

# Kongsberg Integrated Delivery for Angolan Research Vessel



Kongsberg Maritime has been awarded a contract by Damen Schelde Naval Shipbuilding of Vlissingen, The Netherlands to provide an integrated technology solution for a new 74 metre Fishery Research Vessel (FRV), which will be built at Damen Shipyards Galati, Romania. The vessel is planned to be delivered to the owner, the Angolan Ministry of Fisheries, in July 2018. The vessel, designed by Skipsteknisk, uses Silent-A/F/R technology to ensure highly accurate survey results from the advanced Kongsberg scientific package.

Supported by Kongsberg's extensive integrated technology, the Angolan Ministry of Fisheries' vessel will be capable of diverse applications, including hydrographic survey, sub-bottom profiling, acoustics research, pelagic and demersal trawling, plankton, water,

environmental and geographical sampling, oil recovery and emergency towage operations.

Kongsberg's delivery is focused on design, engineering, equipment, material and services for the Integrated Bridge System, Dynamic Positioning System, marine ecosystem monitoring and seabed mapping.

The scientific package is based on a suite of integrated instruments that forms the basis of a de facto industry standard marine ecosystem monitoring system: Simrad EK80 Scientific Split Beam Echo Sounder, Simrad ME70 Scientific Multibeam System with Bathymetric Module, Simrad MS70 Scientific Multibeam 4D Sonar, Simrad SU90 Omnidirectional Sonar and Simrad PI and FX80 Trawl Monitoring System.

Furthermore, the vessel will be equipped with market leading hydrographic systems; Kongsberg EM 122, 1x2 Degree Deepwater Multibeam Echo Sounder, Kongsberg SBP 120-3 Degree Sub-Bottom Profiler, Kongsberg EM 712, 0.5x1 Degree Medium Depth Multibeam Echo Sounder and Kongsberg GeoPulse Plus Digital Sub-Bottom Profiler.

The complete Subsea package is synchronised by a Kongsberg K-Sync, 16-channel system to prevent interference between systems during multiple use of the various Subsea systems.

Positioning for the Subsea package is provided by the Kongsberg Seapath 330+ GNSS Dual Frequency Receiver (GPS/GLONASS) including a state-of-the-art MRU-5+ motion reference unit. The Kongsberg HiPAP 502 Acoustic Positioning System completes this versatile Subsea package.

Vessel operation will be managed by a Kongsberg K-Bridge Integrated Bridge System (IBS), with the Kongsberg K-Pos Dynamic Positioning system providing advanced manoeuvring and positioning functions tailored for research vessels, ensuring optimal performance of the scientific sensors. The K-Bridge IBS is adaptable to the requirements of all sea-going ship types and is designed to meet all IMO and classification societies' requirements including one-man bridge operation. The vessel will also feature advanced operational planning tools for research operations.