MEETING MINUTES

Topic: Research Report

Tuesday, September 26, 2017
5:32 pm -

Minutes recorded by: Jeremy Tilden

Meeting called by: David Trevas

Attendees: Andrew Robinson, Isaac Keene, Adam Wedell

Table 1. Record of meeting.

5:32 pm – 5:40 pm	**Clear Plastic**
	● Alibaba – selling through other companies
	● Plastics
	● McMaster-Carr
	● Polycarbonate or plexiglass
	● Look at pressure vessel design, must design it like a pressure vessel
	● Calculate hoop stress, with material specs
	● Laird plastics
	  ○ Invented by Dupont
	  ○ Look for specs for acrylic or polycarbonate
	● Must calculate the pressures and flows to get good ranges
	● Work out all thermos equations for engineering requirements
	  ○ This should be in the presentation
		duBois Room 11

5:40 pm – 5:50 pm	**Strain**
	● Measure strait bending on the plate or shaft
	  ○ This would be a cantilever
	  ○ This is to measure thrust
	  ○ Measure stress on one side, using tension on opposite side of thrust
	  ○ Stress would be measured in pascals
	  ○ Find stress using strain (usually in microstrain)
	● Rosette is for a stress state that is more complicated, bending and torsion, (combinations)
	  ○ Probably not needed for this project
	  ○ Only need if it is turning
	● Select the beam to get a proficient reading
	  ○ Good beam will give you a better range
	  ○ Match beam deflection with expected force for most accurate data
		duBois Room 11

5:50 pm – 5:54 pm	**Moving Forward** ● Need numbers	duBois Room 11

	○ How big ○ How much air ○ Forces ○ Etc. ● For Tuesday ○ Rubrics and templates are on bblearn ○ Customer and engineering requirements ○ 8-12 minutes for each team ○ Background and requirements ● Fundraising ○ No budget information yet. ● Need to know what's going in and what is going out	
5:54 pm – 6:01 pm	**Data Collection** ● Wheatstone bridge, where to take and collect data ● Sometimes strain gauge are too small for an Arduino to read, need amplifier ● Need to balance it to read it ○ Might already have a strain ● Calibrate the voltage measured into strain ● Display data in real time	duBois Room 11

Table 2. Tasks Assigned.

Task	Person Assigned	Due Date	Date Complete
Prepare Presentation	All		

Next formal meeting: 10/3/2017, Room 11, duBois Center, at 5:30 pm.