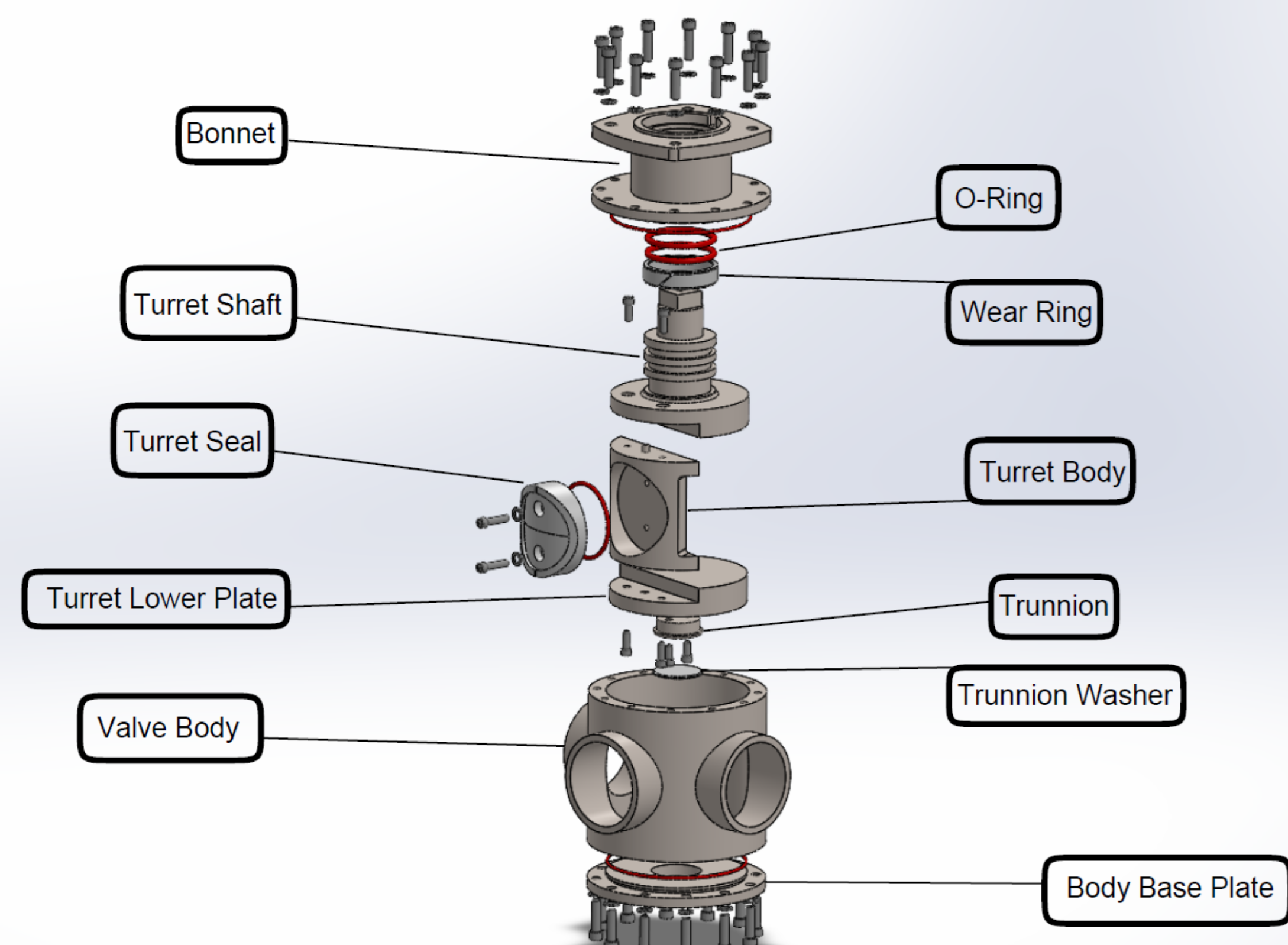


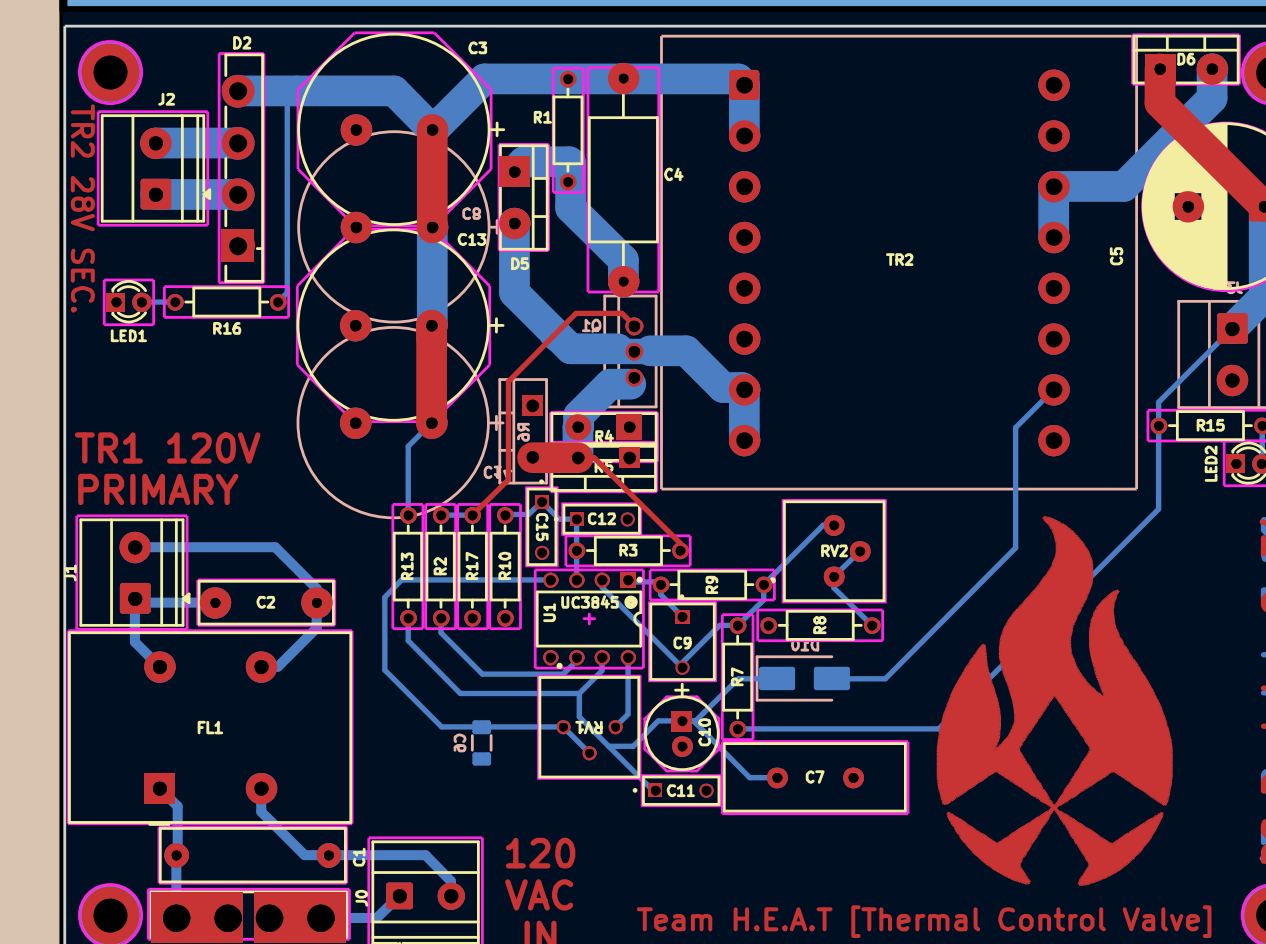
### Project Overview

The objective of this project is to redesign a thermostatic mixing valve for a modular thermal management system used by General Atomics. The goal is to reduce size and weight while maintaining precise structural integrity, and compatibility with existing system components.

### Full-Assembly CAD

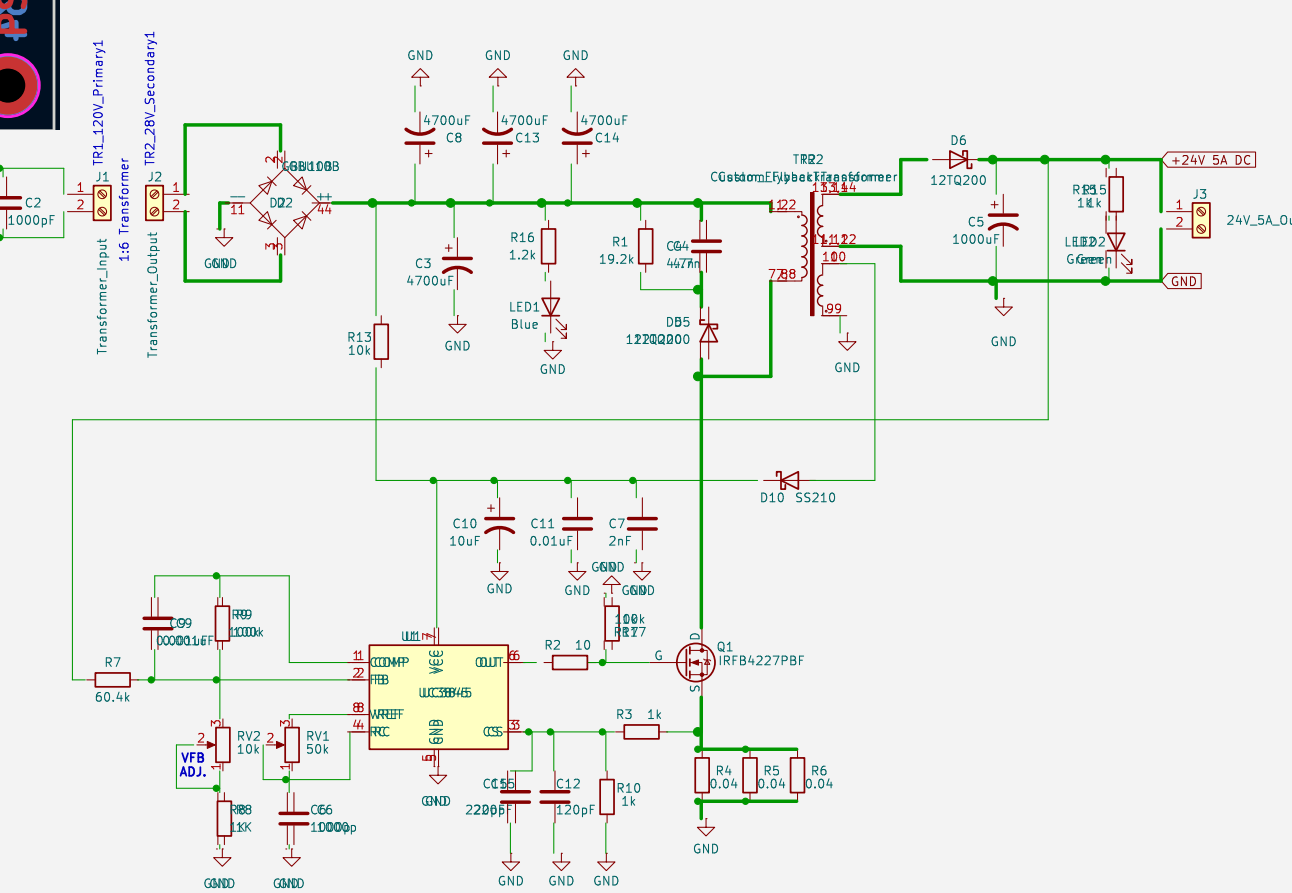


### Electrical Design



### PCB Board Layout

### Schematic Layout



### Meet the Team



**Jaden Li**  
ME Team Lead



**Natalie-Noelle Puspos**  
ME



**Aidan Kiswoto**  
ECE Team Lead



**Noah Deneau**  
ME



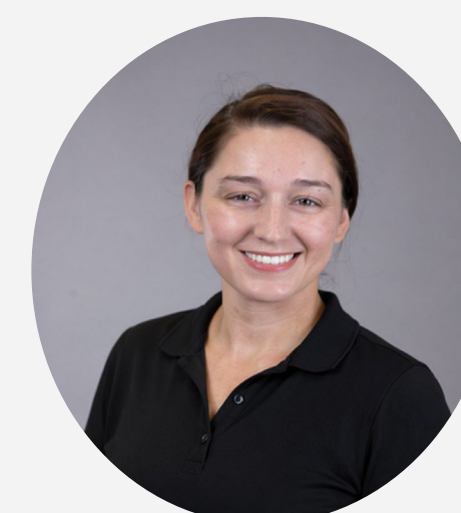
**Emanuel Diaz-Sanchez**  
ME



**Merabi Khachidze**  
ECE



**Nicolas Doutt**  
ME

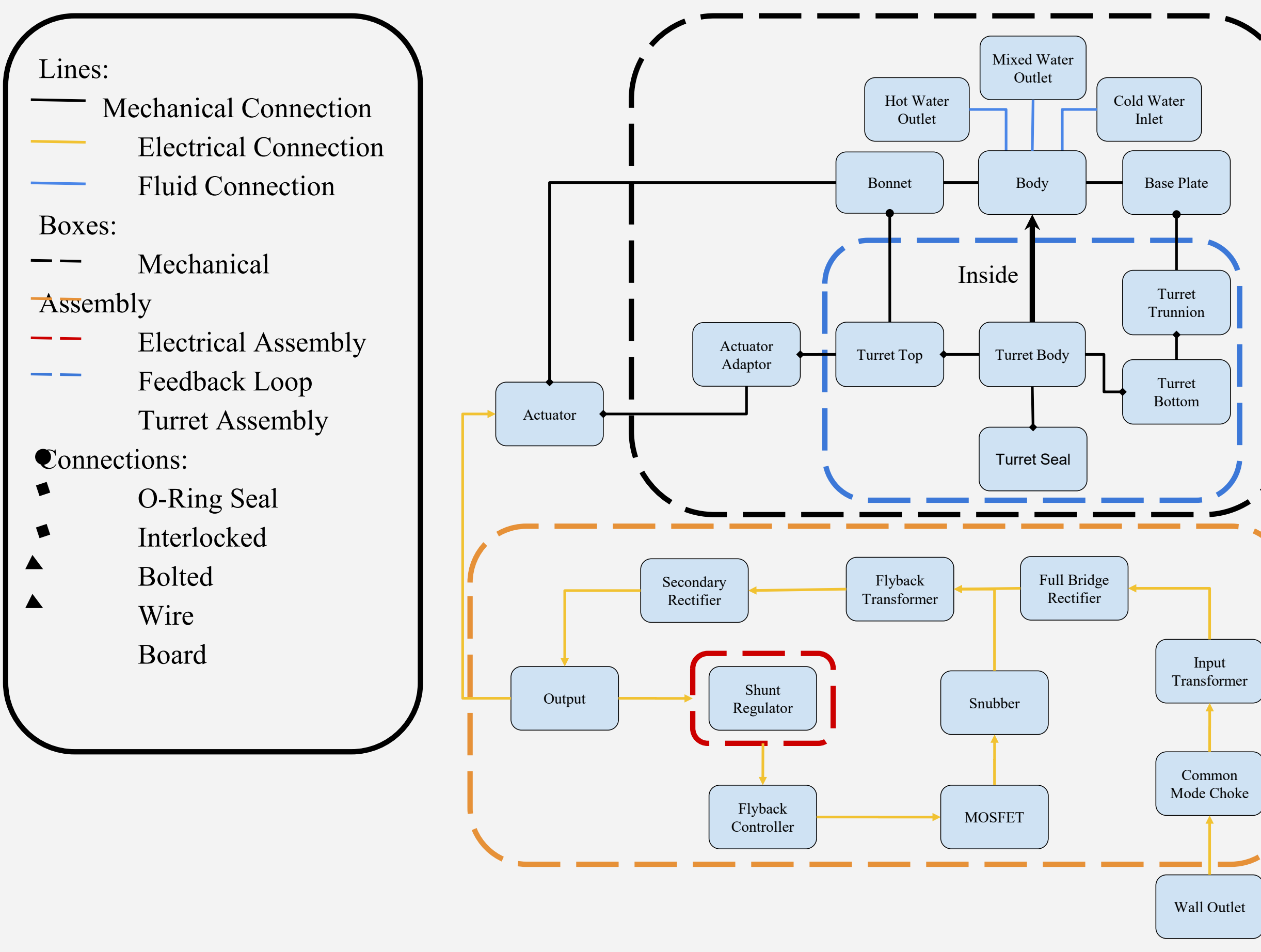


**Sara Hilera**  
ECE

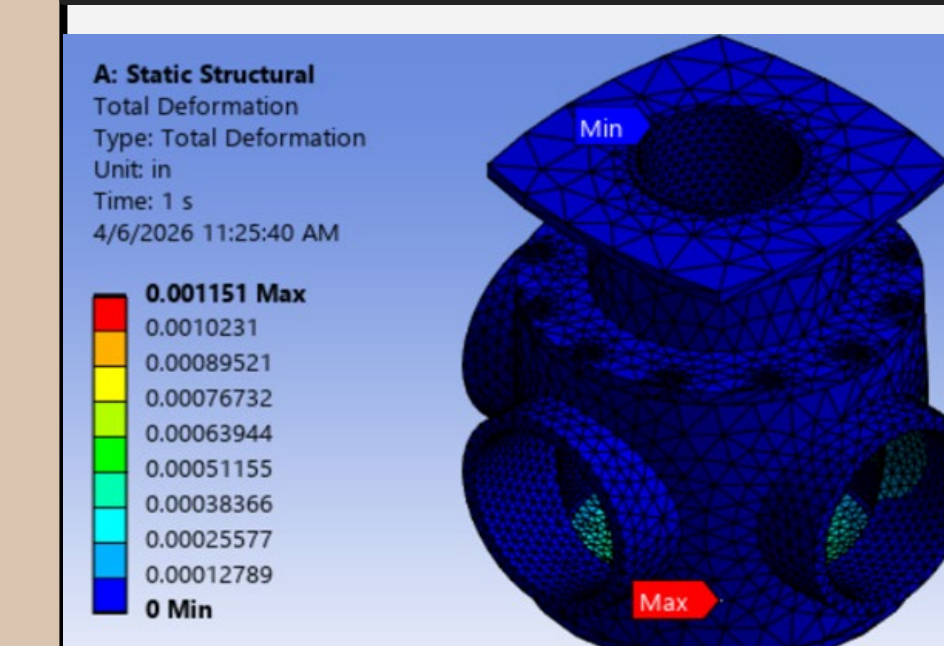


**Tarun Nair**  
ECE

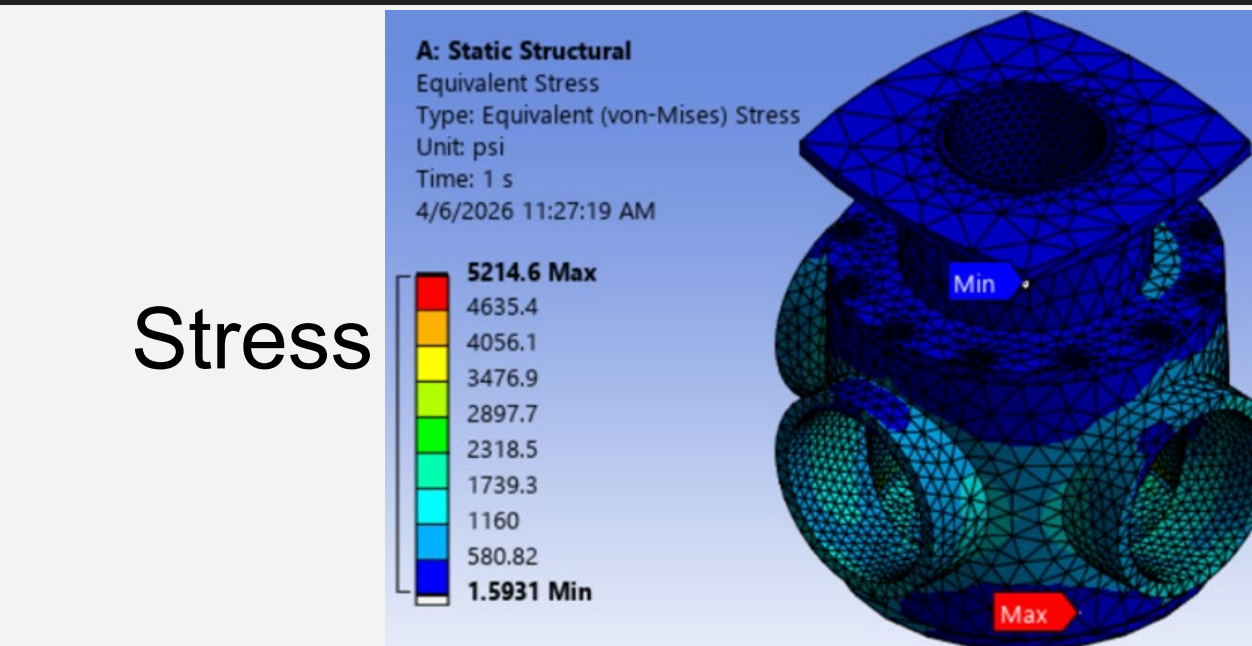
### System Level Diagram



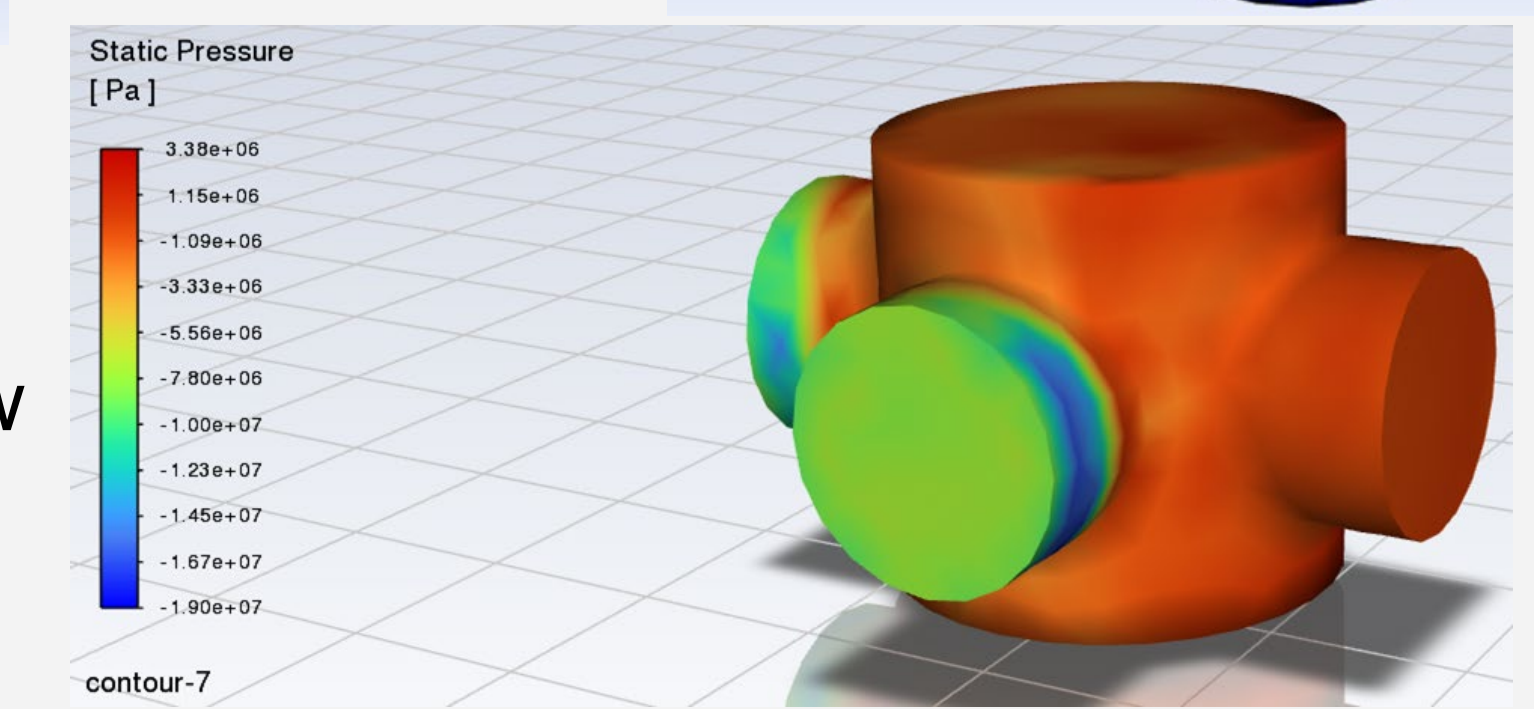
### Analysis



Deformation

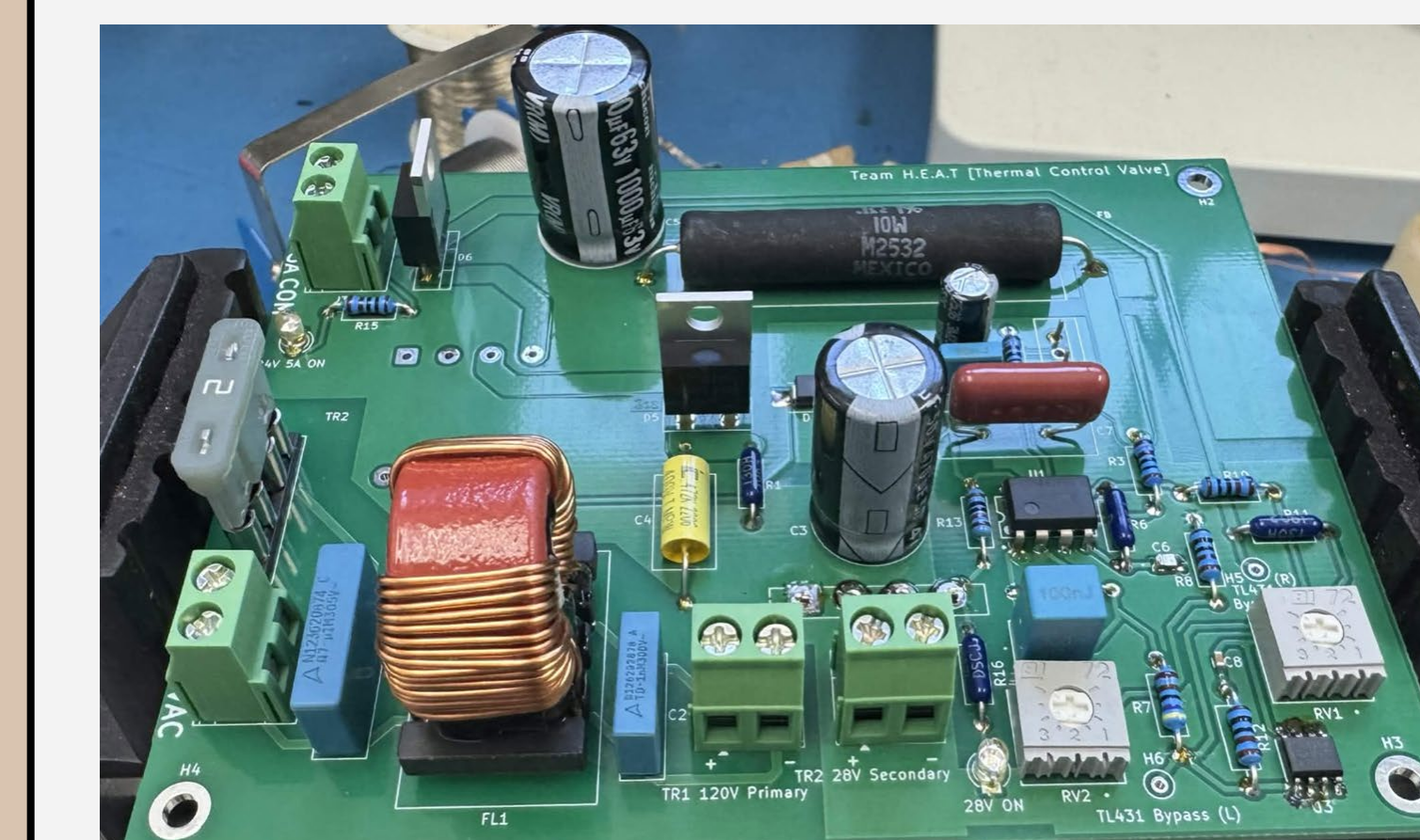


Stress



Fluid Flow

### Prototype & Manufacturing



### Acknowledgements

The team thanks General Atomics for their support and guidance. Special thanks to Travis Scott and Vidya Rangaswamy of General Atomics as well as Dr. Scott Shaffar, Dr. Christopher Paolini, Mark Bruno, Michael Ha and both the SDSU Mechanical Engineering and SDSU Electrical and Computer Engineering Departments.