

Seatex MRU Calibration Certificate



KONGSBERG

Seatex MRU model number:	H
Serial number:	24118
Calibration certificate number:	20151030-24118

5.generation

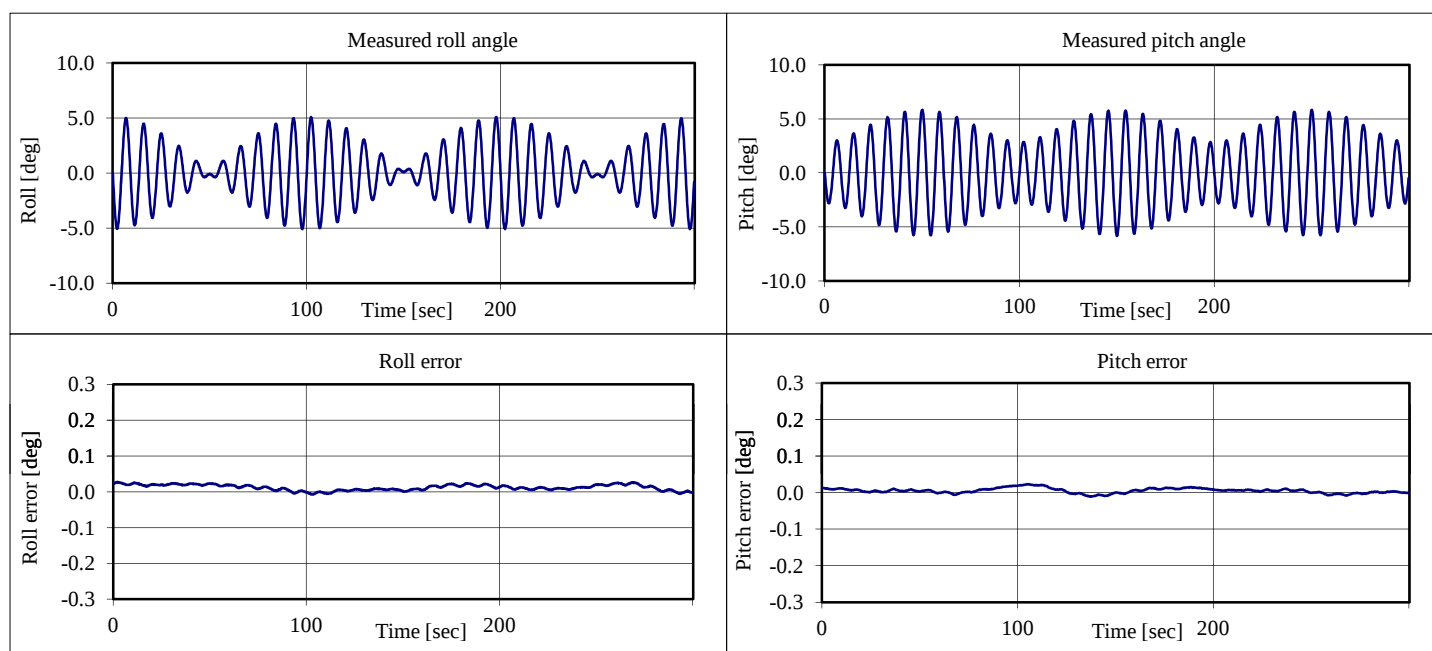
1. Roll and Pitch Accuracy Tests

Roll and pitch accuracy	Test requirement	Roll	Pitch
RMS static roll and pitch [deg]	0.04	Passed	Passed
RMS dynamic roll and pitch [deg]	0.04	Passed	Passed

The static accuracy was measured by sampling at 4 Hz for 30 minutes, when the Seatex MRU is stationary.

The dynamic accuracy was measured in a rate table test with simultaneous sinusoidal excitation in two axes for 10 minutes.

Plots of results from dynamic test of Seatex MRU with serial number 24118



2. Rate Gyro Accuracy Tests

Angular rate accuracy	Test requirement	R-axis	P-axis	Y-axis
RMS rate sensor noise [deg/s]	0.1	Passed	Passed	Passed
RMS rate sensor scale factor error [%]	0.2	Passed	Passed	Passed

The angular rate sensor noise level was measured by sampling at 4 Hz for 30 minutes, when the Seatex MRU is stationary.

The rate gyro scale factor error was tested by single-axis rotations on a rate table at $\pm 30^\circ/\text{s}$ and at $\pm 50^\circ/\text{s}$.

3. Accelerometer Accuracy Tests

Linear acceleration accuracy	Test requirement	R-axis	P-axis	Y-axis
STD acceleration sensor noise [m/s^2]	0.002	Passed	Passed	Passed
RMS acceleration sensor scale factor error [%]	0.02	Passed	Passed	Passed

The acceleration sensor noise level was measured by sampling at 4 Hz for 30 minutes, when the Seatex MRU is stationary.

The accelerometer scale factor was measured by tilting the Seatex MRU in steps of 90° around a circle.

The Calibration Certificate test requirements are the technical specification limits in the MRU User Manual

A two-axis rate table with temperature chamber (AC 2267L-TCM from Acutronic AG, 2011) was used to test the unit.

All tests were performed at room temperature according to test procedures in the MRU Production Manual