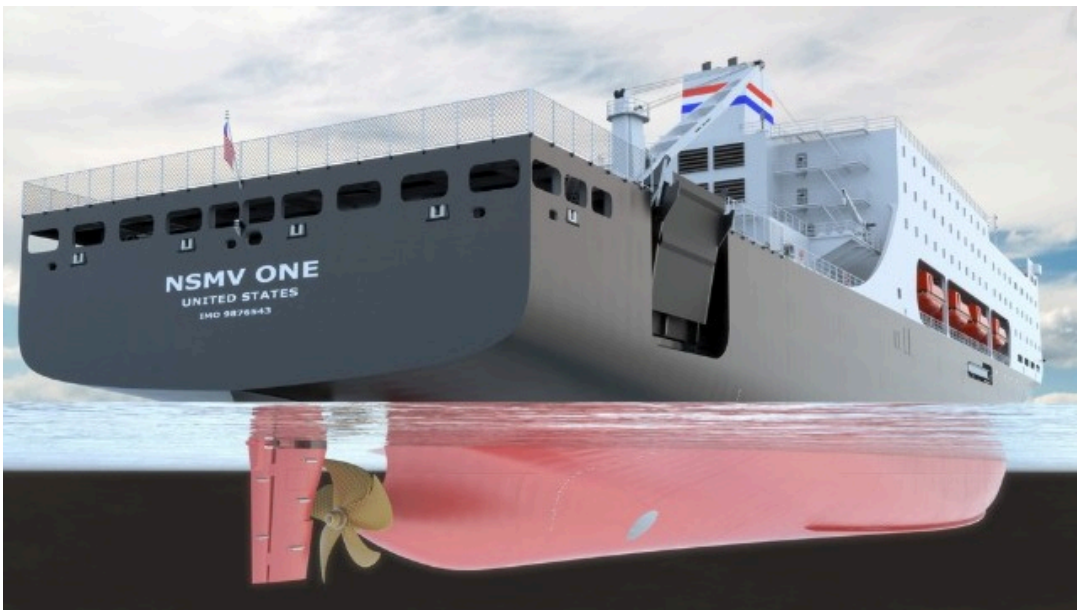


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Views

Becker Supplies Rudders for US National Security Multi-Mission Vessels



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Hamburg-based Becker Marine System is pleased to have been awarded to supply their Becker Flap Rudder Twisted and their Becker Intelligent Monitoring System (BIMS) for the first two National Security Multi-Mission Vessels (NSMVs). The NSMVs will become part of the U.S. National Defense Reserve Fleet and are designed as training vessels for the US Merchant Marine Academies with training space for up to 600 cadets. In addition to being a training platform, the NSMVs are highly functional assets to support disaster relief for up to 1000 people and other critical national needs. The vessels will be constructed at Philly Shipyard in the United States.

Becker had been involved with this project at a very early stage – providing valuable engineering support to the vessel designers of Herbert Engineering Corporation – and Becker’s engineers excelled themselves by designing a custom-made rudder system that met and exceeded all of the design parameters of the project.

The high-efficiency flap rudder with twisted leading edge is designed for excellent maneuverability at all speeds, whether at bollard conditions in the harbors or while underway. A critical element of the vessel's design is to be able to dock without tug assist – and Becker's rudder system will meet this demand easily. The well-known Becker Flap Rudder is equipped with a proven and reliable linkage system that is designed to provide less wear and tear than competitive products for years of trouble-free use.

Using state-of-the-art computer technology and decades of experience, Becker Marine System designs maneuvering systems that provide the highest level of lift during turning while at the same time reducing the amount of rudder drag. The twisted leading edge feature of the Becker Flap Rudder is proven to be one of the most efficient rudder designs on the market. The combination of the flap rudder with twisted leading edge and Becker's patented KSR® (King Support Rudder) bearing arrangement, allowing for full-spade rudders of unlimited size and slim profile thickness, creates an extremely efficient rudder system.

Besides the rudders, Becker is also supplying its Becker Intelligent Monitoring System (BIMS) to support cadet training, safe maneuvering, and efficient operation. The digital BIMS system measures rudder forces, interfaces them with the ship's navigation systems and displays the rudder lift on the bridge. The BIMS' visual display of rudder forces on a screen of rudder forces allows the crew to utilize the optimal rudder performance for safe maneuvering under all conditions. The direct rudder force feedback by BIMS can support e.g. a ship's autopilot systems to sail with fewer rudder movements, resulting in the benefit of energy-saving, emission reduction and less wear and tear for the maneuvering system.

The installation of the Becker Intelligent Monitoring System on the NSMV also offers a benefit for cadet training. By visualizing the direct influence on bending and torsion on the rudder at specific steering angles, the system can indicate poor rudder response or even rudder stall. This enables the cadets to learn and to take appropriate countermeasures in advance to achieve an optimum rudder performance.

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