

Success offshore



In October 2016 PES brought you the newly baptised Vol au vent. It has certainly been a winner for Jan De Nul, with ongoing projects and planned improvements to increase the crane's capacity and available deck space.

The Blyth Offshore Demonstrator Project

During the third quarter of 2017, Jan De Nul Group's vessel Vole au vent will start the installation of 5 MHI Vestas 8.3 MW turbines at the Blyth Offshore Demonstrator Project. This new project is located 5.7km off the coast of Blyth, Northumberland, UK.

The Jan De Nul Group was awarded the contract in March 2016 after FID was achieved by EDF Renewables UK. The Blyth Offshore Demonstrator wind farm will have an initially installed capacity of 41.5MW of electricity, which is enough to

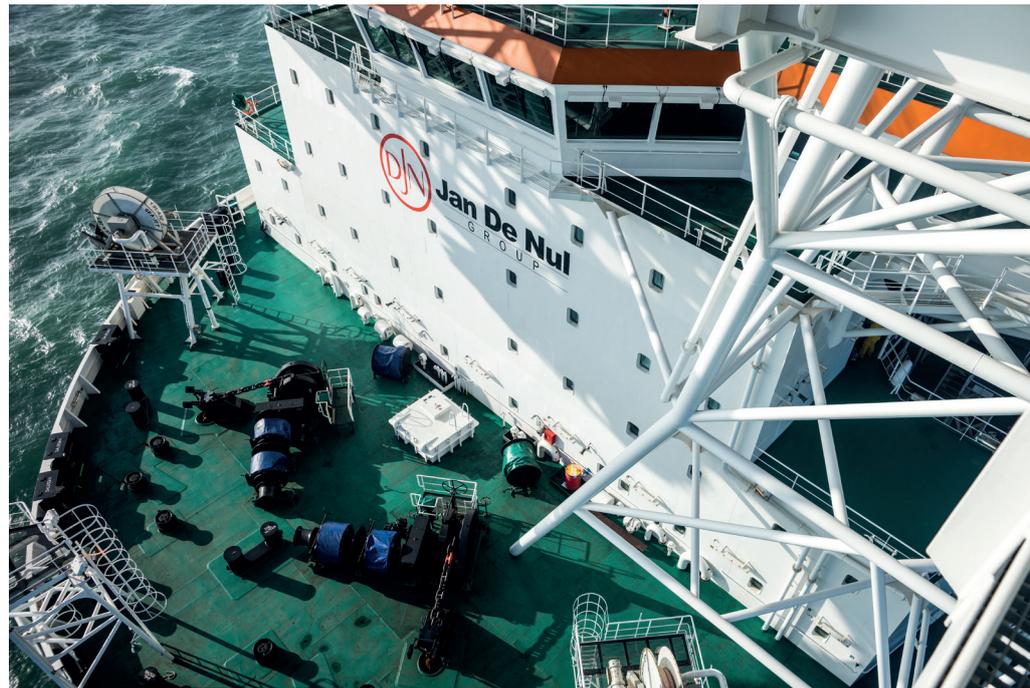
provide approximately 34,000 homes of renewable energy.

Third in a row

This project will be the third project in a row for the Vole au vent since it was acquired by Jan De Nul Group in 2015. The previous projects were the Bligh Bank Phase II project and the Tahkoluoto project in Finland. By the time the new project starts, the two previous projects will have been completed.

The challenge in small scale projects

In April 2017, the Vole au vent successfully



completed the installation of 50 V124-3.3MW MHI Vestas turbines, which marks the first fully completed EPCI wind farm contract for Jan De Nul Group. The turbines used for the Blyth project, however, are of a different magnitude. Each tower has a height of 88.2m and a blade length of 82m.

Even though only 5 turbines will have to be installed on this project, the setup and project preparation is not so very different from the setup and preparation of a park with 50 turbines. In some ways it is more challenging for operations, as there is no time for a learning curve. Therefore,

everything has to go according to schedule from the word go.

In order to achieve maximum time efficiency and quality, a close cooperation has been set up between the Jan De Nul team and the MHI Vestas project team, building further on experience gained for the Blyth Bank project. The result of which is the development of a fully set up roadmap focussing on cooperation and the project completely finished within the time frame and of course, most importantly, the prevention of any incidents.

In-house engineering

Another focus during the project preparation was to find an optimum seafastening design which allowed maximum operability for the installation crew, in order to assure no time was wasted.

The seafastening was fully designed in-house by the Jan De Nul Group's maritime engineering department. This is once again an example proving the versatile capabilities of Jan De Nul Group. The engineering team had to contend with several challenges.



The first challenge they faced was how to incorporate the transfer across the North Sea, in both summer and winter conditions, from the marshalling point in port Esbjerg, to the project location, as the start date of the project had not yet been fixed at the time when the engineering started.

A second challenge was the sheer magnitude of the components of the turbines. Once on deck, the 88.2m long towers of the MHI Vestas 8.3 MW turbines are an impressive addition to the 90m long legs of the Vole au vent. Add to that the 82m blades, and we are facing an engineering challenge of rather large proportion.

Mobilisation

As this will be the third project in a row for the Vole au vent in one year, it goes without saying that the schedule is packed and no time can be lost. Optimal planning is key to prevent any last minute problems which could cause a loss in time efficiency and have a big impact on any further deadlines.

This result is very challenging demobilisation and mobilisation planning. Here, the technical department of Jan De Nul is involved, working together with the operational department, to ensure everything goes smoothly and without incident. First of all, the best yard for the undertakings has to be selected. After that, the entire program is worked out step by step to ensure nothing is left unplanned.

Operations

After all engineering and mobilisation work is completed, it will be time to start the actual MHI Vestas 8.3 MW turbines



installation at the Blyth Offshore Demonstrator Project. For this Jan De Nul will rely on the experience of the Vole au vent crew, the dedicated project team and the MHI Vestas installation team. They will be working closely together for the duration of the project to ensure a smooth installation process.

After the vessel arrives at the project location it will be jacked up to working height. This is when the installation will begin. The first job will be the removal of the TP cover or 'Chinese hat'. After these preparatory works, the lifting supervisor and the captain will need to find a sufficient weather window to initiate the installation of the turbines themselves.

In total the Vole au vent will do 2 trips to the

project site, in which it will be able to complete the full installation of the 5 turbines.

Outlook

After the Blyth Offshore demonstrator project is completed, the Vole au vent will be upgraded in preparation for the Borkum Riffgrund 2 Project. This new fourth project will kick off in the first quarter of 2018. This upgrade will be an increase in the crane capacity from 1200 tonnes to 1500 tonnes and the modification of the funnel houses, allowing for further maximisation of the deck space.

As can be seen from all the above mentioned challenges, the Vole au vent still has quite some work in the pipeline.

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