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Major Developments in Offshore Windfarm Support Vessels

Seawork launch platform

Seawork continues to prove itself as a valuable platform for BMT Nigel Gee. In 2010 not only did we launch the innovative Turbine Access System (TAS), in conjunction with Houlder, but BMT also unveiled its range of new Windfarm Support Vessels. Since then we have been awarded four separate design contracts for Windfarm Support Vessels and are in detailed discussions with a number of other operators and builders.

Recent contracts

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| Turbine Transfers | 19.5m Multi-Purpose Windfarm Support Vessel (Series Build) |
| Turbine Transfers | 1 x 26m Next Generation XXS Wind Farm Support Vessel |
| VEKA | 4 x 19m Windfarm Support Vessels |
| South Boats | Production Design for 24m Windfarm Vessel using the South Boats Hull Design |

The BMT 19m Windfarm Support Vessel

BMT has worked closely with Turbine Transfers in undertaking the detailed design of the new 19.5m Wind Farm Support Vessel which offers extreme flexibility in operation, as well as increased comfort through lower noise levels and improved vessel motions.

A clear focus for turbine suppliers is to provide the best possible environment for their technicians whilst on-board the vessels. In order to do this BMT has designed and integrated an innovative, resiliently mounted superstructure into the vessel. This has been achieved without compromising the structural design or performance of the vessel and provides benefits to both crew and passengers who frequently have to contend with extended transit times to and from the site. As the vessels will spend all day at sea and the technicians will be on-board for prolonged periods whilst the transfers are taking place, minimising the noise and vibration will vastly improve the comfort levels in the cabin, thereby ensuring the technicians are fit to work and have a much more relaxing journey during transit. This technology is well proven on previous BMT designed

vessels such as the five 18m Crew Transfer Vessels built for Serco.

To further improve the vessel performance an active motion damping interceptor is installed which provides significant reductions in vertical acceleration within the passenger cabin in rough weather, whilst also allowing the vessel to operate at the optimum trim angle for minimum fuel consumption.

The vessel will be the first ever to incorporate the Active Fender System (AFS) which is being jointly developed by BMT and Turbine Transfers.

Furthermore, the vessel will be one of the first to be designed and constructed in accordance with the new DNV Windfarm Service 1 Notation. Construction is now underway by Holyhead Marine with the delivery into service planned for early 2012.



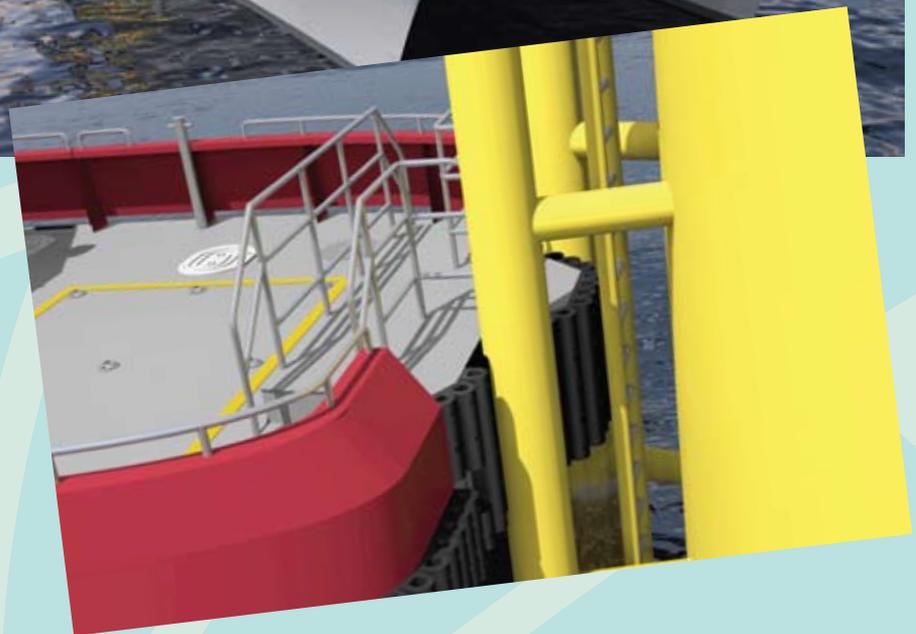
If you would like an appointment to discuss any of these developments please contact Mark Willbourn or Ed Dudson on +44 (0)23 8022 6655 or email: mwillbourn@ngal.co.uk & edudson@ngal.co.uk

Active Fender System (AFS)

BMT has teamed up with Turbine Transfers to develop a new Active Fender System for use on Windfarm Support Vessels. The unique design requires no hydraulics or electrical power and ensures that in the event of a heavy docking with the turbine foundation, the loads imparted on both the vessel and turbine foundation are minimised. A patent for the system has been filed.

When installed with a conventional fender the AFS offers a reduction in load by a factor of 3 compared to a conventional fender alone.

The major benefit for the windfarm developer / operator is that vessels fitted with the AFS are far less likely to damage the turbine foundation access fenders or the vessel - both of which have a significant impact on the operability of the windfarm.



26m XSS

BMT has teamed exclusively with Turbine Transfers to develop a next generation turbine support vessel. The vessel denoted the XSS (Extreme Semi-Swath) offers significant improvements in motion levels over conventional platforms and is designed specifically to operate in higher sea states than the more conventional catamarans. These motions have been proven through a series of model tests undertaken at Haslar. The vessel features a fully active motion damping system comprising of

TFoils and interceptors provided by NAIAD, the world leader in motion damping systems. This fully active motion damping system is capable of providing reduction in motions in excess of 80% compared to a conventional platform, resulting in extremely high levels of comfort during transfer.

The vessel has a Load Line length of 24m and is capable of carrying 12 passengers with a service speed of 28 knots. It has a number of similar features to the 19m vessel

including a resiliently mounted superstructure and the AFS. In addition, the foredeck is of sufficient size to accommodate the Houlder / BMT Turbine Access System.

The vessel is designed and will be constructed in accordance to the new DNV Wind Farm service 1 notation. Production design is currently taking place and construction is likely to start in September 2011.

The methods and concepts in this document are protected by international patent applications



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