

sdmay19-03: 3D Metal Printer - Phase II

Semester 2 Week 7 Report

March 11th - March 17th

Client/Advisor: Dr. Bigelow

Team Members

Thomas Waters — *Computer Engineer*

Ariel Rizhsky-Yakobson — *Computer Engineer*

Jacob Gosse — *Electrical Engineer*

Alvin Rymash — *Electrical Engineer*

Armand Hernandez — *Software Engineer*

Summary of Progress this Report

For this week, we cut out insulation for the box to ensure vacuum seal. The gasket was really thick and hard to cut through and this took a while to do. After that we also had to cut holes for the screws so the lid can be screwed on. Then we also made sure that the roller was done.

Pending Issues

Some of the parts manufactured for the printer were misaligned, requiring fixing. The side panel of the box needs to be made into more of a door, which will be simple once hinges are purchased for it.

Plans for Upcoming Reporting Period

We have measured and accounted for the new misalignments in the parts, and should be fixed once it is taken to the machine shop. Once this is done, we will also have to test the printer and all of its components together.

Individual Contributions

Team Member	Contribution	Weekly Hours	Total Hours
Thomas Waters	Did initial attachments and measurements of bracket, and mounts for print bed and powder bed.	4	26
Ariel Rizhsky-Yakobson	Reviewed the Printer manual for power cable setup and connection. Researched power supply requirements for laser.	4	26

Jacob Gosse	Fit the gasket to the top of the vacuum chamber to create a seal with the lid. Also fit the viewing door with gaskets as well.	4	26
Alvin Rymash	Assisted in power cable setup and research.	4	26
Armand Hernandez	Continued work on the 3D model slicing and parsing to gcode as well as helping with research for laser control settings	4	26