NAKUJA PROJECT INTERNSHIP

PROGRESS REPORT

WEEK 4 (2nd FEBRUARY – 9th FEBRUARY)

Tasks achieved:

- [#52] Nozzle Fabrication
- [#64] Test stand Fabrication.
- [#11] Casting tools Fabrication
- [#71] Casing fabrication
- [#72] Ejection Charge preparation

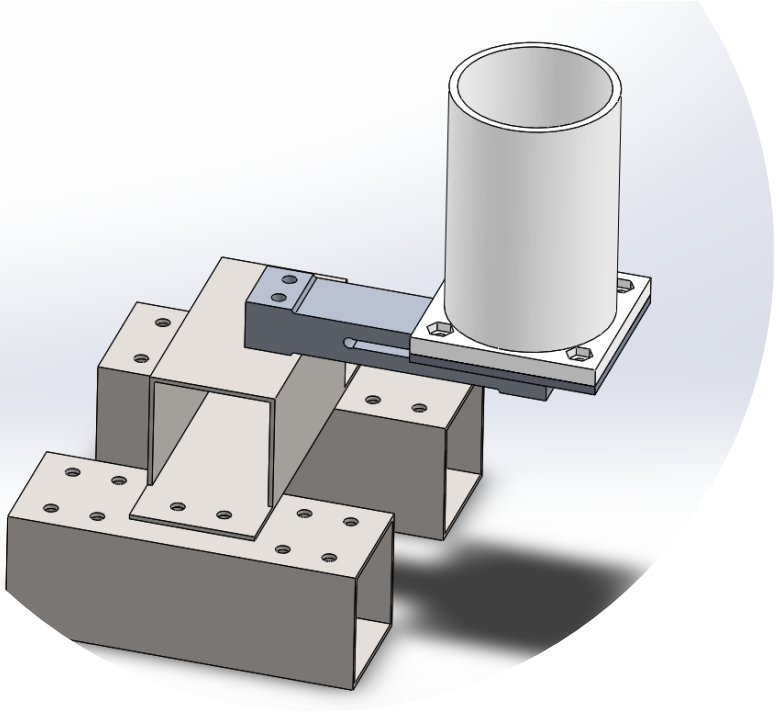
NOZZLE FABRICATION

OPTIMUM DE LAVAL NOZZLE

Convergence half angle – 35 deg

Divergence half angle – 15 deg

Modified Test Stand Design

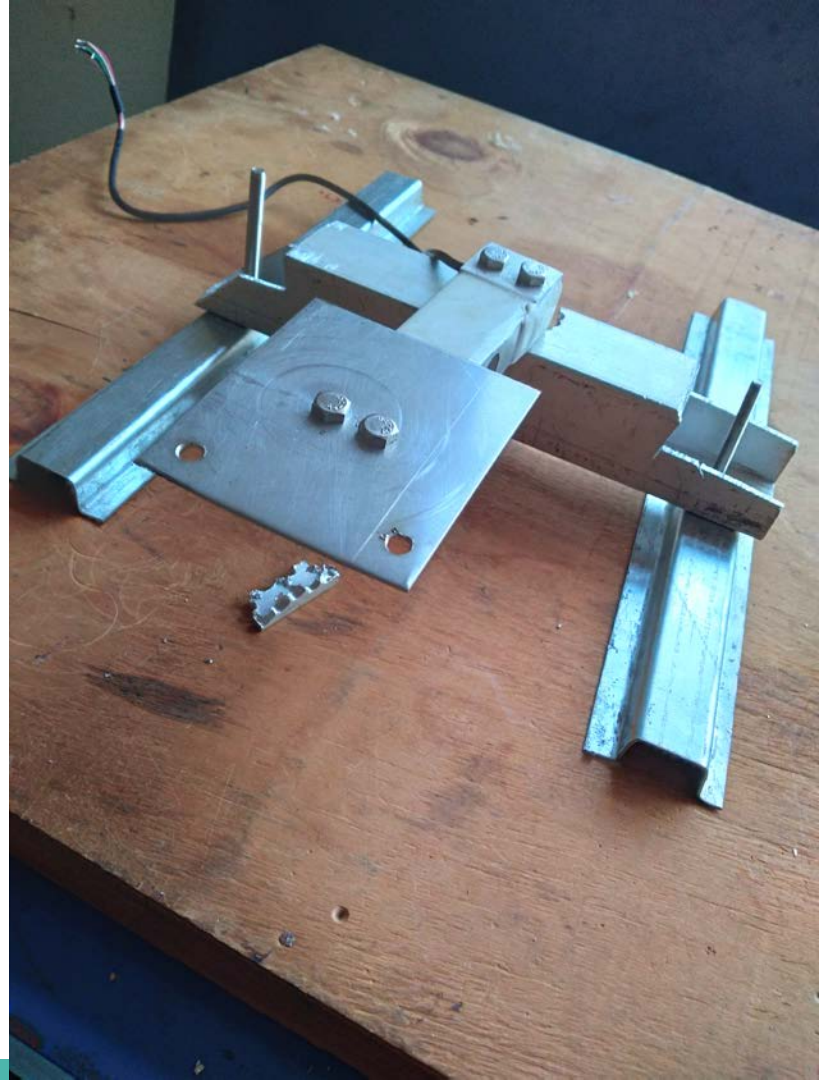


Made use of 1 50kg Load Cell

Test Stand fabrication

Fabrication complete

Motor Mount Fabrication in progress



Casting Tools Fabrication

Fabrication in progress –
Lathe only available on Wed, Thu & Friday

Ejection Charge Preparation

For parachute ejection

1. Ascorbic acid
2. Red Iron Oxide
3. Potassium Nitrate
4. Water

Will be tested after 2 days.

Tasks to be done

- Fabrication of Casing. [#71]
- Research on Snap rings [#57]
- Casting tools fabrication. [#11]
- Cast fuel. [#56]
- KNPSB trials [#69]
- Ejection Charge prodtion [#13]

Timeline

MONTH	WEEK	INTERN TASKS
January		Designs [Casing, Nozzle, Bulkhead, Test stand]
	Week 1	Fabrication begins [Casing, Nozzle, Bulkhead]
	Week 2	Fabrication Continues
	Week 3	Test stand Fabrication
February	Week 4	Fuel Casting & Fabrication
	Week 5	Iterative Static Firing Tests
	Week 6	Iterative Static Firing Tests and fuel improvement
	Week 7	Launch Pad Design and Fabrication