

MASTER OF SCIENCE THESIS

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# Sustainable Fuel and Fuel Cells for Aircrafts

## System Thermodynamics

Álvaro B. M. Fernandes

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My Graduation Date

Faculty of 3ME Engineering · Delft University of Technology



# **Sustainable Fuel and Fuel Cells for Aircrafts System Thermodynamics**

MASTER OF SCIENCE THESIS

For obtaining the degree of Master of Science in Aerospace  
Engineering at Delft University of Technology

Álvaro B. M. Fernandes

My Graduation Date







DELFT UNIVERSITY OF TECHNOLOGY  
DEPARTMENT OF  
PROCESS AND ENERGY

The undersigned hereby certify that they have read and recommend to the Faculty of 3ME Engineering for acceptance a thesis entitled “**Sustainable Fuel and Fuel Cells for Aircrafts**” by **Álvaro B. M. Fernandes** in partial fulfillment of the requirements for the degree of **Master of Science**.

Dated: My Graduation Date

Head of department: \_\_\_\_\_  
prof.dr.ir. P.R. Of

Supervisor: \_\_\_\_\_  
dr.ir. D.A.I. Ly Supervisor

Reader: \_\_\_\_\_  
ir. G.U. Est

Reader: \_\_\_\_\_  
ir. Reader Four





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## Chapter 1

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# Introduction

## 1.1 Background and motivation

m,dgzxxlfhkmgj [1, 2].

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## References

- [1] R. A. Hess. “A Simplified Technique for Modeling Piloted Rotorcraft Operations Near Ships”. In: *Proceedings of the AIAA Atmospheric Flight Mechanics Conference and Exhibit*. San Francisco, California, 2005.
- [2] G. D. Padfield et al. “Predicting Rotorcraft Flying Qualities Through Simulation Modelling – A Review of Key Results from GARTEUR AG06”. In: *Proceedings of the 22nd European Rotorcraft Forum*. Vol. 2. Brighton, 1996, pp. 71.1 –71.14.
- [3] H. Xin. “Development and Validation of a Generalized Ground Effect Model for Lifting Rotors”. Ph.D. Thesis. Georgia, Atlanta: Georgia Institute of Technology, 1999.



## Background and Technologies

### 2.1 Thermodynamic analysis

sdzsm,zgfxmgjmhj,k[3]





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- [1] R. A. Hess. “A Simplified Technique for Modeling Piloted Rotorcraft Operations Near Ships”. In: *Proceedings of the AIAA Atmospheric Flight Mechanics Conference and Exhibit*. San Francisco, California, 2005.
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