

Internship 2022

Personal Progress Report

Name: Washington Kamadi

26/01/2022 - 02/01/2022

Tasks completed last week

- [#55] Tested new load cell configuration (Mon)
- [#52] Continued Nozzle fabrication (Wed - Fri)
- [#62] Acquire 7075 aluminum rod for casing and nozzle (Wed)
- [#73] Test stand design (Tue)

NOZZLE FABRICATION

(In progress)

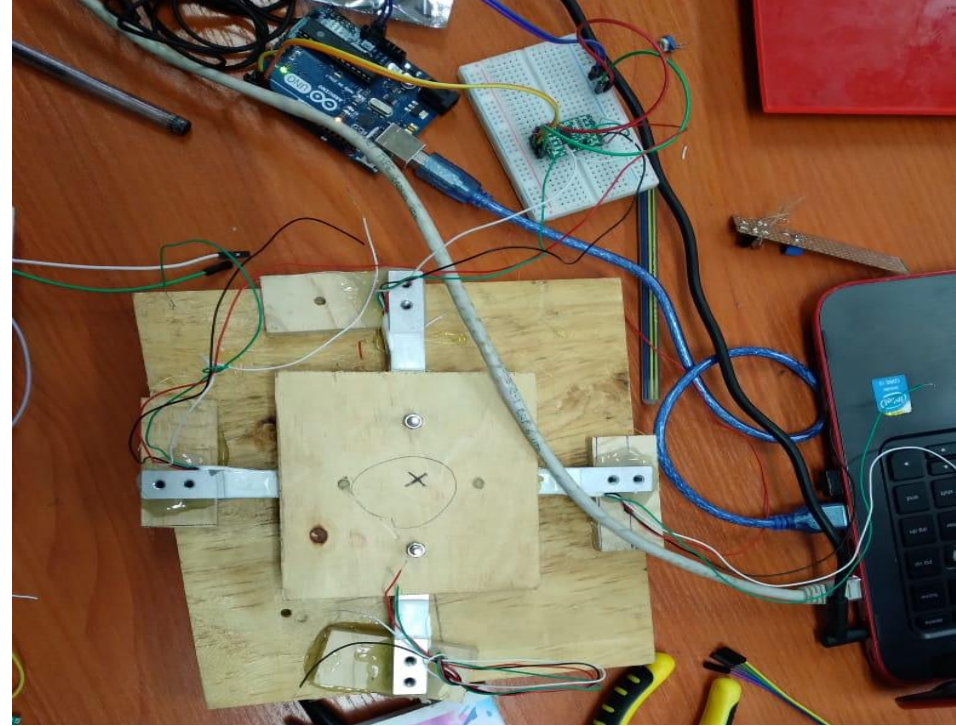
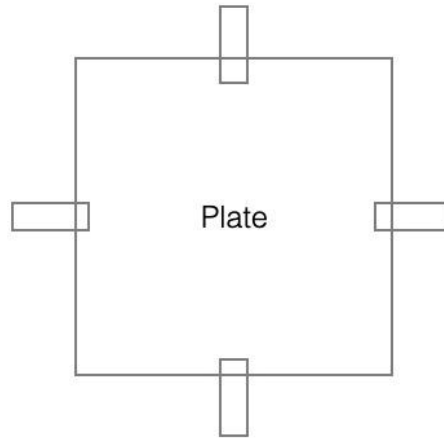
1 Fail!

Started afresh



Load Cells configuration

(5kg Load Cells used for testing)



TEST STAND DESIGN

Materials to be used

Wood, plywood

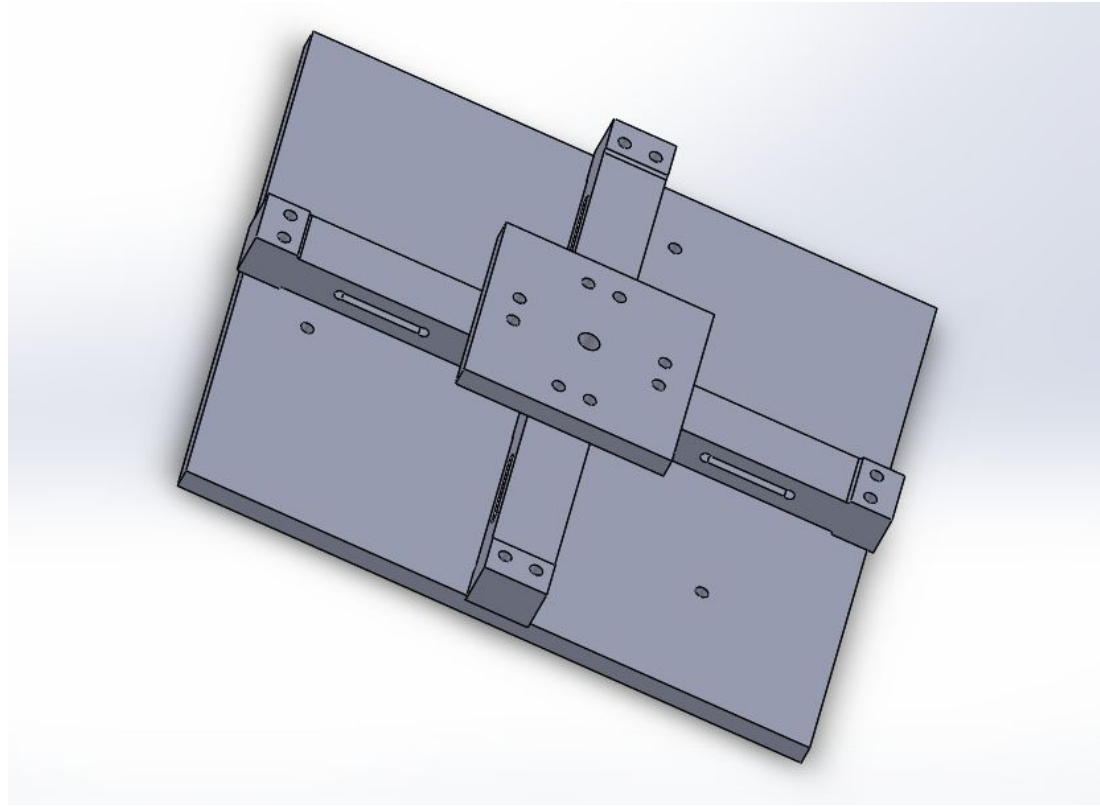
EMT (Electrical Metal Tubing))

Wood - Ease of fabrication & Readily available

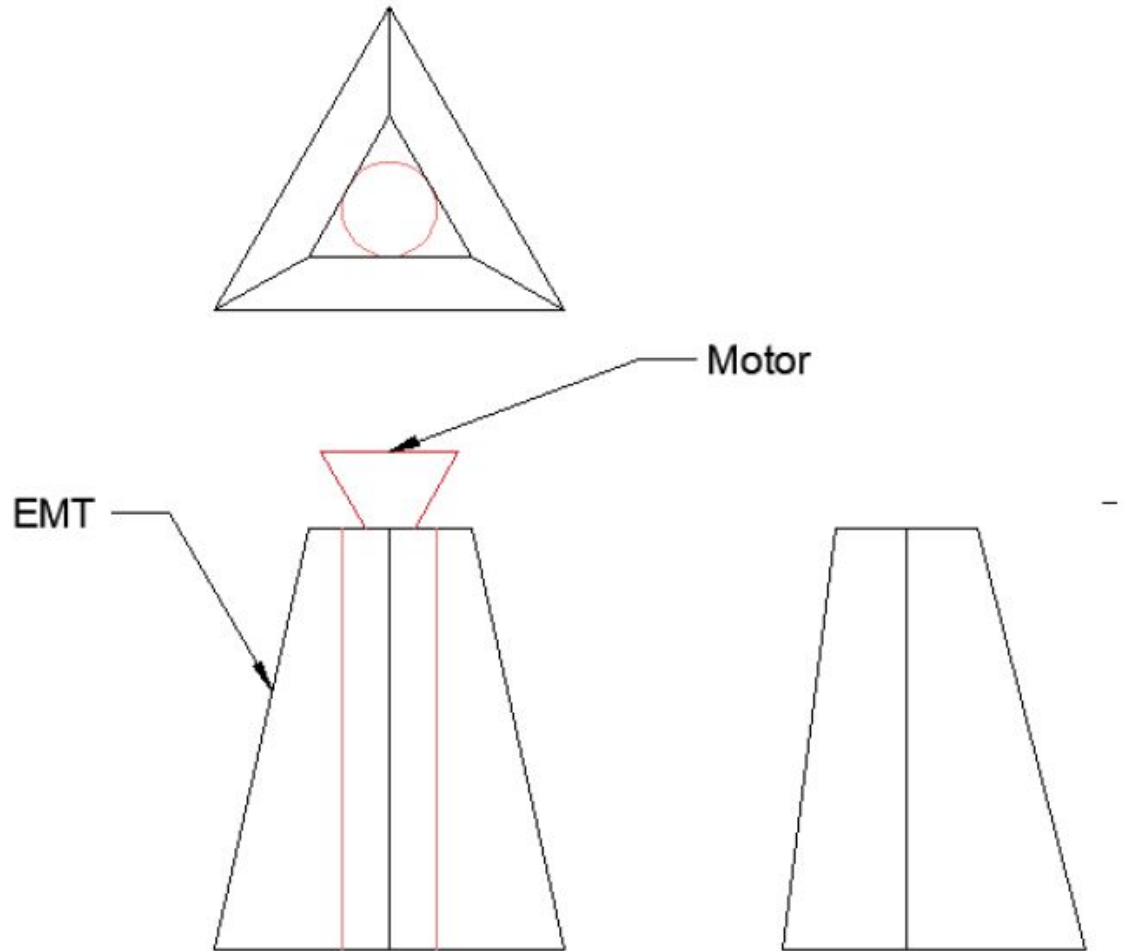
EMT - Ease of Fabrication, Rigid support

EMT + M6 bolts for clamp mechanisms

1 Load cell will work



PROPOSED EMT BASED CLAMP



Tasks in this week

- [#52] Nozzle fabrication
- [#11] Casting tools fabrication
- [#56] Fuel Casting
- [#57] Research on the use of snap rings
- [#64] Test stand fabrication

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