Internship 2022

Week 7 Progress Report

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Tasks completed last week

- [#19] Static Test #2, #3 & #4

- [#85] Preparation of Potassium Perchlorate

- [#56] Iterative fuel preparation and improvement

- [#68] Igniters improvement.

[#19] Static Test #2

1.A faster burn was achieved, moisture content was significantly reduced

2. No data was found

3. Data logging to raspberry pi was successful

4. Implemented wireless ignition

[#19] Static Test #3

1. A slower burn was achieved, moisture content was significantly Reduced. The slower burn was due to too much time curing
2. No data was found
3. Data logging to raspberry pi was successful
4. Wireless ignition failed

Residue after a static test..

Casting for the different static tests

Static test #2 - Fuel spent too much time in the dessicator

Static test #3 - All moisture was removed, Potassium NItrate not ground

Static test #4 - Potassium Nitrate was ground

Static test #5(Today) - Potassium Nitrate ground & Sifted

Static test #6(Tomorrow) - Fuel/Oxidiser ratio → 68/32

●[#85] Preparation of Potassium Perchlorate

- We spent a number of hours in the
  chemistry lab as we carried out thermal
   decomposition of potassium chlorate to
  obtain potassium perchlorate as per the
  manual obtained but the experiment did
  not yield the expected results.

Tasks in this week

- [#11] Casting Tools Fabrication [Curing under pressure]

- [#19] Iterative Static Firing Tests

- [#32] Test stand PCB Etching

- [#98] Temperature & Pressure measurement during static testing

- [#99] Camera mount for test stand

- [#108] Implement servo controlled wireless ignition

Timeline

Month	Intern week	Tasks
Jan		
	Week 1	Designs [Fuel, Casing, Nozzle, Bulkhead, Casting tools, Test stand]
	Week 2	Fabrication of items
	Week 3	Fuel Fabrication and test stand revamp
Feb	Week 4	Fabrication of items & Fuel casting
	Week 5	Iterative Fuel tests
	Week 6	Launch Pad design and iterative fuel tests
	Week 7	Iterative fuel testing and improvement