Marin Hydrodynamikk
Assignment 1

Sebastian Gjertsen

September 13, 2015

Abstract

For specified (see below) two-dimensional geometries, assuming potential theory in unbounded fluid, and use of Green's second identity, calculate the velocity potential along the body and the added mass forces, for a circle, an ellipse, a square and a rectangle, moving laterally, and with rotation. Find also the cross coupling added mass coefficients. For the circle, the reference solution is: $\phi = -a^2 x/(^2)$ where a denotes the cylinder radius, $r^2 = x^2 + y^2$.

1 Teori

2 Conclusion