KASAOKA MONOPILE FACTORY

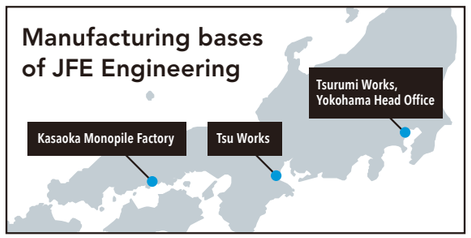
SUSTAINABLE DEVELOPMENT GOALS

Using world-class technology to realize a sustainable society

Sustainable Development Goals (SDGs) aim to realize a world where all people live a rich and healthy life while reducing the load on the global environment. The Kasaoka Monopile Factory will focus on activities to attain the SDGs.

JFE Engineering Corporation will contribute to the establishment of a domestic supply chain for offshore wind power generation businesses to help realize carbon neutrality by 2050.
The Kasaoka Monopile Factory aims to become a manufacturing base that does the following:

- Establishes social infrastructure that will support a comfortable life for everyone
- Contributes to Japan's first manufacturing of monopile foundations
- Passes on society-, eco-, and worker-friendly manufacturing to the next generation



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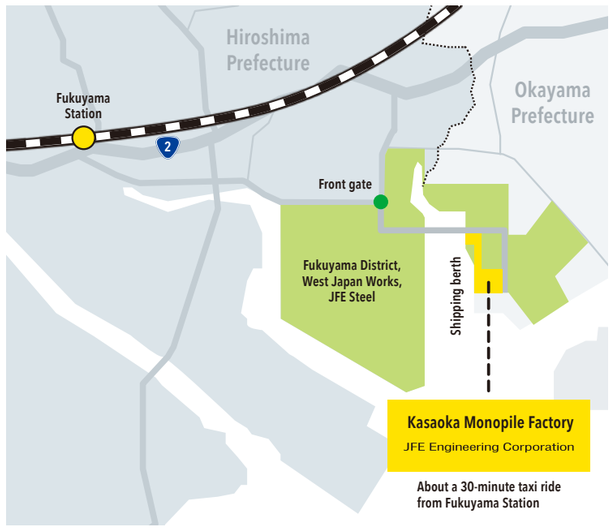

Foundation of Life — Just For the Earth

JFE Engineering Corporation

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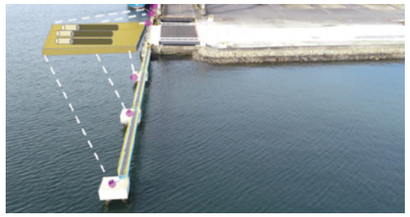
JFE Engineering Corporation

Japan's first monopile manufacturing factory

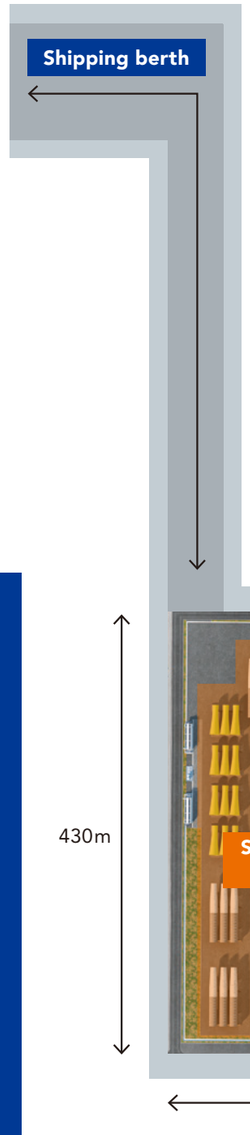
Manufacturing the foundation for a decarbonized society

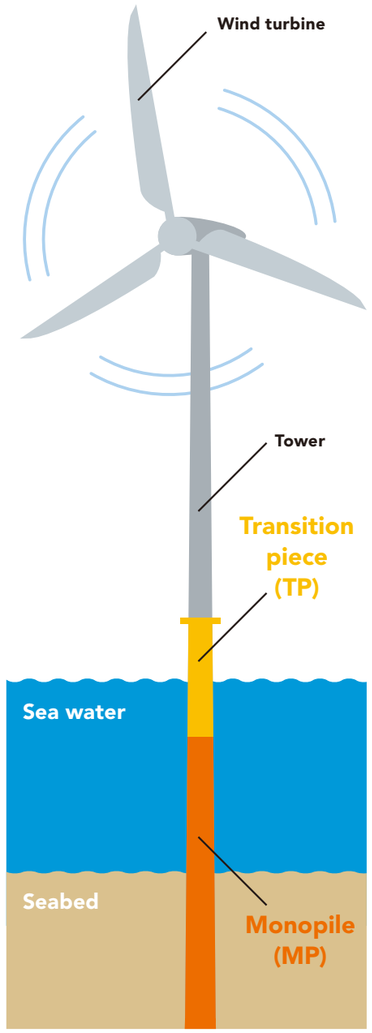
Monopile foundations, which consist of monopiles that support wind turbine towers and transition pieces that are the connecting tubes to the wind turbine towers, are one of the foundation types for offshore wind turbines. Kasaoka Monopile Factory was established in Kasaoka City, Okayama Prefecture in April 2024, as Japan's first monopile manufacturing factory, taking advantage of JFE Engineering's technical capabilities and JFE Steel's large and heavy steel plate (J-TerraPlate ™).



Shipping berth adjacent to the factory

Monopile transported by self-propelled modular transporters (SPMTs)





Overview
Site Area: 200,000 m²
Production Capacity: Approx. 100,000 t/year
(Equivalent to 50 sets of monopiles and transition pieces)

Manufacturing Capacity
Maximum Diameter: 12 m
Maximum Plate Thickness: 130 mm
Maximum Length: 100 m
Maximum Weight: 2,500 tons

* Please contact JFE Engineering about the feasibility of manufacturing above the limits.

Main facilities (as of April 2024)	
Facility	Number
200-ton gantry crane	5
80-ton gantry crane	1
Two-torch NC gas cutting machine	1
Double-headed beveling machine	2
Butt welding machine	4
Roll bender	2
Welding line for single cans	2
Welding line for tubular segments	4
Welding line for MPs/TPs	2
Blasting facility (inspection facility)	1
Coating facility	4

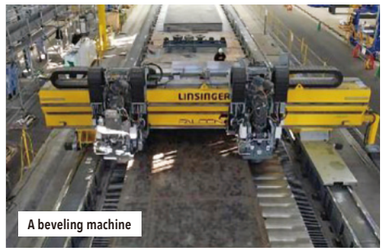
Integrated service from plate processing to product shipment

Cutting, bending, and connecting extra-thick plates with cutting-edge machines

We installed cutting-edge facilities in an optimal way in order to manufacture XXL monopiles in an efficient and safe manner. We will meet the increasing needs for the foundations of offshore wind power generation.

1 Beveling

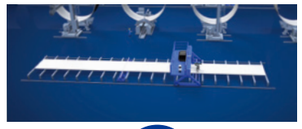
Bevel extra-thick plates in a highly precise and rapid manner.



A beveling machine

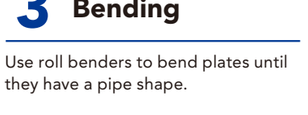
2 Plate jointing

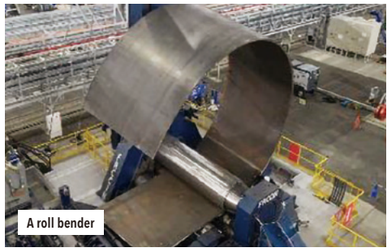
Joint extra-thick plates by using special equipment and controlling weld distortion.



3 Bending

Use roll benders to bend plates until they have a pipe shape.





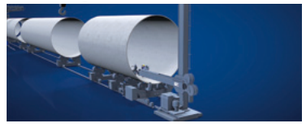
A roll bender

4 Welding for single cans

Weld the bended plates to complete single cans.

5 Welding for tubular segments

Connect the single cans by circumferential welding to complete tubular segments.



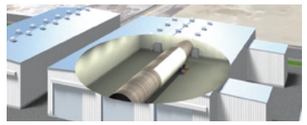
A welding facility for tubular segments

6 Welding for MPs and TPs

Connect the tubular segments by circumferential welding to complete a full-size can.

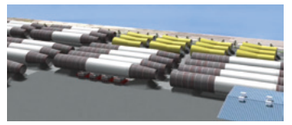
7 Coating

Applying high-quality coating while using air-conditioning systems to control temperatures and humidity.



8 Storage

Store the completed products in the storage yard until they are shipped.



9 Loadout

The completed products are transported to the shipping berth by using SPMTs and loaded on transport vessels for shipping.