

To: Dr. Willy

From: Child-Size HPV

Date: 17 September 2021

Re: Hardware Review 1

The following memo will outline the HPVC Team's effort to complete the hardware review's requirements. Furthermore, this memorandum will outline the manufacturing and purchasing progress since last semester. Lastly, the team will provide some photographs to illustrate the steps being taken to prepare for manufacturing of the frame and roll cage.

Both Abel and Trent of the HPVC team have been working to begin the manufacturing process that includes TIG welding, bending, cutting, and notching. Abel and Trent have been working closely with machine shop employees to learn the tools in the shop for bending and coping, while also learning the process for work orders for larger welds. Martin has been supporting their efforts of manufacturing by providing updated engineering drawings, minor redesigns, or just a third hand during manufacturing. Preston has been working for the team to source parts and maintain the budget during the manufacturing process. With efforts to reduce the budget, he has contacted local suppliers to reduce shipping cost and source parts faster. While this is helpful, the team requested he sort through the current ASME inventory and apply spare parts towards reducing the budget.

Overall, the team feels very strong about the progress within the HPV project. Furthermore, the team believes by hardware review two a full prototype will be completed (such as the frame with working features). The team is looking forward to manufacturing the frame and bringing different subsystems together, such as drivetrain and steering.



Figure 1: Weld Sample

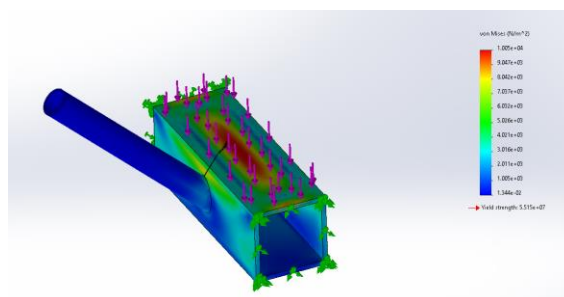


Figure 2: SolidWorks Model of Weld Sample

Table 1: Example of Inventory Taken

Ribbon Wire (26AWG?)	ASME Locker - Clear Bin
28AWG Steel Galvanized Wire	ASME Locker - Clear Bin
Everbilt Tee Hinges	ASME Locker - Clear Bin
Electrical Silver Solder	ASME Locker - Clear Bin
Was Paper	ASME Locker - Clear Bin
Steel/Aluminum Plates	ASME Locker - Clear Bin
Various Screws (20x1.5in Socket Screws)	ASME Locker - Ammo Can
Various Nuts (1/8 to 1/4 thick, 1/8 size to 1in)	ASME Locker - Ammo Can
Plastic Rivets	ASME Locker - Ammo Can
Plexi Glass	ASME Locker - Ammo Can
DT Swiss Spokes (Size: 72)	ASME Locker - Ammo Can
Adhesive Gasket	ASME Locker - Ammo Can