

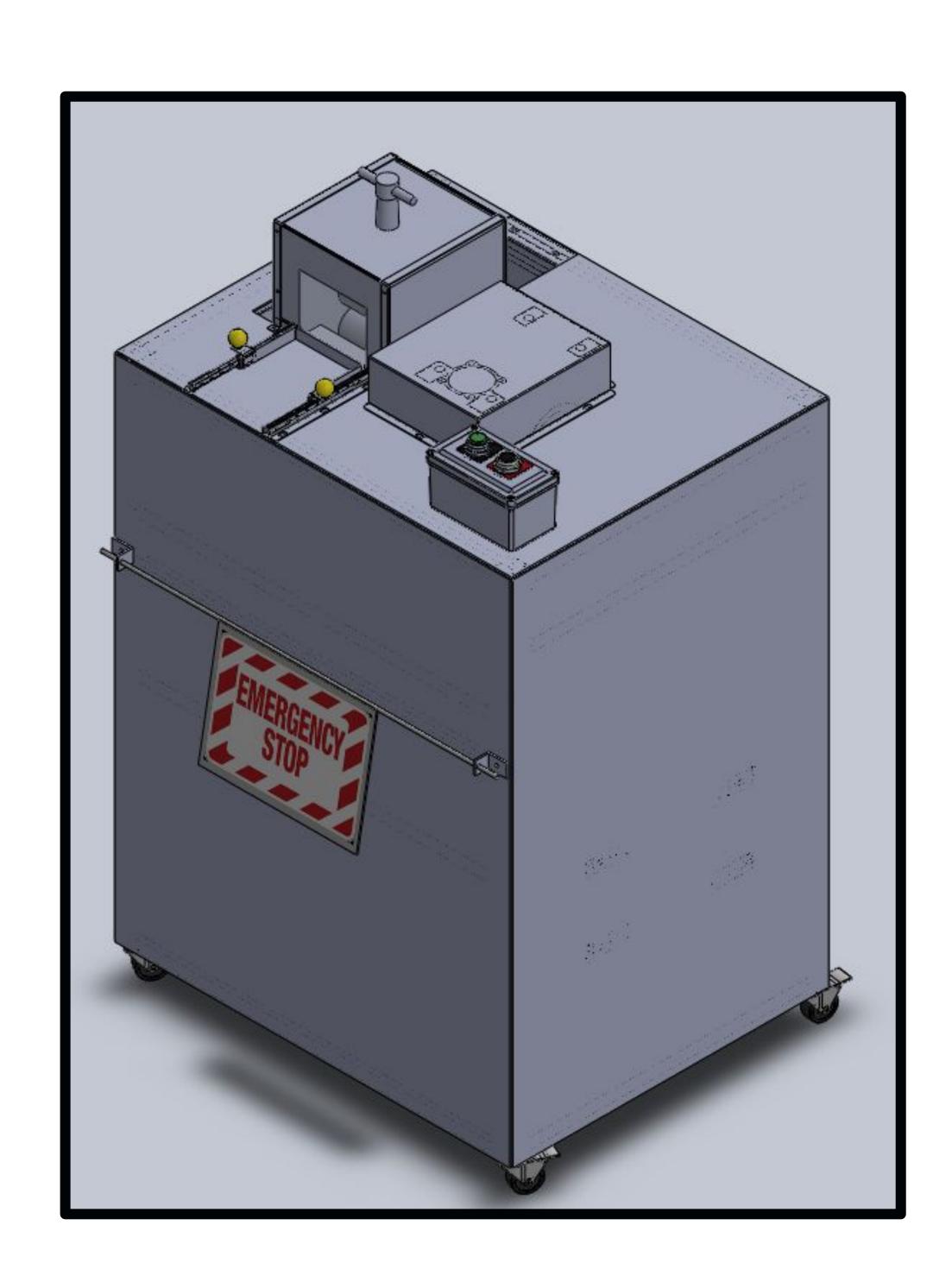
GRANDVALLEY GVSU COLD ROLLER

Team Members

Austin Blumenthal, Nicholas Erickson, Nicholas Fiore, Andy Mitchell, Trey Phifer, Michael Verwys

Team Advisor

Professor Phillip Hittepole



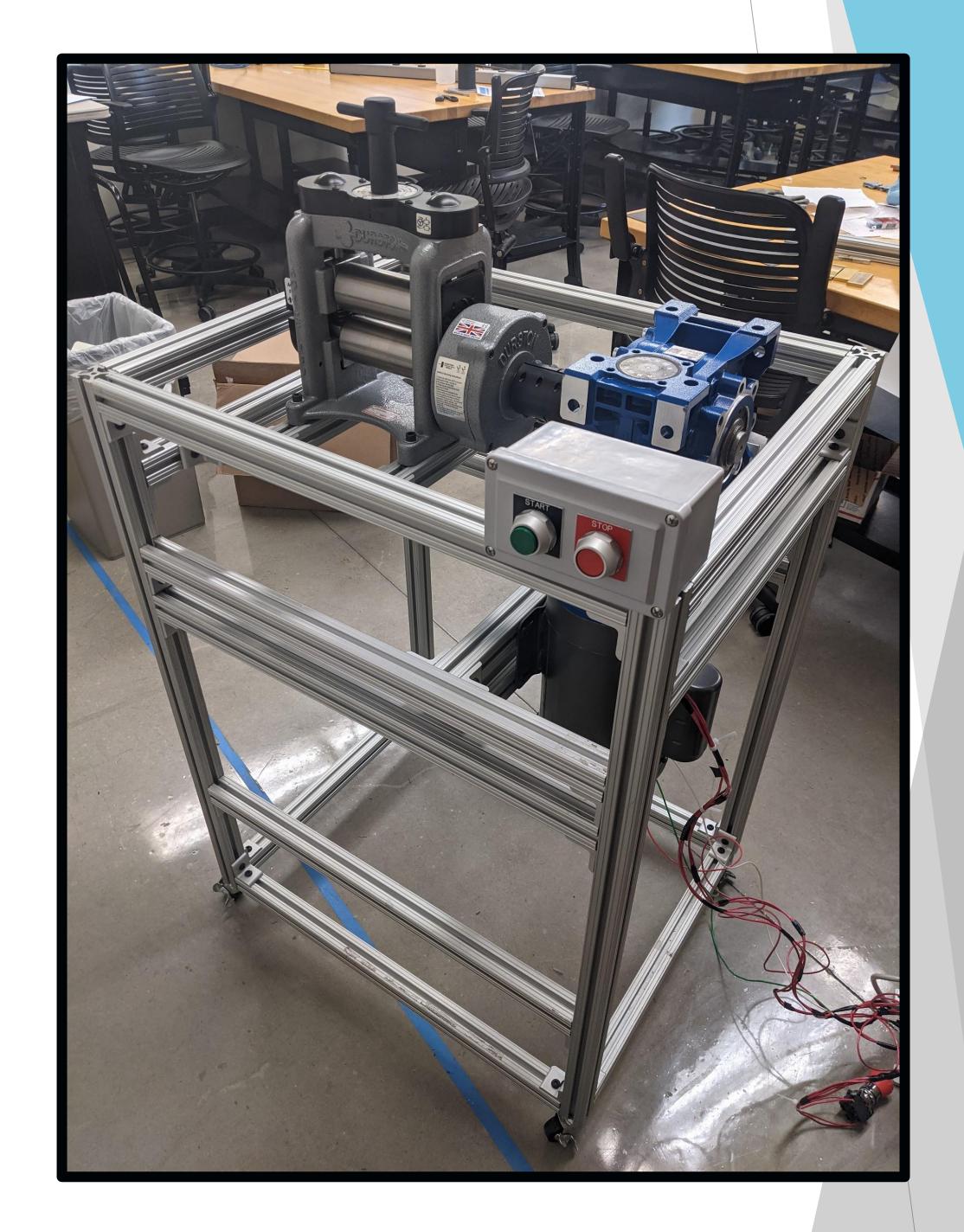
CAD Design of the Rolling Mill

Sample Requirements:

- Sample Material: Cartridge Brass
- Sample size: 3"x1.25"x0.25" (LxWxH)
- Sample Thickness Reduction: 50%

Objective:

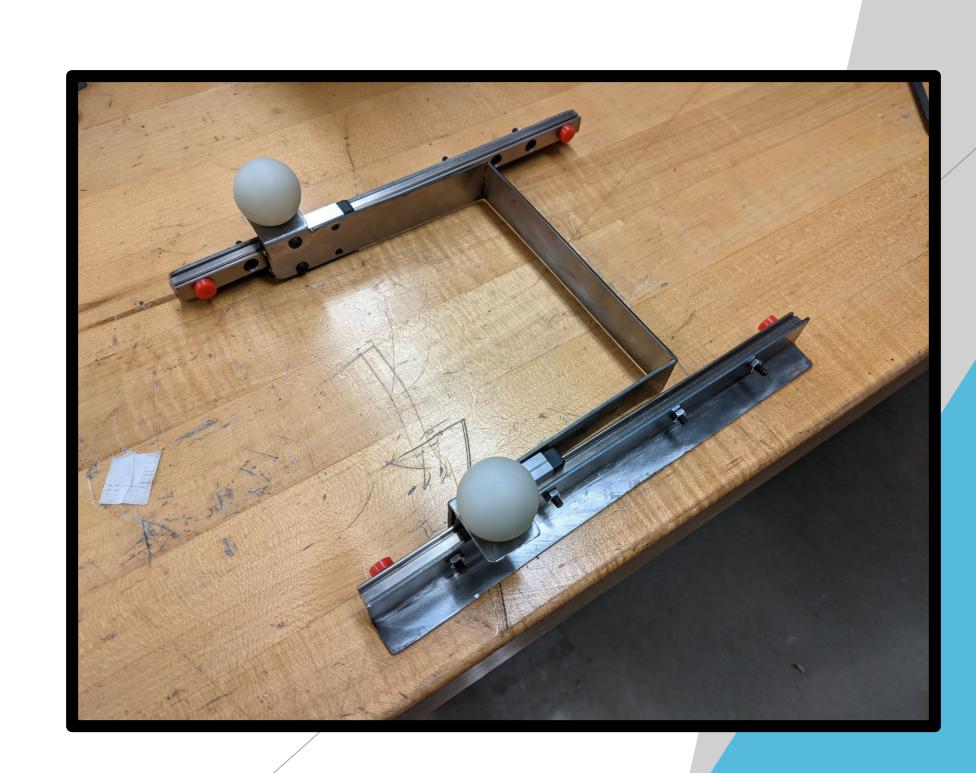
- Construct a Cold Rolling Mill with the goals of:
- o Deforming a metal sample's thickness by 50% to observe the effects of cold rolling
- o Use in EGR 250 Materials Science and Engineering Lab activities



Skeletal Frame of the Rolling Mill

Safety Requirements:

- Use of a push slider mechanism to avoid finger injuries
- Emergency stop flap for hands free stopping of the machine
- Zero access to rollers with plexiglass shielding



Push Slider Mechanism