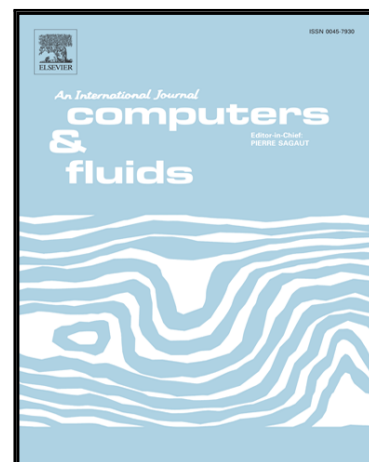


Accepted Manuscript

Aerodynamic and aeroacoustic analyses of a submerged air inlet in a low-Mach-number flow

Nicolas J. Pignier, Ciarán J. O'Reilly, Susann Boij

PII: S0045-7930(16)30113-X
DOI: [10.1016/j.compfluid.2016.04.010](https://doi.org/10.1016/j.compfluid.2016.04.010)
Reference: CAF 3149



To appear in: *Computers and Fluids*

Received date: 23 November 2015
Revised date: 31 March 2016
Accepted date: 8 April 2016

Please cite this article as: Nicolas J. Pignier, Ciarán J. O'Reilly, Susann Boij, Aerodynamic and aeroacoustic analyses of a submerged air inlet in a low-Mach-number flow, *Computers and Fluids* (2016), doi: [10.1016/j.compfluid.2016.04.010](https://doi.org/10.1016/j.compfluid.2016.04.010)

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.

Highlights

- Aerodynamic and aeroacoustic studies of a generic NACA inlet are presented
- The flow is solved through RANS and DES, for various velocity ratios
- The flow results show good agreement with experimental data
- A transition from a quasi-laminar to a turbulent state is observed
- These two states exhibit two types of acoustic spectra in the far-field

Download English Version:

<https://daneshyari.com/en/article/7156708>

Download Persian Version:

<https://daneshyari.com/article/7156708>

[Daneshyari.com](https://daneshyari.com)