

# Second Indonesian Survey Vessel Ready for Duty



The second of two 60-metre oceanographic and hydrographic vessels designed and built by OCEA in France for the Indonesian Navy was handed over following a commissioning ceremony in Jakarta this March. The *KRI 934 Spica* is the sister ship to the *KRI 933 Rigel*, delivered in June 2015, which is already on active survey duty in Indonesian waters. Both are highly advanced aluminium multi-purpose ships, with 'Full Picture' technology packages delivered by Norway's Kongsberg Maritime.

OCEA's unique vessel design and aluminium construction is suited to achieving highly accurate survey results at speed as it produces less cavitation across the hull during surveying. According to OCEA's director of sales, Fabrice Epaud, this enables Kongsberg Maritime's hydroacoustic systems on board to operate optimally and deliver highly

accurate data at speeds up to 15 knots, close to almost twice that of standard survey operations.

Epaud adds that aluminium is smooth in the water, hence creating less bubbles, which will enable the Indonesian navy to get the best results possible from the subsea equipment.

## Understanding of the Seabed

The Indonesian Navy's new vessels will be utilised to gain a better understanding of the seabed and waters of the Indonesian archipelago, so have been equipped with the most efficient and up-to-date technical and scientific equipment. OCEA worked in partnership with SHOM, the Hydrographic and Oceanographic Service of the French Navy, to optimise the selection and integration of the hydroacoustic equipment in addition to providing scientific training for crews and technical assistance in Indonesia.

The identical Kongsberg scope of supply for both the *KRI 934 Spica* and *KRI 933 Rigel* includes a [HUGIN AUV](#) per vessel, [EM 2040](#) and [EM 302](#) multibeam echo sounders, [EA 600 single beam echo sounder and side-scan sonar](#), in addition to HiPAP hydroacoustic positioning systems. Both vessels have their own 8m survey launches also equipped with Kongsberg Maritime subsea technology including the EM 2040 multibeam and [EA 400 single beam echo sounder](#). The *KRI 933 Rigel* also makes use of an advanced Kongsberg Maritime Dynamic Positioning system.