Accepted Manuscript

An analytical and semi-empirical model for the viscous flow around a vortex cavity

Johan Bosschers

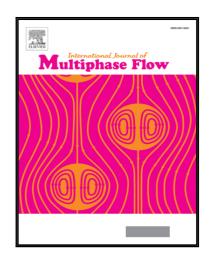
PII: \$0301-9322(17)30635-3

DOI: 10.1016/j.ijmultiphaseflow.2018.03.021

Reference: IJMF 2776

To appear in: International Journal of Multiphase Flow

Received date: 24 August 2017 Revised date: 14 January 2018 Accepted date: 31 March 2018



Please cite this article as: Johan Bosschers, An analytical and semi-empirical model for the viscous flow around a vortex cavity, *International Journal of Multiphase Flow* (2018), doi: 10.1016/j.ijmultiphaseflow.2018.03.021

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

ACCEPTED MANUSCRIPT

Highlights

- An analytical solution for the 2-D viscous flow around a vortex cavity is derived
- The analytical solution is extended with a semi-empirical formulation to allow for vorticity roll-up
- The resulting model for the azimuthal velocity distribution is able to accurately represent experimental data of a wing-tip vortex
- The relation between cavity size and cavitation number is evaluated.



دريافت فورى ب متن كامل مقاله

ISIArticles مرجع مقالات تخصصی ایران

- ✔ امكان دانلود نسخه تمام متن مقالات انگليسي
 - ✓ امكان دانلود نسخه ترجمه شده مقالات
 - ✓ پذیرش سفارش ترجمه تخصصی
- ✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
 - ✓ امكان دانلود رايگان ۲ صفحه اول هر مقاله
 - ✔ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
 - ✓ دانلود فوری مقاله پس از پرداخت آنلاین
- ✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات