

Wärtsilä and Aker Solutions to jointly develop cutting edge High Performance Turbine Installation Vessel

Wärtsilä Corporation, Trade Press release, 29 March at 11 am (EET)

Wärtsilä, the marine industry's leading solutions provider, and Aker Solutions, the international oil and gas services company, have agreed to combine their fields of expertise to develop a new and environmentally sound concept for offshore wind farm installation vessels. According to the contract, which was signed earlier this year, Wärtsilä will provide the new installation vessels with the ship design, electrical power generation, propulsion machinery and high-end automation, whilst Aker Solutions will supply the jacking system. Wärtsilä, together with Aker Solutions, will also offer a 24/7 global support service for maintenance, repairs, and component supply to the vessels.

The two companies have selected the best technologies for this custom designed installation vessel, which enables a highly efficient way of setting up offshore wind power generation. The three Wärtsilä 6L34DF and two Wärtsilä 9L20DF dual-fuel engines, that will provide main and auxiliary power for the vessel, can operate on liquefied natural gas (LNG) with low emissions. Similarly, heat from the engine cooling system will be utilized to generate drinking water, and to supply hot water for use by the crew. The accommodation heating on board will also use the same heat source, while absorption chiller units will provide air conditioning during summer months.



Picture Turbine Installation Vessel: This HPTIV can operate in year around weather conditions with an operational water depth range of 4.5 to 50 m.

Aker Solutions has applied its in-depth knowledge of the offshore drilling market to develop a continuous hydraulic jacking system for truss legs, which has been customized for high performance turbine installation vessels. This jack system has great benefits in regard to redundancy, and has a robust design for operations in harsh environments.

The new vessel concept will be marketed as a complete package. It will fulfill the industry's requirements for large deck space, sufficient crane capacity, year-round and all-weather operational capability and cost-efficient operating systems. It is designed for operating in the International Maritime Organization's emission control areas (ECAs).

“This new concept is already generating significant interest among that segment of the industry involved with the installation and maintenance of offshore wind farms. There is a notable demand for a high technology, and fully integrated installation vessel design having significant environmentally sound features. We are delighted to be in co-operation with Aker Solutions to fill this need that is especially significant in the North Sea area. We expect to get the first orders this year,” says Riku-Pekka Hägg, Vice President, Wärtsilä Ship Design.

The market for offshore wind farms is rapidly developing as demand for renewable energy sources increases. Since Northern European offshore wind farms tend to be in shallow waters of 50 meters or less in depth, so-called jack-up vessels are used for the installation work. At the installation site, the vessel lowers massive legs to the seabed on which the vessel is jacked-up until it is above the waves. A hydraulic grip system is used for this jack-up operation.



Picture Turbine Installation Vessel: Thanks to the optimized deck space around the 1000 ton offshore type gantry crane, three windmill foundations or five complete wind turbine assemblies of the 5 MW class can be stored on deck, thus increasing the installation efficiency.

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Wärtsilä in brief:

Wärtsilä is a global leader in complete lifecycle power solutions for the marine and energy markets. By emphasising technological innovation and total efficiency, Wärtsilä maximises the environmental and economic performance of the vessels and power plants of its customers. In 2010, Wärtsilä's net sales totalled EUR 4.6 billion with more than 17,500 employees. The company has operations in 160 locations in 70 countries around the world. Wärtsilä is listed on the NASDAQ OMX Helsinki, Finland.

www.wartsila.com

Aker Solutions in brief:

Aker Solutions ASA, through its subsidiaries and affiliates ("Aker Solutions"), is a leading global oil services company that provides engineering and construction services, technologies, product solutions and field-life solutions for the oil and gas industry. The Aker Solutions group is organised in a number of separate legal entities. Aker Solutions is used as the common brand/trademark for most of these entities. Aker Solutions has aggregated annual revenues of approximately NOK 46 billion and employs approximately 20 000 people in about 26 countries.

www.akersolutions.com.