

Abstract

Aly H Abdalla

Study of the Effect of Low Profile Vortex Generators on Ship Viscous Resistance

A study of the effect of the well-known aerodynamic device low profile vortex generators (VGs) on the viscous resistance of the DTMB 5415 ship hull form through the control of the ship boundary layer separation is performed using the finite volume code Ansys CFX. The tetrahedral unstructural grids have been used for meshing the different cases. Different types of VGs have been tested, but the study has forced on two main types of VGs. The effects of VGs on the ship viscous resistance and its components have been investigated for the different cases in this study, and comparisons between the various results have been made