



MONOPILE SEAFASTENING



To safely transport and install heavy monopile foundations, a tailored and project specific seafastening structure is required. The seafastening supports the piles, keeps them secured on the deck during transports in rough weather conditions and transfers their heavy loads efficiently to the strong points on the deck.

Due to varying water depths, ground conditions and turbine sizes, monopile dimensions vary greatly per wind farm. To accommodate these variations, complicated seafastening modifications or even entirely newly fabricated seafastening structures are required on a project by project base, largely driving the costs of a transport or installation project.

Not only adjusting to the diameter of the pile, a seafastening should also assure its integrity. With the ever-increasing diameter/wall-thickness ratio, a monopile becomes increasingly delicate to handle.

HAMMOCK DESIGN

TWD's first-of-its-kind patented hammock design offers a flexible solution which automatically adjusts to the diameter of the pile, just like the way a hammock fits perfectly around a child or an adult. Besides this flexibility, the hammock provides continuous support, maintaining the piles shape and assuring its integrity.

ADVANTAGES



- RE-USE SEAFASTENING ON MULTIPLE PROJECTS
- ADJUST TO DIFFERENT PILE DIAMETERS
- NO CONCENTRATED LOADS ON THIN-WALLED MONOPILES, MONOPILE INTEGRITY ASSURED
- SWIFT MOBILIZATION DUE TO MODULAR DESIGN
- ROBUST AND EFFICIENT STRUCTURE DUE TO OPTIMAL FORCE LINES
- EASY STACKING OF MONOPILES IN 2 LAYERS

FUTURE-PROOF DESIGN

The hammock seafastening is designed to cover both the monopiles currently being installed and the XL-monopiles as planned for future wind farms. Furthermore, the solution can be applied on both installation and heavy cargo transport vessels.

THE IN-HOUSE DEVELOPED DESIGN IS BASED ON FOLLOWING BOUNDARY CONDITIONS

- MP WEIGHTS UP TO 2.000t
- DIAMETER VARIATION OF 4m IN ONE SET-UP
- HORIZONTAL ACCELERATIONS UP TO 0.4g
- SINGLE AND DOUBLE STACKS



SLINGS DESIGN

The hammock slings are developed together with soft sling developers, to come to the optimized material and physical properties. Besides the strength, the sling yarns are creep resistant and will be covered with a sleeve with an extra high friction capacity.

TWD'S TRACK RECORD

TWD designed monopile seafastening structures for over 60 offshore wind farms, on a wide variety of transport and installation vessels. The Hammock design combines the experience of this wide range of projects, resulting in a lean design which can efficiently be modified to suit your transport's requirements.



TAILORED DESIGN FOR YOUR NEEDS

TWD tailors the design to suit your barge or vessel's underdeck structure, where not only the design of the seafastening but also the most efficient deck lay-out and loading / un-loading sequences will be considered. Where required, provisions to skid the monopile towards the crane can be incorporated.

For pricing information, lead times or technical enquiries, please use the contact information below.

GET IN TOUCH

TEMPORARY WORKS DESIGN

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