

Excellence
in Flow⁺

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MULTI/JOINT[®] 3000 Plus

Optimized cable protection for offshore wind energy

Customer reference: TenneT

The MULTI/JOINT[®] flange adaptor
excels in connecting PE pipes used
as cable protection from sea to shore

Efficient installation for renewable energy supply



TenneT, the Dutch and German electricity transmission system operator, connected approximately 200 kilometers of cables from offshore wind parks (Hollandse Kust Noord and West Alpha) to the mainland near Wijk aan Zee. The implementation of the MULTI/JOINT® flange fitting DN800 played a vital role in achieving TenneT's primary goal of ensuring reliable and safe electricity transmission.

Project background

The 250 mm diameter electricity cables were buried 6-8 meters deep into the ground, transitioning from the North Sea to a pipe casing. Each cable was pulled into a large PE d800 casing pipe for thermal expansion regulation, cable pulling, and future maintenance. Using HDD drilling (Horizontal Directional Drilling), contractor Van Vulpen, belonging to the division of the NRG-Group, installed a kilometer-long casing pipe by creating a horizontal drill hole. The cables were pulled onto the land and threaded through the casing pipe using a protective funnel attached to the flange. To securely seal the pipes, a two-part cover plate with a rubber seal was finally installed. This procedure effectively prevents sand infiltration.



The large-scale project includes four electricity cables – 220 kilovolts with a total length of about 200 kilometers each – were connected to the high-voltage grid.

Selected technical solution

Thanks to the availability of the big sized couplers, the timely completion of this large-scale project was made possible. Significant infrastructure projects require adherence to timelines and easy installation of components. MULTI/JOINT® met all those requirements and was chosen over the conventional method of welding a PE stub flange with a backing flange to the PE casing pipe.



The cover plate was installed onto the DN800 flange fitting.

Achieved improvement

MULTI/JOINT® is typically used in water and gas systems but proved to be a quick and versatile application for this unique project. The DN800 MULTI/JOINT® flange adaptor offers the benefit of easy connection between the funnel and flange, saving valuable engineering time. With its wide range and restraint features, thrust blocks become unnecessary, resulting in a quick and smooth installation. Moreover, the cover plate could easily be mounted onto the MULTI/JOINT® flange fitting. Installers confirmed their satisfaction with the solution provided by MULTI/JOINT® and expressed their intention to use it more frequently in future projects.

Customer benefits

- Thanks to the products' technical lifespan of 50 years customers can rely on a long-lasting solution.
- The wide-range and restraint capabilities ensure a quick and easy installation. Precious time was saved, as no thrust blocks are required.
- MULTI/JOINT® is a versatile pipe connection system as it has proven its value beyond water and gas distribution grids.

Where next?



Discover the
MULTI/JOINT®
3000 Plus system



Get in touch
with our experts

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