



## Your reliable partner for the offshore wind industry

STEELWIND is a high-tech company of the offshore wind industry and one of the worldwide leading manufacturers of monopiles.

#### **FOUNDED IN 2011**

Since 2014 STEELWIND is producing monopiles and TP-less monopiles for offshore wind projects at its fabrication yard in Nordenham/Germany with direct access to the North Sea.

#### FIRST CHOICE

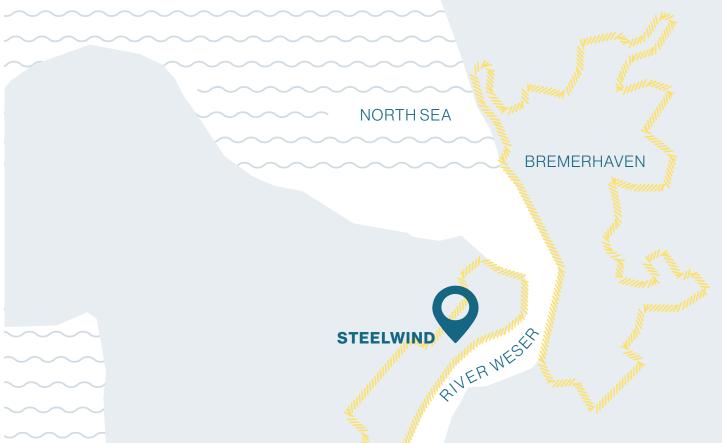
State-of-the-art fabrication equipment, a large outdoor storage area on-site and the company-owned quayside for load out of the monopiles make STEELWIND the first choice for your offshore wind projects.

#### HIGH QUALITY SOLUTIONS, OPTIMIZED SERVICES

As a reliable partner for the offshore wind industry, we offer high quality solutions, optimized services, efficient logistics and tailor-made project management. A specialized fabrication system for the integral production of monopiles covers all necessary onshore works and services like coating or assembly of secondary structures. The high quality of our projects benefits from our experienced staff, their knowledge and teamwork.

DILLINGER

STEELWIND is a **100** % subsidiary of Dillinger which is our reliable supplier for highest quality heavy steel plates.



## **Location Nordenham**

STEELWIND's production location is placed in the industrial area of Nordenham-Blexen, directly at the river Weser, vis-à-vis of the seaside town Bremerhaven.

The manufacturing facility in Nordenham/ Germany with direct access to the North Sea. The quayside at the River Weser estuary can be approached from the North Sea without nautical difficulties or obstacles (e.g. locks or bridges).

## OPTIMAL OPPORTUNITIES

STEELWIND is specialized in manufacturing of monopiles in series with appr. 120–150 pieces per year depending on the final design. If required, we also advise our customers on design issues and jointly develop tailor-made concepts for offshore wind projects. Our qualified team supports you in all matters relating to monopile foundations.

Additionally, our location offers unique possibilities for the production of heavy foundation systems. We also provide optimal opportunities for the logistics with the heavy lift terminal Blexen and the associated storage area.

#### **TECHNICAL FACTS**

#### **Technical Key Data Fabrication Yard**

Total Area	320,000 m <sup>2</sup>
Production Plant (Roofed Area)	<b>44,000 m²</b> (without coating)
Storage Area	135,000 m²
Shot Blasting and Coating Shop	<b>8,200 m²</b> (6 halls)
Capacity	120 MPs per year

#### Monopiles

## **Product Specifications**



#### **Monopiles**

Unit Weight	up to <b>2,800 t*</b>
Length	up to <b>120 m</b>
Diameter	up to <b>11.5 m*</b>
Wall Thickness	up to <b>150 mm</b>

\*Planned from 2027

### Monopiles are by far the predominant foundation type for offshore wind turbines.

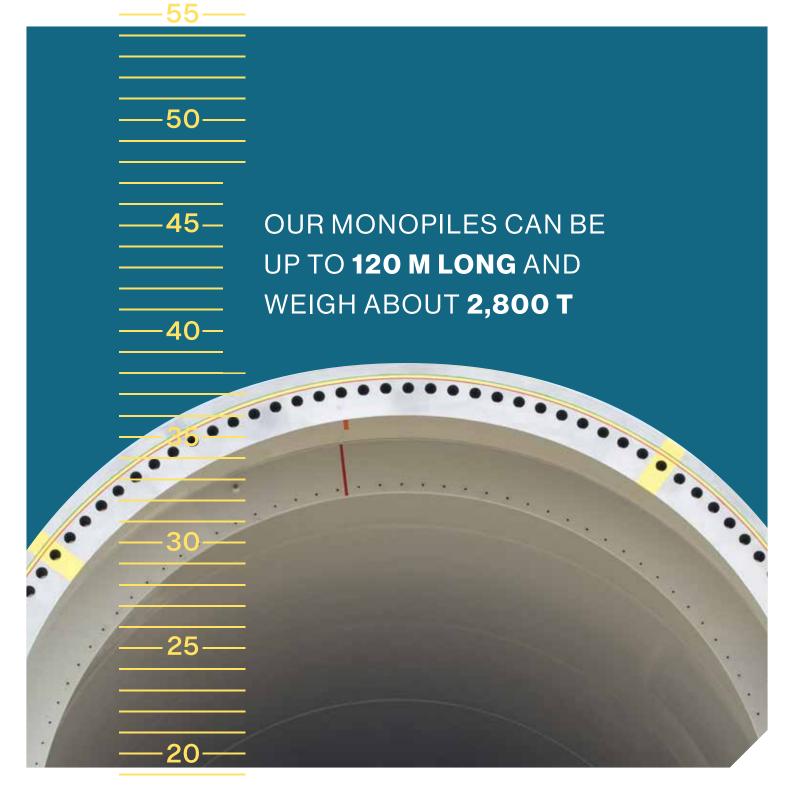
They consist of a single steel support tube, which is piled into the seabed. Often a transition piece is connected, on which the wind turbine is installed. Alternatively, the functionality of a transition piece is an integrated part of the monopiles design, which makes the separate fabrication of the transition piece obsolete.

Monopile foundations have the advantage that they are quick to install and that no major preparatory work is necessary on the seabed. Another advantage is the low maintenance after installation.

#### **MANUFACTURING**

At the start of production, Dillinger's high-quality plates are joined using high-performance submerged arc welding with several welding heads. The welding processes are precisely defined and strictly controlled to ensure high productivity and quality at the same time. Using a unique combination of a bending press and subsequent roll bending machine, the plates are formed into an excellent round shape and a well-defined circumference to facilitate can assembly and minimize possible misalignment.

Quality assurance relies heavily on strictly controlled process parameters, and finally, quality is proven by state-of-the-art technologies such as UT-TOFD weld seam inspection and photogrammetric inspection of the final geometry. A diverse selection of coating options is available, ranging from standard epoxy and polyurethane-based coatings to specialized coatings like glass flake (polyester and/or epoxy), polyurea, and TSZA.



## Integrated Management System (IMS)

STEELWIND uses an Integrated Management System in which requirements for quality, environmental, occupational health and safety and energy management systems are joined together.

The IMS regulates the strategic responsibility and the operational practices in these fields of work across all operative divisions within the company.

ISO 9001

**Quality Management** 

**ISO 50001** 

**Energy Management** 

**ISO 45001** 

Occupational Health and Safety Management

**ISO 14001** 

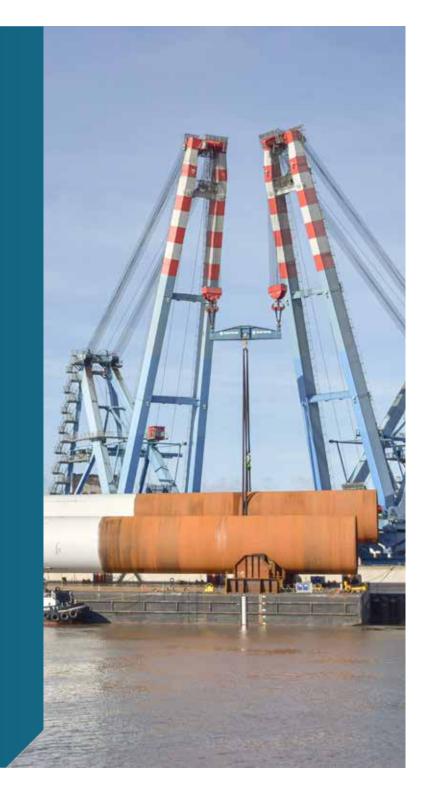
**Environmental Management** 



The IMS also fulfills the requirements of other various international and national standards and regulations such as:

- **ISO 3834-2** Requirements for fusio welding of metallic materials
- DIN EN 1090-1 (EXC3 acc. EN 1090-2)
  requirements for conformatiy assessment for structural components
- DIN EN 1090-2 (EXC3 acc. EN 1090-2)
  Technical requirements for the execution of steel structures

We raise the industrial safety and the quality of our products by constant improvement of our processes, resulting in an environmentally friendly and energy-conscious production.



# The 200 m long quay is available 24/7 to receive goods and materials or to load products. The complete quayside area can bear loads of up to 100 t/m².

**Good to know:** Foundation transport services to a marshalling port can be offered as an option.



### Monopiles and Beyond

## **Quay Information**

#### **Quayside Details**

Quay Length	200 m
Max. Ship Length	250 m (after detail check)
Water Depth	6.0 m LAT (low tide)
Tidal Hub	4 m
Number of Ships	Max. <b>2</b>
Heavy Load Capability / Capacity	100 t/m²
Heavy Duty Cranes	2 × Cranes with max. capacity 800 T each
Crane Swing Range	<b>45 m</b> (800 T/1,600 T) <b>60 m</b> (500 T/1,000 T)
Mobile Cranes	Yes, after detail check
Operator	Saar-Rhein Transportgesellschaft mbH







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