

sdmay19-03: 3D Metal Printer - Phase II

Semester 2 Week 9 Report

April 1st - April 7th

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

All pieces of the printer are aligned, and fixed. We have created our power cable, and are working on testing the guide laser before fully turning the laser on. We found a wall supply for the 250 volt plug, and are in the process of moving the laser over to this area in order to test it.

Pending Issues

We need a powder collection bin, and a fully functioning roller. We need a reliable dc power supply for the lasers, and the door to the vacuum chamber needs to be completed.

Plans for Upcoming Reporting Period

Our plan for the upcoming period is to get the laser running and test the printer with all the pieces attached. We are also planning to research the vacuum chamber more, as well as test and finish the wiring diagram for the chamber.

Individual Contributions

Team Member	Contribution	Weekly Hours	Total Hours
Thomas Waters	Attached the completed pieces to the printer, made sure that they are aligned properly.	4	34
Ariel Rizhsky-Yakobson	Assisted in creation of the laser power supply and getting all of the pieces attached to the printer.	4	34

Jacob Gosse	Did updated measurements and tests to make sure that the new pieces are properly placed and aligned with the rest of the printer.	4	34
Alvin Rymash	Machined the necessary changes to the final misaligned pieces. Finished the power supply cable that was needed to be produced to power the laser.	4	34
Armand Hernandez	Continued work on the 3D model slicing and parsing to gcode, worked on having the vacuum chamber ready for use.	4	34