



Press Release

# HERRENKNECHT

## Second wind farm with Herrenknecht OFD technology

May 08, 2024

Schwanau, Germany

**Beginning in mid-May, Herrenknecht's Offshore Foundation Drilling (OFD®) technology will be used in the construction of the Noirmoutier wind farm off the French Atlantic coast. The mechanized drilling method developed by Herrenknecht and DEME to install foundations for large-diameter monopiles was used for the first time at the St. Nazaire wind farm in 2021 and 2022.**

\_\_\_\_\_ Offshore Foundation Drilling (OFD®) makes it possible to safely install foundations for wind turbines and other coastal infrastructure even in rocky seabed. The technology thus opens up new terrain for offshore wind energy and the expansion of renewables. For the new wind farm, OFD will be used to drill boreholes for 61 monopiles in the rocky Atlantic seabed between the islands of Noirmoutier and Yeu. Each monopile has a diameter of 7 meters and will serve as the foundation for one of the more than 200-meter-high wind turbines. The innovative drilling method was already successfully used at the Saint-Nazaire offshore wind farm in 2021/2022. The machine used there was completely overhauled by Herrenknecht. The new project off Noirmoutier is subject to similarly challenging weather, sea and bottom conditions as off St. Nazaire. With water depths of up to 36 meters, the monopiles will be embedded in the rocky seabed.

### Successful cooperation continues

The monopiles for the Noirmoutier wind farm will be installed by the leader in offshore wind solutions DEME. DEME and Herrenknecht jointly developed the drilling and installation method and are continuing their close collaboration with the second project. Herrenknecht supplies the drilling technology and provides specialized drilling personnel who are constantly on board the installation vessel in shifts during the project. DEME is responsible for the installation of the monopiles and the MODIGA (Monopile Offshore Drilling Installation and Grouting Aid). It serves as a drilling template and enables controlled lowering using a liner, which also stabilizes the borehole. The 73 drilled foundations for the Saint-Nazaire wind farm have already been installed using the mechanized drilling method for large-diameter monopiles developed by the two technology leaders as a world first. This reference project was fully completed entirely on schedule.

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### **Proven OFD machine overhauled at the plant**

The drilling for Noirmoutier will be carried out with the 350 tonnes OFD machine also used off St. Nazaire in 2021/2022. It has a drilling diameter of 7,700 millimeters and an impressive drive power. For the construction of the new wind farm project, the OFD machine was thoroughly overhauled by Herrenknecht, subjected to extensive functional tests with comprehensive test documentation and then transported back to Vlissingen, the home port of the installation vessel "Innovation". In addition to overhauling the machines and reusing them in new projects, Herrenknecht's sustainability concept includes using OFD drilling technology to keep the seabed largely intact and reduce noise emissions that are harmful to underwater fauna.

### **Project execution**

Installation of the monopiles will begin soon. Monopiles will be loaded onto the installation vessel in the port of La Rochelle. After the drilling process, the monopile is then inserted into the lowered liner, creating the foundation for a wind turbine. During the installation period for the wind farm foundations, a team from Herrenknecht will always be on board to control and maintain the OFD drilling machine.

After completion, the Noirmoutier windfarm will have a total output of 496 MW and generate around 1,900 gigawatt hours of electricity per year from, covering the needs of 800,000 inhabitants.

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#### **PROJECT DATA PARC EOLIEN EN MER DES ÎLES D'YEU ET DE NOIRMOUTIER**

- › Client: Éoliennes en Mer des Îles d'Yeu et de Noirmoutier (EMYN), with shareholders Ocean Winds (joint venture of ENGIE and EDP Renewables), Sumitomo Corporation, la Banque des Territoires and Vendée Energie
- › Contractor: DEME Offshore
- › Application: Offshore wind power, monopiles, diameter 7 m
- › Drilling depths: 15 – 27 m
- › Water depths: 19 – 36 m
- › Geology: mostly rock with hardness between 25 MPa and 120 MPa max.

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#### **DRILLING TECHNOLOGY**

- › Machine type: Herrenknecht OFD7700
- › Drilling diameter: 7,700 mm
- › Weight: 350 t

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## Photos



**Photo 1**

Jack-up vessel "Innovation" installs a monopile for the Saint-Nazaire wind farm (2021-2022)



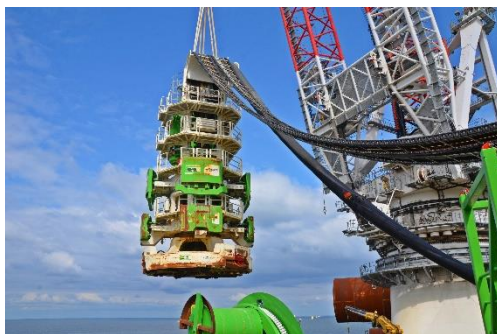
**Photo 2**

Offshore Foundation Drilling: OFD machine. Factory Acceptance Test, September 09, 2020, Herrenknecht HQ, Schwanau, Germany



**Photo 3**

Offshore Foundation Drilling: OFD installation principle



**Photo 4**

Offshore Foundation Drilling: OFD machine on the installation vessel's crane (Saint-Nazaire wind farm, 2021-2022)

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**Photo 5**

Offshore Foundation Drilling: the OFD machine is inserted into the MODIGA (Monopile Offshore Drilling Installation and Grouting Aid), Saint-Nazaire wind farm 2021-2022

## For further information: Please contact us.

### **Herrenknecht AG**

Herrenknecht AG is the only company worldwide to deliver tunnel boring machines for all geologies and in all diameters – ranging from 0.10 to 19 meters. The product range comprises tailor-made machines for traffic, supply and disposal tunnels, technologies for pipeline installation as well as additional equipment and service packages. Herrenknecht also manufactures drilling equipment for vertical and inclined shafts as well as deep drilling rigs.

In 2022 the Herrenknecht Group achieved total output of 1,232 million euros. The independent family business employs about 5,000 people worldwide, including approximately 200 apprentices and trainees. With around 70 domestic and overseas subsidiaries and associated companies working in related fields, Herrenknecht provides comprehensive, fast, and targeted services close to each project and contractor.

› <http://www.herrenknecht.com/en/references>

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