Marine Motion Sensor

Kongsberg Maritimes has introduced a new member in its family of Motion Monitoring Units at Ocean Business 2015. The MRU 5+ MK-II is part of a range of MRUs for diverse marine applications including: motion compensation of multi-beam echo sounders, high speed craft motion control and damping systems, heave compensation of offshore cranes, dynamic positioning, hydro acoustic positioning, ship motion monitoring, ocean wave measurements and antenna motion compensation and stabilisation.

The MRU 5+ MK-II uses a new sensing element (Coriolis force resonator) in the new design of integrated MEMS gyros. With less than 0.002° angle noise, and Angle Random Walk 0.006°/√h, the MRU is on par with fibre optic and ring laser gyros.

The sensing elements are individually modelled for improved performance over temperature. In combination with enhanced electronics this has resulted in improved scale factor linearity and an absolute bias of typically 4°/h for the gyro. In addition, the documented roll and pitch accuracy of 0.01° makes MRU 5+ MK-II an excellent sensor for high precision applications.

The MRU 5+ MK-II features extremely simple interfacing to various sonar systems as it comes with data protocols for the most commonly used multibeam echo sounder systems already integrated. Distribution of MRU data is available through an Ethernet interface enabling easy delivery to multiple users on board a vessel. The MRU 5+ accepts external input of speed and heading information on separate serial lines for improved accuracy in heave, roll and pitch during turns and accelerations.

https://www.hydro-international.com/content/news/marine-motion-sensor