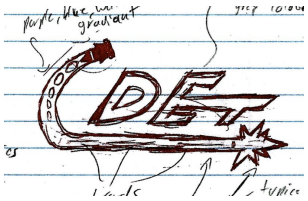


DETechnologies

Fifth Year Mechanical Engineering Capstone Project

Memorial University of Newfoundland Faculty of Engineering and Applied Science

Overview

This project aims to contribute to the global research space regarding Rotating Detonation Engine (RDE) development. RDEs have prospective applications as orbital maneuvering thrusters, staged launch vehicle booster engines, missile engines, gas turbine combustors, and supersonic aircraft engines. The goal of this project is to build a modular, liquid cooled, RDE capable of thrust output on the order of 500N.

Our operational objectives are to maximize efficiency, collect empirical data, and document design choice relations to exected results during the development process. The engine will be designed as modular as possible, to allow for future research and development work to be conducted by students and faculty researchers. We plan to have our work published in full, as a reference roadmap for design, construction and testing of RDEs in a research environment.

Scope & Project Objective

Design, Build and Test a Rotating Detonation Engine

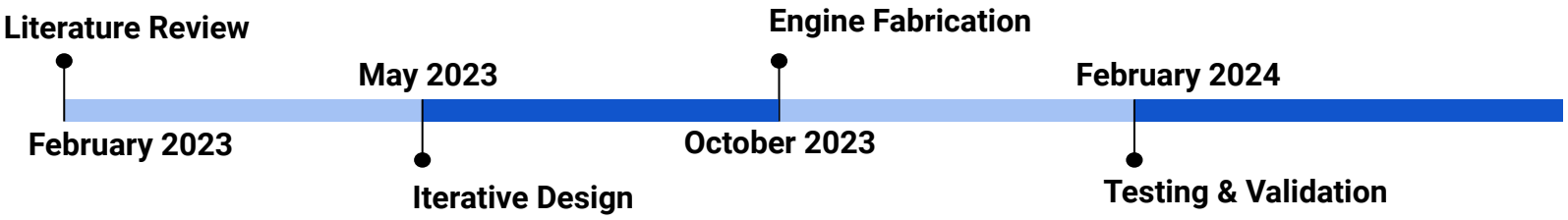
- Gas-Gas, non-premixed, orbital thruster
- Liquid cooled
- Modular
- Design focus on engine structure geometry
- Maximize thrust

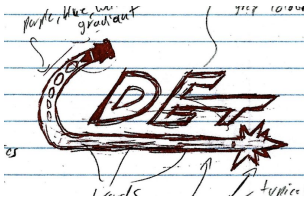
Areas Requiring Support

Seeking support in the following areas;

- Testing Equipment/Laboratory Space
- Computational Resources for Simulations
- Manufacturing Support
- Financial Support

Project Timeline





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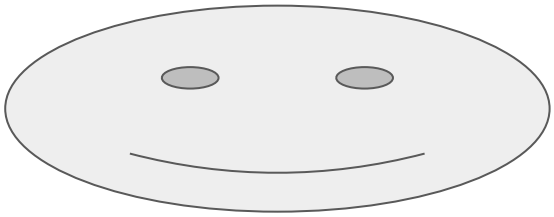
Investor Levels

	Platinum	Gold	Silver	Bronze
	$20,000 +	$15,000	$5,000	$1,000
Commemorative 3D Printed Model	✓	✓		
Investor Event	✓	✓	✓	✓
Logo Size on Team Gear	Large	Medium	Small	Extra-Small
Logo on Website	Large	Medium	Small	Extra-Small
Logo Size on Engine	Large	Medium	Small	
Framed Thank-You Photo	✓	✓	✓	✓



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