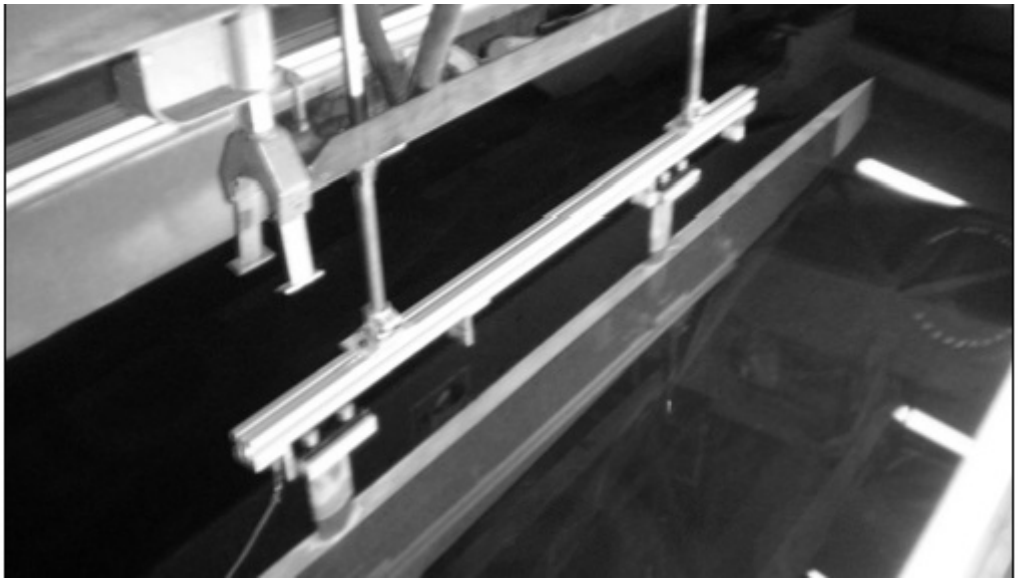
Published on *CD-adapco* (http://www.cd-adapco.com)

Drag reduction through special paints coated on the hull

The economic recession, the environmental impact as well as the continuous fossil fuel consumption encourage actions that focus on saving energy. In the vessels sector, one of the main objectives has always been to reach a hydro-dynamically optimum hull which gave the desired speed with minimum power.Hydrodynamic drag is basically divided into two parts: a) the friction between the water and the hull,and b) the wave generation due to the free-surface air-water. Presented in this paper, is the research which evaluates the possibility of friction-drag reduction by means of the coat of special paints on the hull.The study has been applied to a fishing cooperation vessel on which hydrodynamic aspects had already been analyzed by the ETSI Navales Model Basin. Two plates with different paints have been tested with a wet surface equivalent to the model used in the previous hydrodynamic test.Numerical simulations with a viscous code, which includes a roughness module, have also been carried out. The complete three dimensional system, including the free surface effect, has been considered. With these simulations it is expected to validate the roughness module of the commercial code.

Author Name:
P. IZAGUIRRE-ALZA
L. PÉREZ-ROJAS
J.F. NÚÑEZ-BASÁÑEZ
Industries:
Academic [1]
Manufacturing [2]
Products:
STAR-CCM+® [3]
Conference Location:
Istanbul , Turkey
Conference Proceeding PDF:
Paper9k-1.pdf[4]
Rights:
2010, SMOOTH Consortium
Pages:
8
Conference Date:
Thursday, May 20, 2010
Paper Reference:
Paper No: 9
Publisher:
Mustafa Insel,Ismail Hakki Helvacioglu ,Sebnem Helvacioglu
Conference Name:
International Conference on Ship Drag Reduction
Image:



CD-adapco is the world's largest independent CFD focused provider of engineering simulation software, support and services. We have over 30 years of experience in delivering industrial strength engineering simulation.

Source URL: http://www.cd-adapco.com/conference_proceeding/drag-reduction-through-special-paints-coated-hull

Links:
[1] http://www.cd-adapco.com/industries/academic
[2] http://www.cd-adapco.com/industries/manufacturing-0
[3] http://www.cd-adapco.com/products/star-ccm%C2%AE
[4] http://www.cd-adapco.com/sites/default/files/conference_proceeding/pdf/Paper9k-1.pdf