

Sebastian Bielicki

Tytuł rozprawy w języku angielskim: The simulation method of manoeuvring ship driven by azimuth thrusters, including influence of sea waves, wind and sea currents on ship's motions

Abstract

A method for maneuvering simulations of ships propelled by azimuthal thrusters is presented. A new mathematical model of the hydrodynamic forces on azimuthal thrusters is proposed. This method accounts for the influence of the marine environment by incorporating mathematical models of responses to waves and wind. The simulation results were compared to model tests using a free-floating model. The resulting maneuvering simulator was implemented at the Ship Hydromechanics Division of the Maritime Advanced Research Centre.