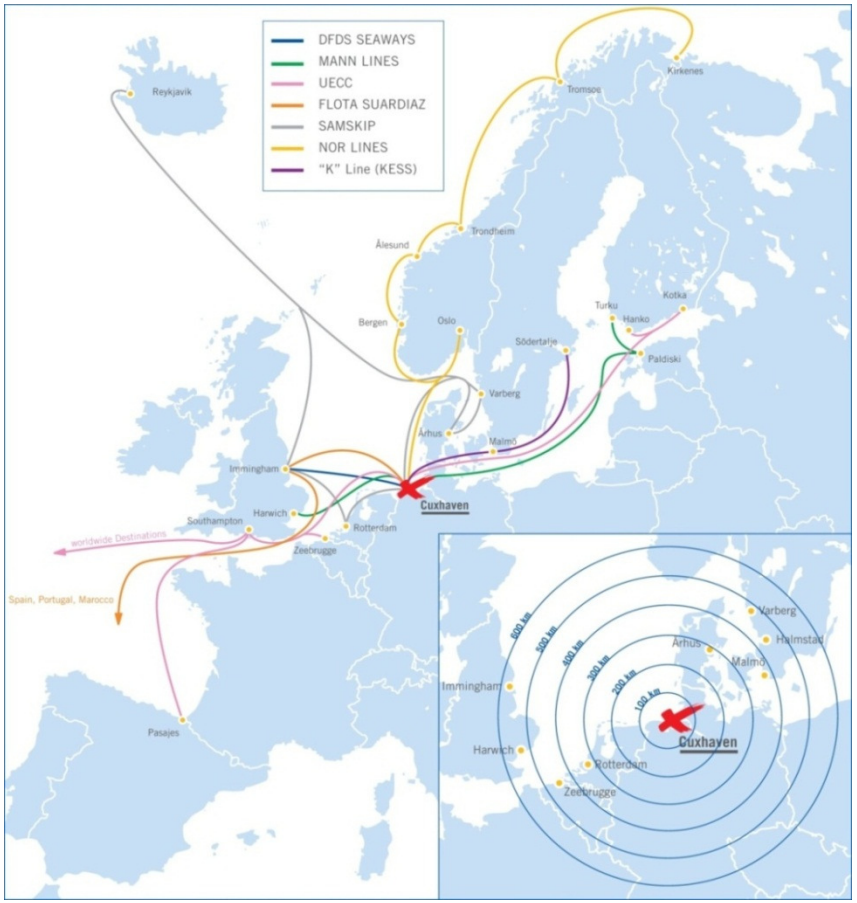
- Offshore windenergy components are too big für inland production, production near port is needed;
- Cuxhaven fulfills all requirements for Offshore Base Ports;
- The Port of Cuxhaven enjoys political support from the City, State and Federal Government;
- In 2003 the State Government decided to develop Cuxhaven as Offshore Base Port.

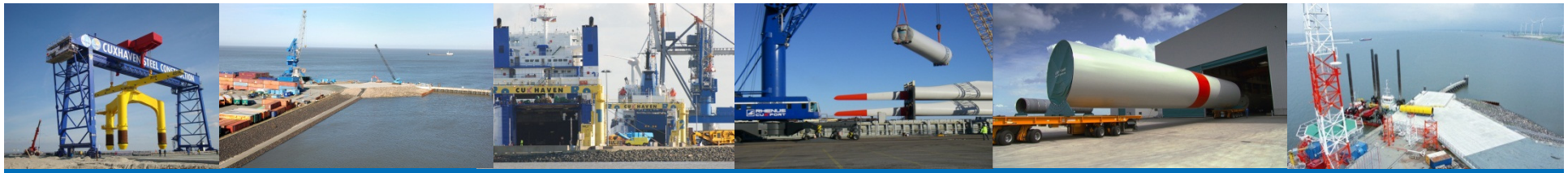


3. Cuxhaven as Offshore Base Port and Maritime Gateway

Where is Cuxhaven?

- 5 weekly RoRo-sailings from Cuxhaven to UK Immingham / river Humber area
- 1-2 weekly RoRo-sailings to UK Southampton
- RoRo-sailing Cuxhaven / Esbjerg upon demand
- 1 weekly RoRo-sailing to Estonia and Finland
- Various other European destinations upon demand
- 1 weekly container service to Iceland





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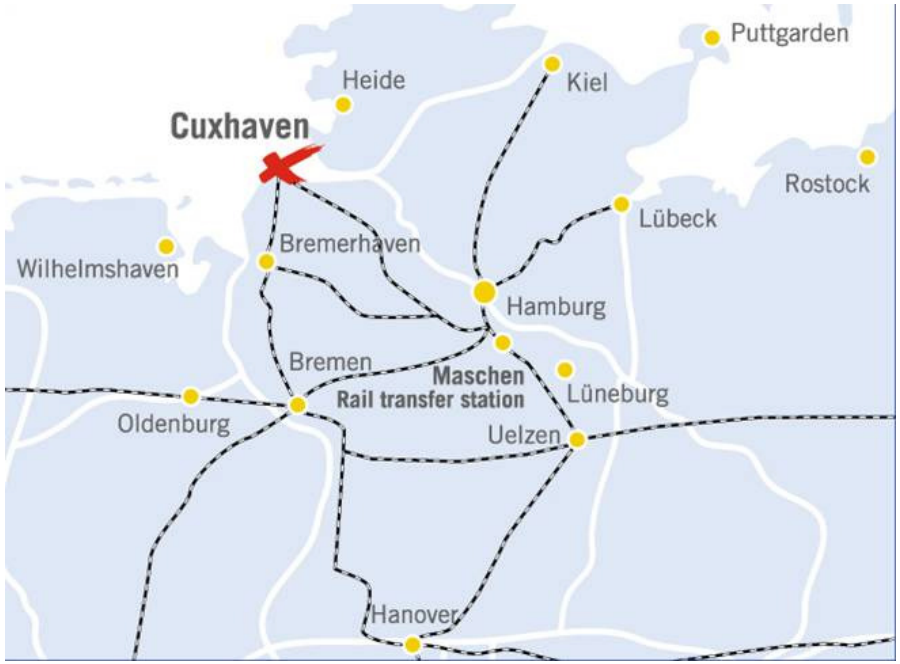
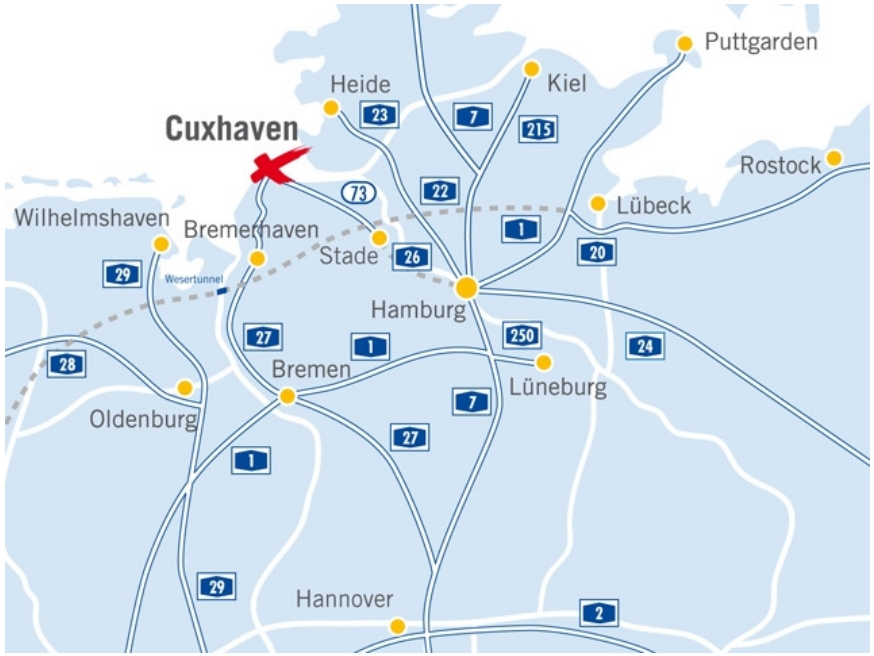
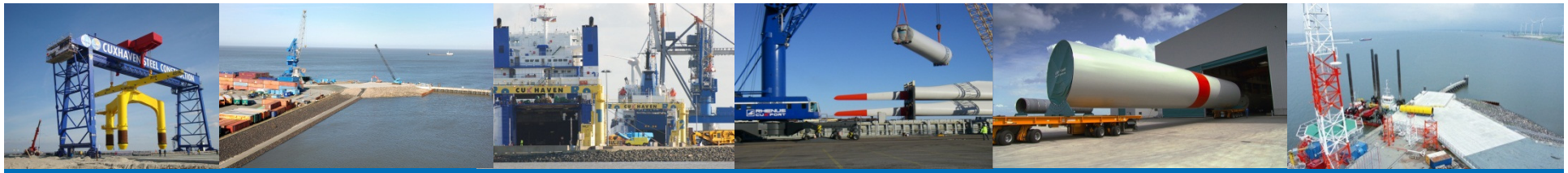




Rail

Inland Waterways

Road



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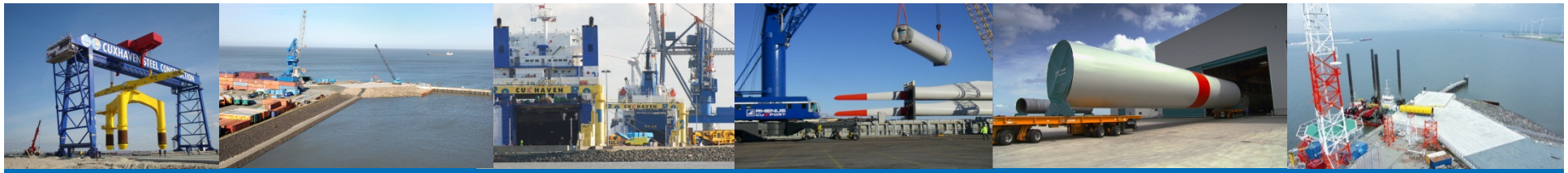
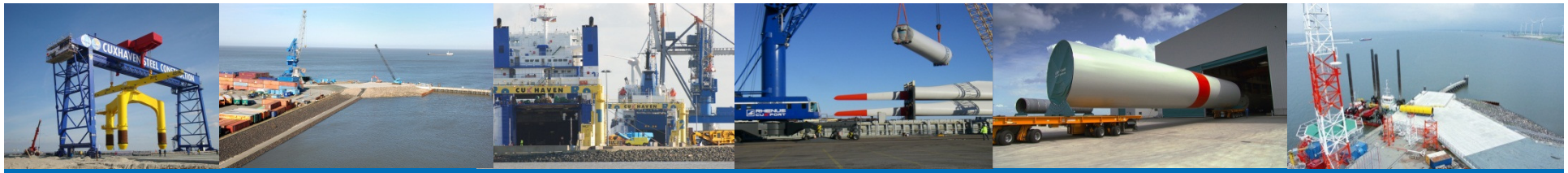


3. Cuxhaven as Offshore Base Port and Maritime Gateway

RHENUS CUXPORT Multi-Purpose Sea Terminal

Features:

- 3 deepwater berths
- no locks, straight on fairway
- 2 ro/ro-ramps (up to 350 t)
- 240.000 sqm storage area
- suited for heavy load handling
- 1 container gantry crane
- 1 mobile harbor crane (100 t)
- 3 reachstackers (45 t)
- forklifts up to 32 t
- well trained, dynamic work force



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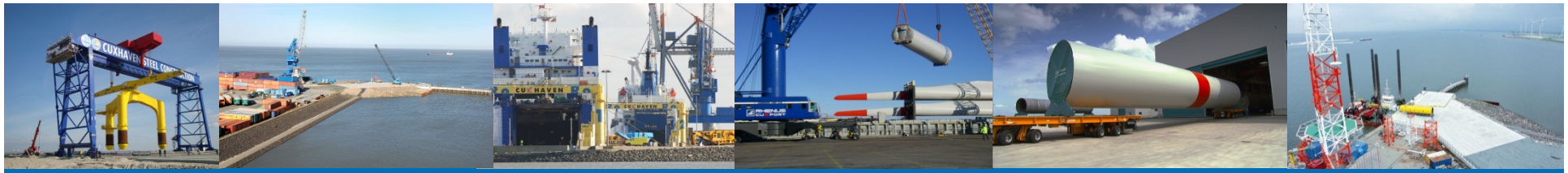
Cuxport Heavy Load Quay: high bearing capacity: 90t / qm ; 1.600 qm area; water depth 15 m



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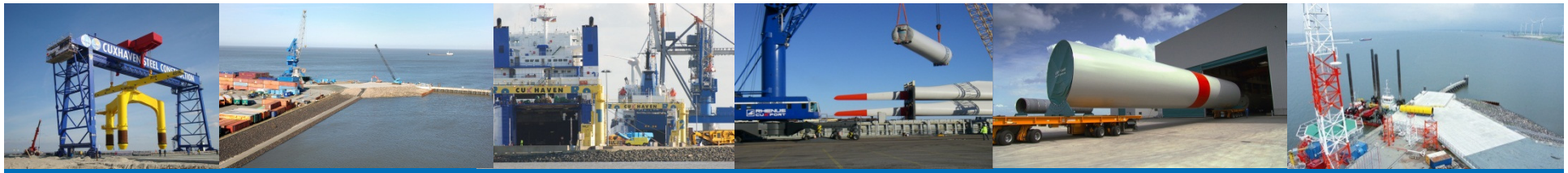
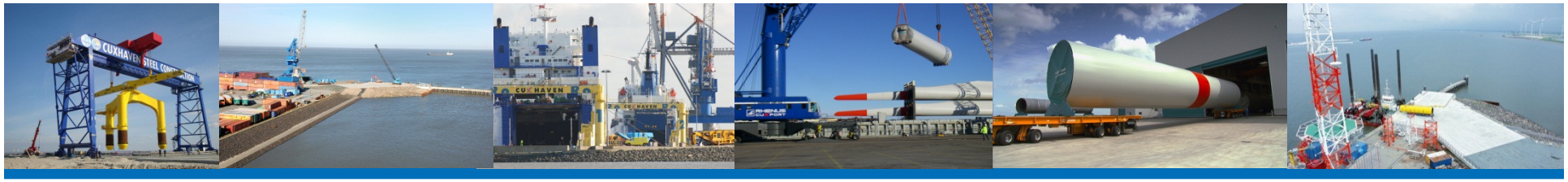
Western Part: Cuxport and Offshore Terminal 1

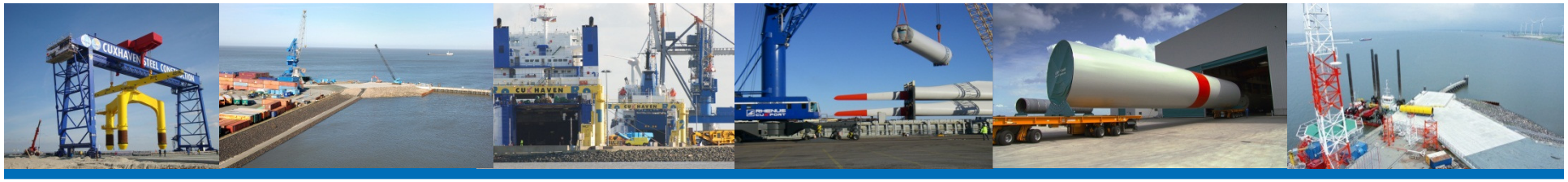


3. Cuxhaven as Offshore Base Port and Maritime Gateway

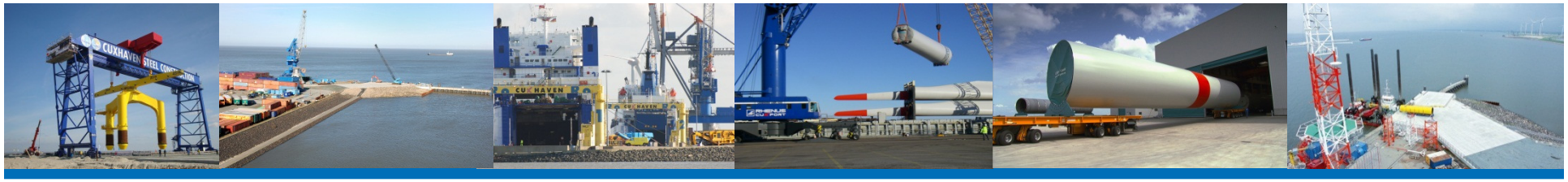
Eastern Part: Offshore Terminal 1 & 2



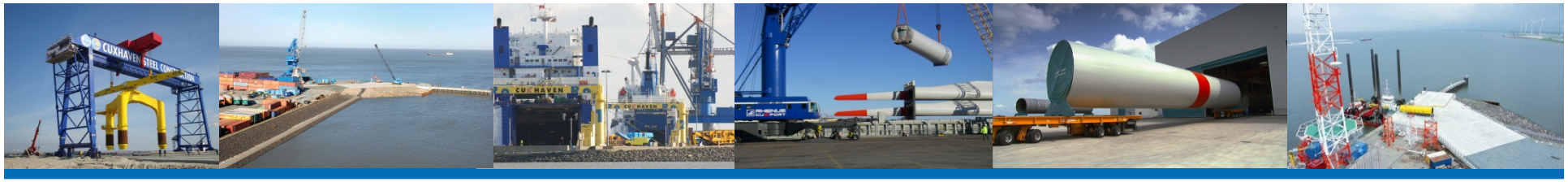
Load Option I: Using Geared Heavy Lift Vessel



Load Option 2: Using Mobile Port Cranes

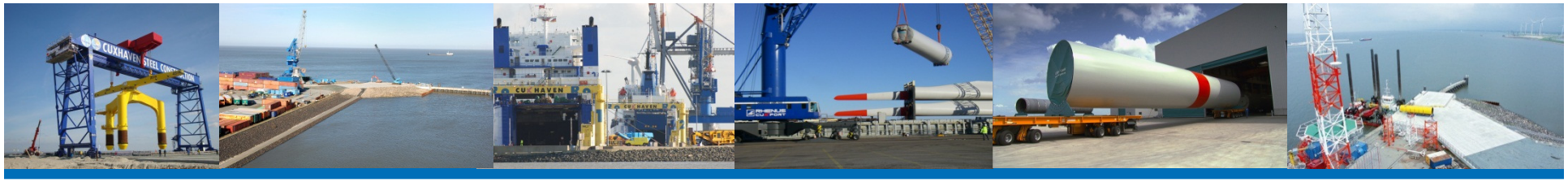


Load Option 3: Using Jack-Up Barge Cranes

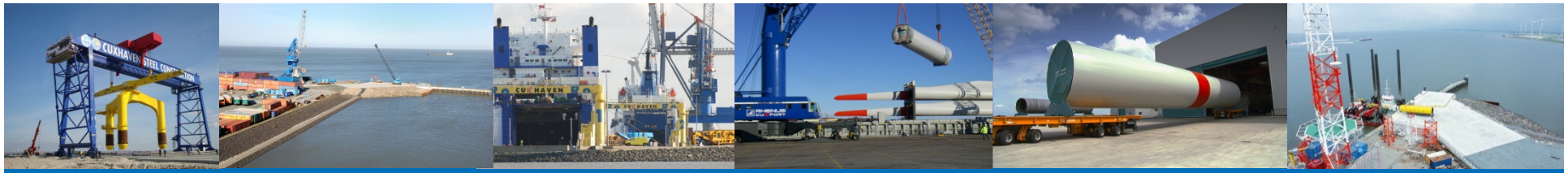


Load Option 4: Rolling by use of SPMT

Load Option 5: Rolling by use of RoRo-ramp – up to 350 t cargo weight



Load Option 6: Using 600 t Port Gantry Crane



3. Cuxhaven as Offshore Base Port and Maritime Gateway

Loading of foundations for first German commercial windfarm: BARD Offshore 1

Otto Wulf GMBH & CO.KG
Cuxhaven - Rostock

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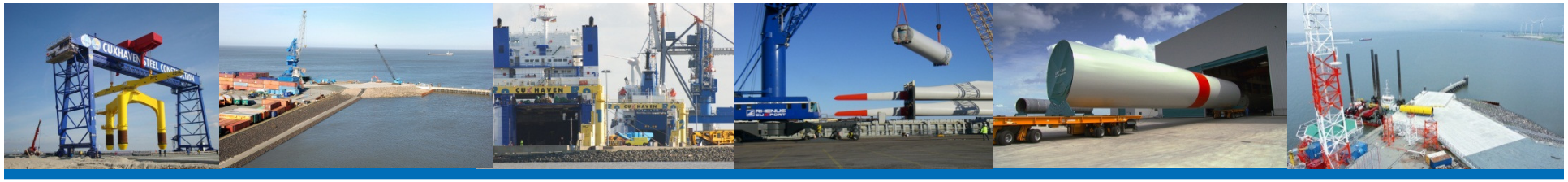

BARD Offshore 1: Handling of Components on Windfarm Site

Otto Wulf GMBH & CO.KG
Cuxhaven - Rostock

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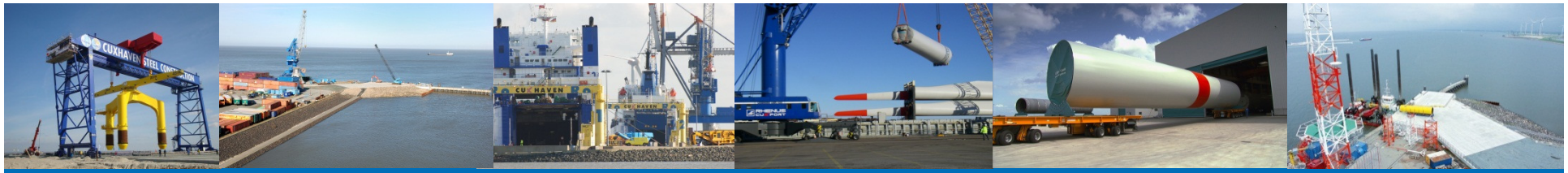
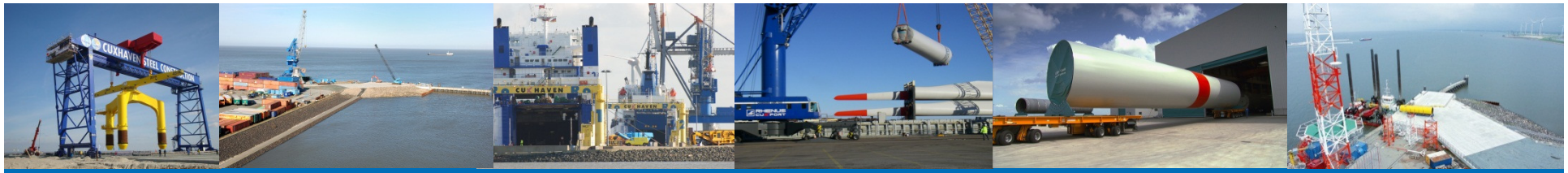


3. Cuxhaven as Offshore Base Port and Maritime Gateway

All sea terminals of the Offshore Base Cuxhaven are linked with the manufacturing plants via port internal heavy load road.



Manufacturers of Wind Energy Components in Cuxhaven

AMBAU GmbH:

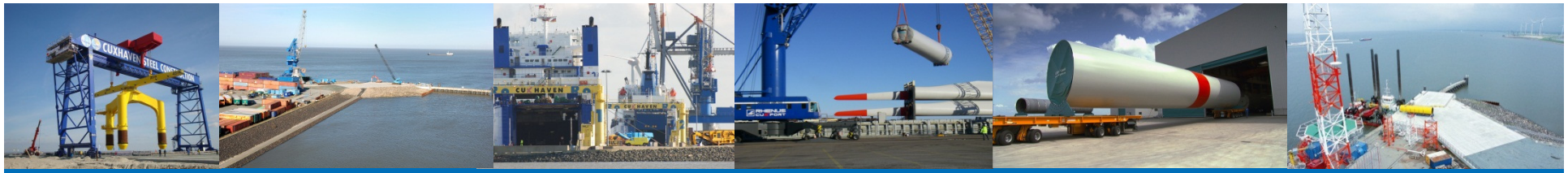
- steel tower sections
- steel foundations

CSC -
Cuxhaven Steel
Construction GmbH:

- steel foundation structures

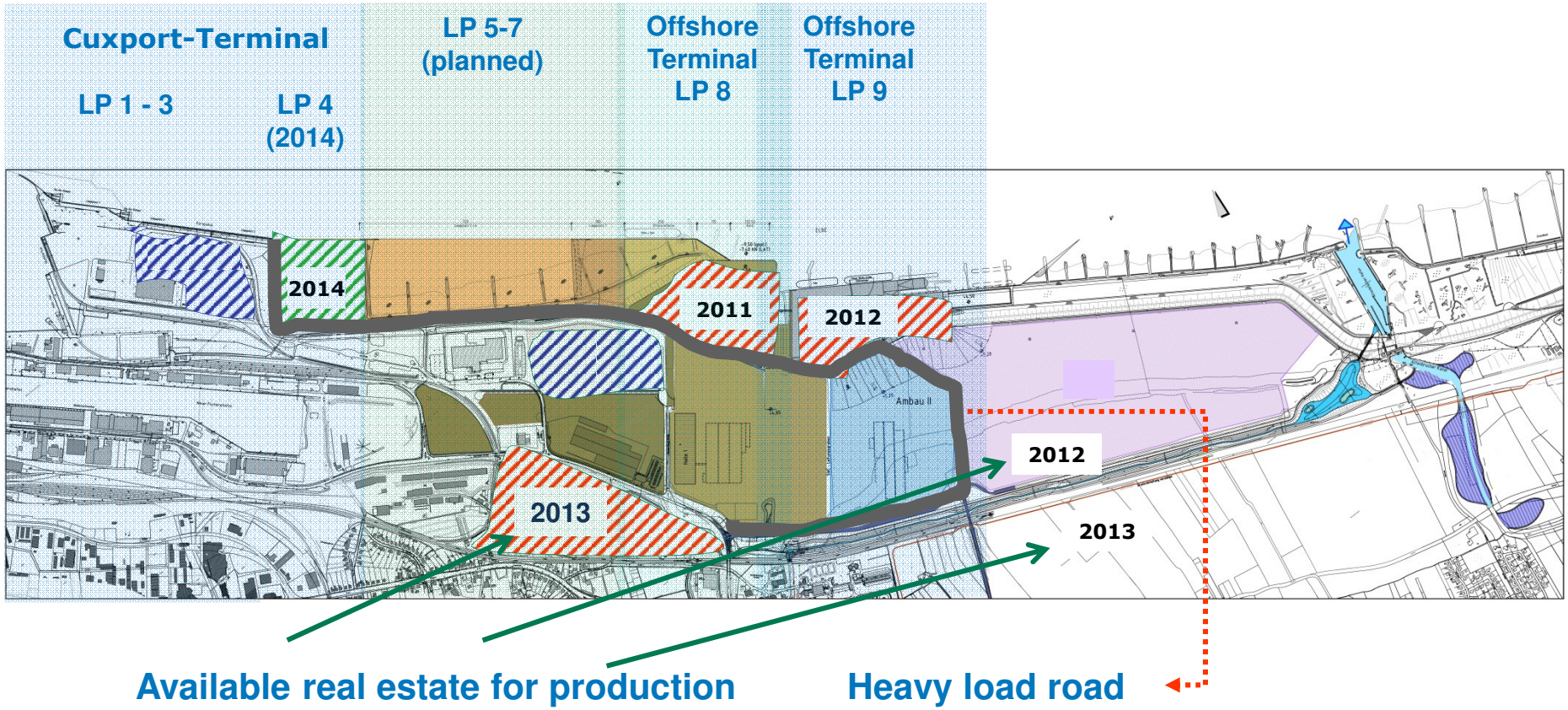
STRABAG Offshore
Wind GmbH:

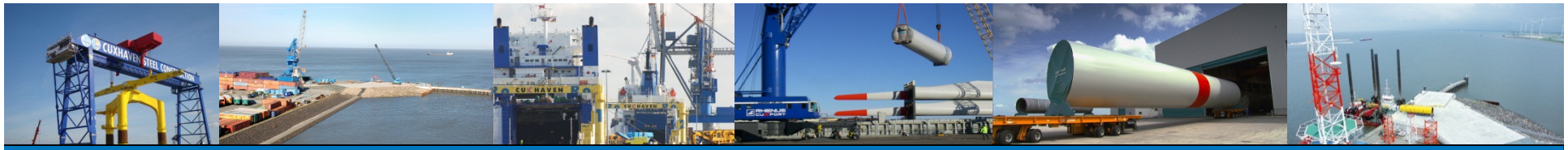
- reinforced concrete foundation structures



3. Cuxhaven as Offshore Base Port and Maritime Gateway

Map of the Port





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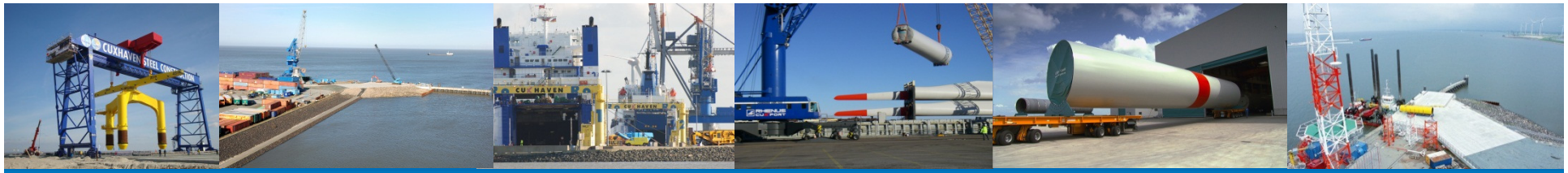
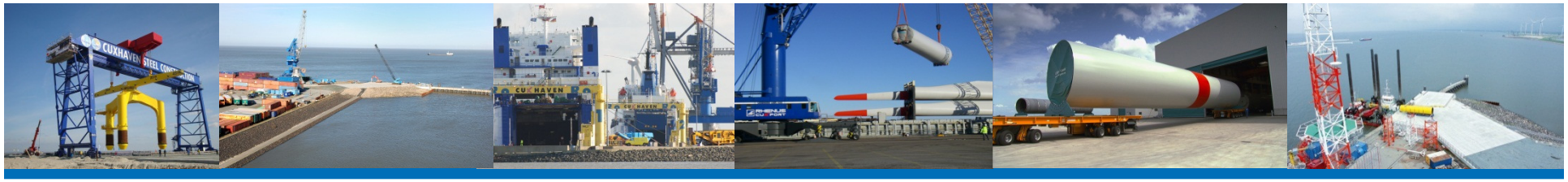


4. Summary – What can Cuxhaven offer to the Chinese Offshore Windenergy Industry?

- Maritime gateway for off- or onshore windenergy components exported from China to the European market;
- Land area for Chinese manufacturer of offshore windenergy components to set up their own production plant in Cuxhaven;
- In depth knowledge and experience for port infrastructure and logistics needed for offshore windenergy projects.



Many thanks for your attention!

More information on our websides:

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