Active Rocket Controls (ARC) 50 % Build Update

Henry Benedictus, Chyler Bitsoi, Emilio Huggins, Eric Reyes, Aislinn Joy Gacayan

Overview

This project focuses on researching, designing, and developing a rocket that demonstrates active control surfaces to dynamically adjust rocket orientation.

- 50% update due to tight deadlines on launch

Design Efforts

- Updated CAD

- Update on all design efforts since the beginning of the semester.

  - 2 Part Fuselage

  - Updated Control Mechanism

- No updates to engineering calculations

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	Aft Mechanism	Holds Control Mechanism and I-500 Motor	1
2	Sled Assembly	Holds Av Bay and Parchute components	1
3	1/4 in Screw	Secures the mechanism to the air frame.	4
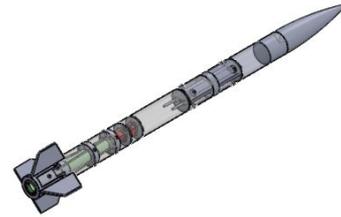
		UNLESS OTHERWISE SPECIFIED:		NAME	DATE		
		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL± ANGULAR: MACH±　BEND ± TWO PLACE DECIMAL　± THREE PLACE DECIMAL　±	DRAWN	Henry B	2/4/26	TITLE:	
			CHECKED				
			ENG APPR.				
			MFG APPR.				
		INTERPRET GEOMETRIC TOLERANCING PER:	Q.A.				
PROPRIETARY AND CONFIDENTIAL			COMMENTS:				
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF <INSERT COMPANY NAME HERE>. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF <INSERT COMPANY NAME HERE> IS PROHIBITED.		MATERIAL					
	N/A	ARC					
	NEXT ASSY	USED ON	FINISH				

TITLE: **Full ARC Assembly**

SIZE **A** | DWG. NO. Full Arc Assembly | REV

SCALE: 1:8 | WEIGHT: | SHEET 1 OF 1

APPLICATION | DO NOT SCALE DRAWING

Purchasing Plan-Top Level Budget

Shown in class

Purchasing Plan - BOM

Shown in class

Manufacturing Plan

- Primary airframe manufactured (aft + payload sections complete)
- Avionics bay fabricated (coupler, bulkheads, and sled complete and dry-fit)
- Motor tube & centering rings assembled (primary thrust load path established)
- Recovery system ready (parachute and shock cord prepared for integration)
- Aft section designed for control system integration (mechanism pending final assembly)

Demonstration

Physical, Shown in Class

Gantt Chart Update

Shown in class