

Image Distortion Correction Method of 2-MHz Side Scan Sonar for Underwater Structure Inspection

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Abstract : The 2-MHz Side Scan SONAR (SSS) attached to the boat for inspection of underwater structures is affected by shaking. It is difficult to determine the exact scale of damage of structure. In this study, a motion sensor is attached to the inside of the 2-MHz SSS to get roll, pitch, and yaw direction data, and developed the image stabilization tool to correct the sonar image. We checked that reliable data can be obtained with an average error rate of 1.99% between the measured value and the actual distance through experiment. It is possible to get the accurate sonar data to inspect damage in underwater structure.

Keywords : image stabilization, motion sensor, safety inspection, sonar image, underwater structure

Conference Title : ICAMMCS 2018 : International Conference on Analysis, Management and Maintenance of Civil Structures

Conference Location : Paris, France

Conference Dates : April 19-20, 2018