

Simulator Dynamic Positioning System with Azimuthal Thruster

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Abstract : This paper aims to project the construction of a prototype azimuthal thruster, mounted with materials of low cost and easy access, testing in a controlled environment to measure their performance, characteristics and feasibility of future projects. The construction of the simulation of dynamic positioning software, responsible for simulating a vessel and reposition it when necessary . Tests for partial and full validation of the model were conducted, operates independently of the control system and executes the commands and commands of the helix of rotation azimuth. The system provides an interface to the user and simulates the conditions unfavorable positioning of a vessel, accurately calculates the azimuth angle, the direction of rotation of the helix and the time that this should be turned on so that the vessel back to position original. There is a serial communication that connects the Simulation Dynamic Positioning System with Embedded System causing the user-generated data to simulate the DP system arrives in the form of control signals to the motors of the propellant. This article addresses issues in the marine industry employees.

Keywords : azimuthal thruster, dynamic positioning, embedded system, simulator dynamic positioning

Conference Title : ICEE 2015 : International Conference on Electrical Engineering

Conference Location : Vancouver, Canada

Conference Dates : August 06-07, 2015