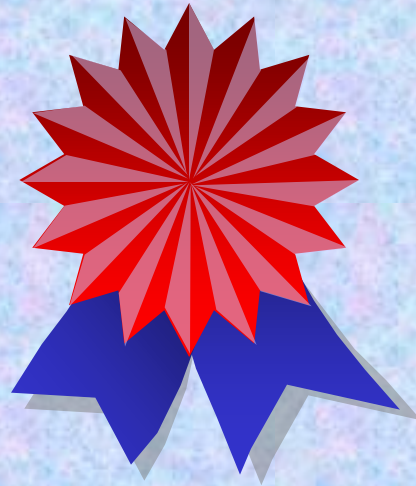


Texas State University-San Marcos
Ingram School of Engineering

***2007 Best Product Development Contest
Award***



2007 Best team:

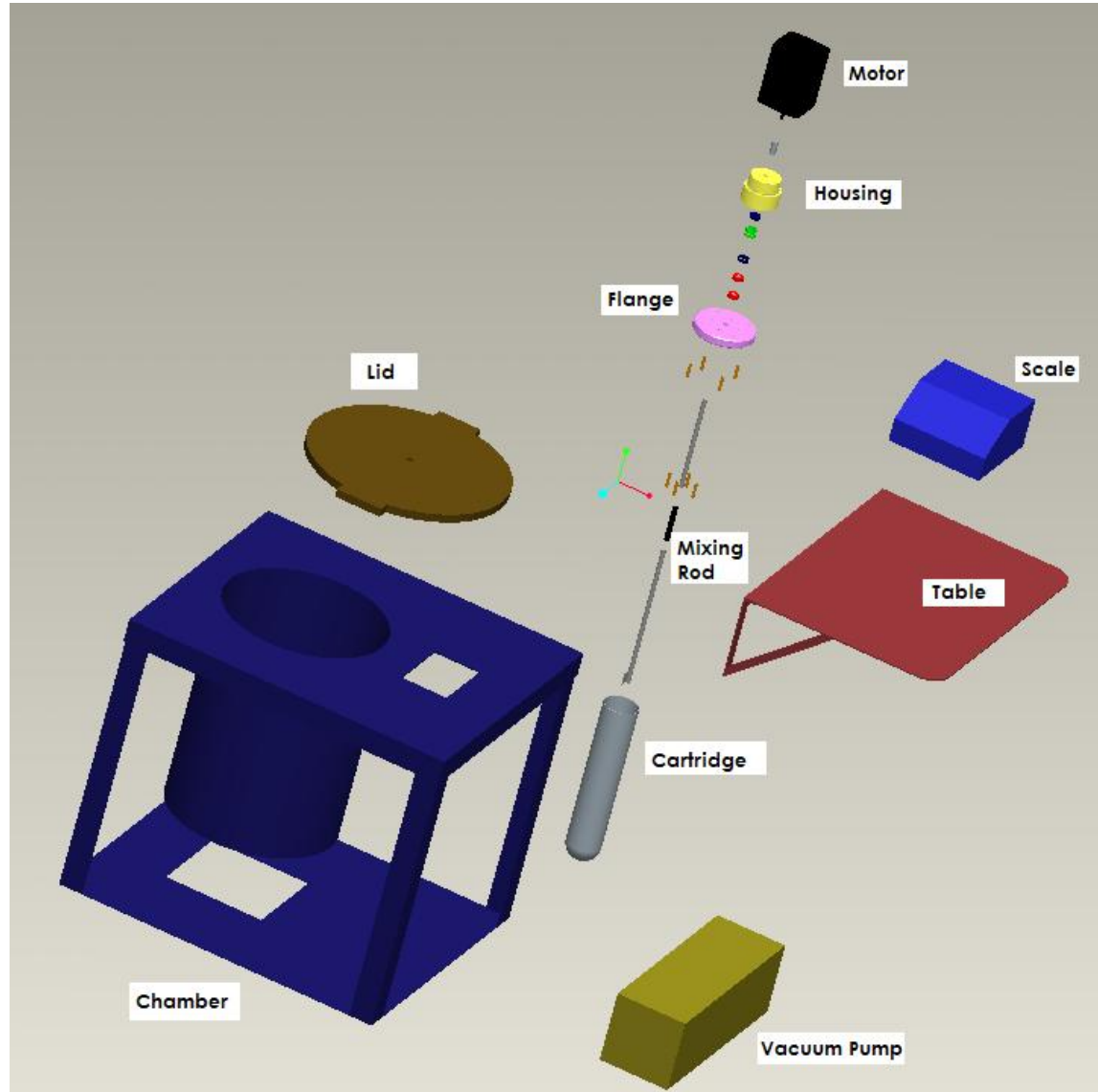
Composite Processing Automation

Aaron Bowers

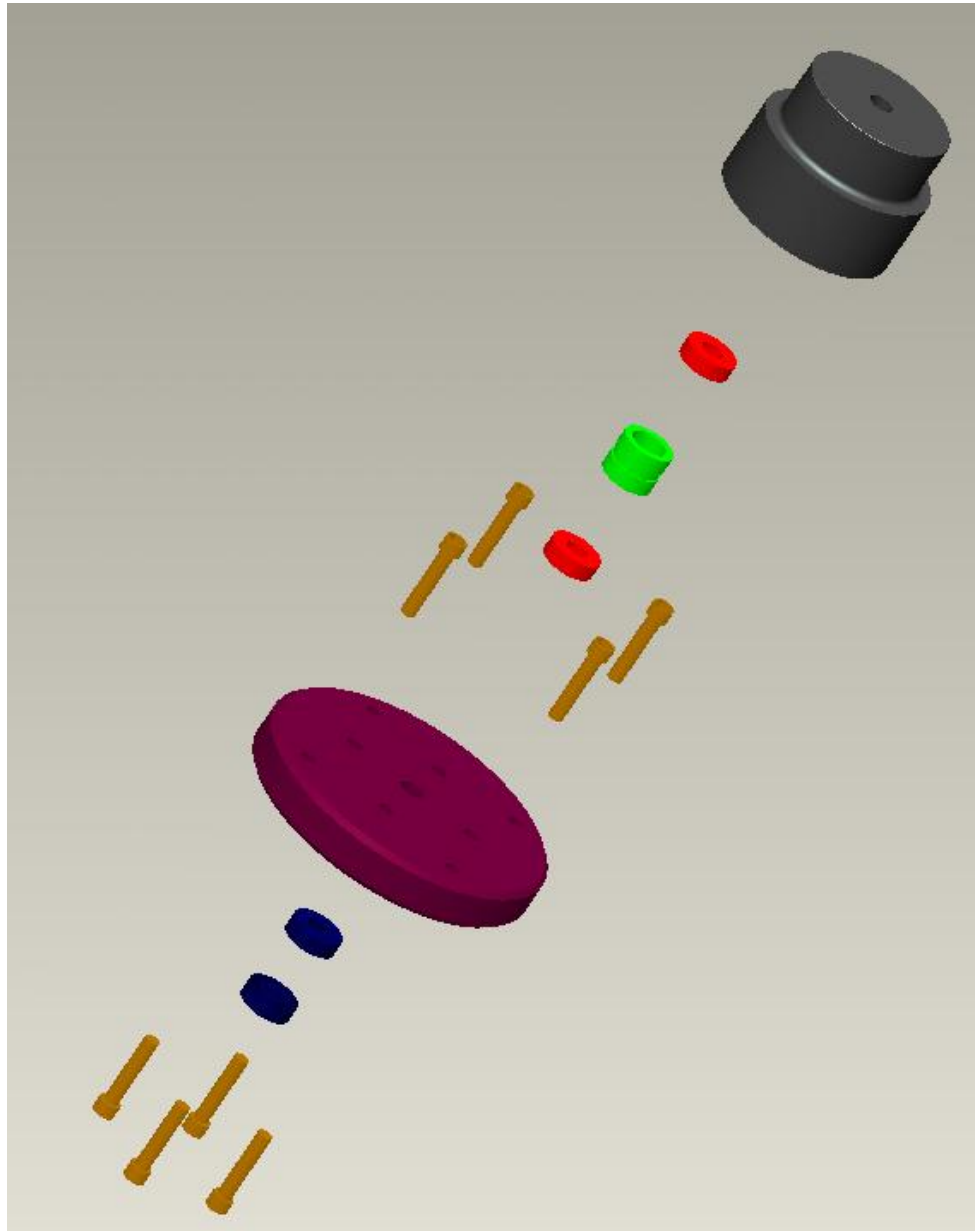
Shane Arabie



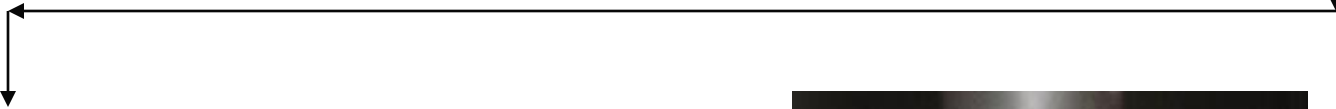
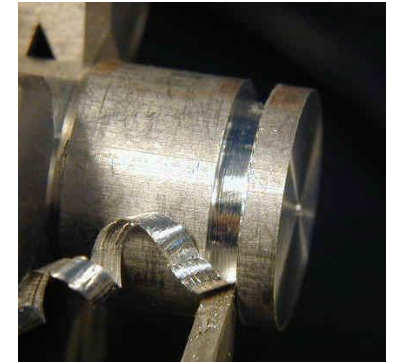
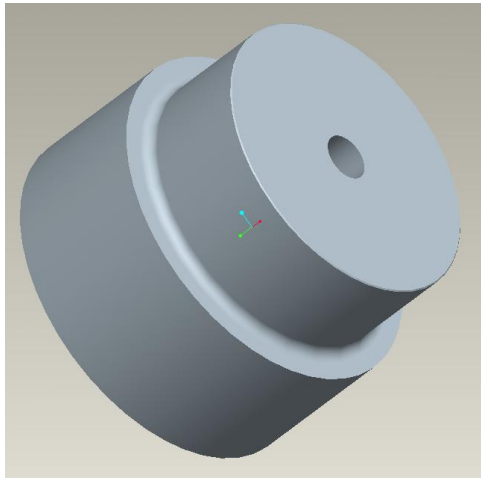
Full System Drawing



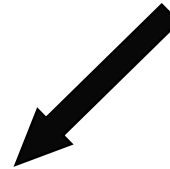
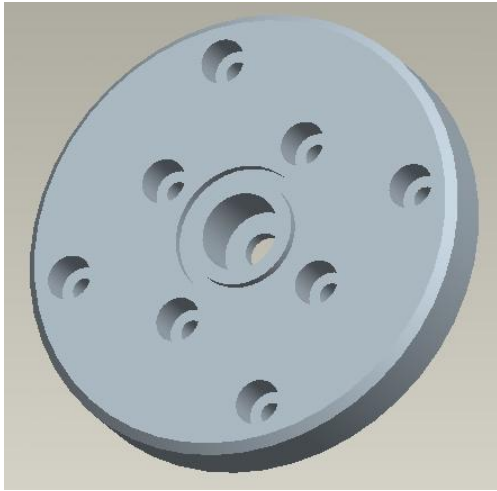
Bearing Housing and Flange Design



Bearing Housing Manufacturing



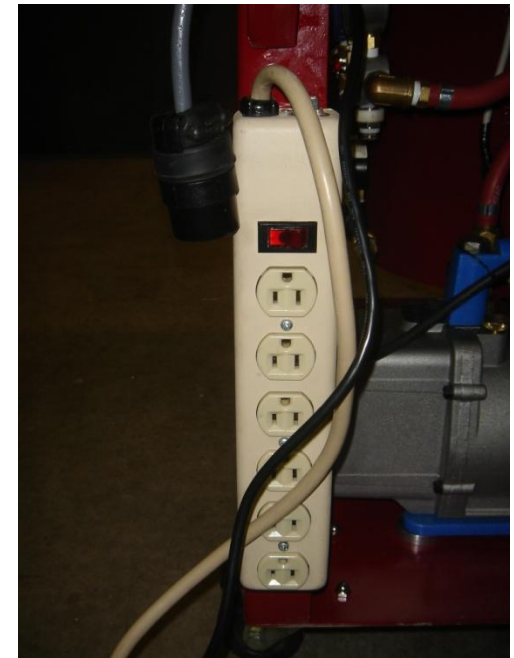
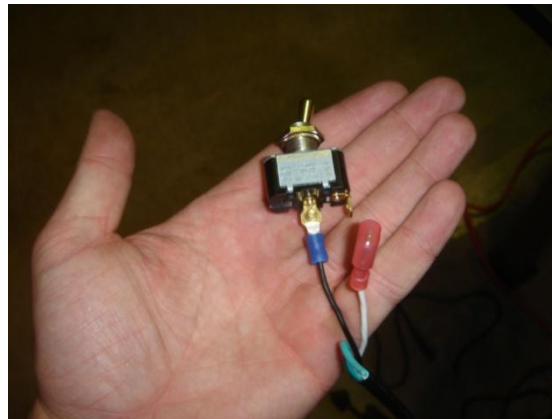
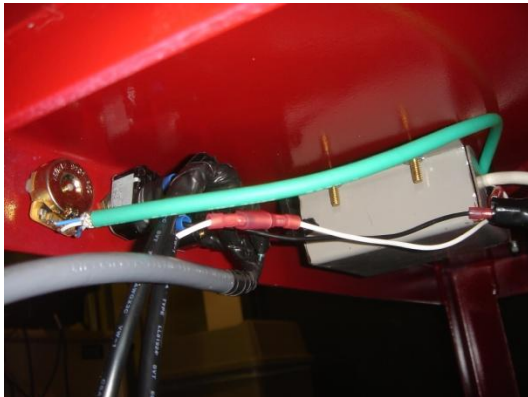
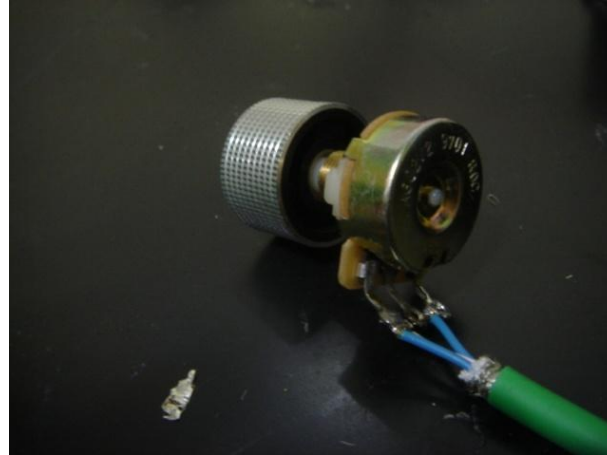
Flange Manufacturing





Chamber Manufacturing

Time for Electricity



Plumbing



Finished Product



Xtreme Table

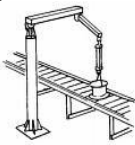







Joshua Shaw

Jesse Covington

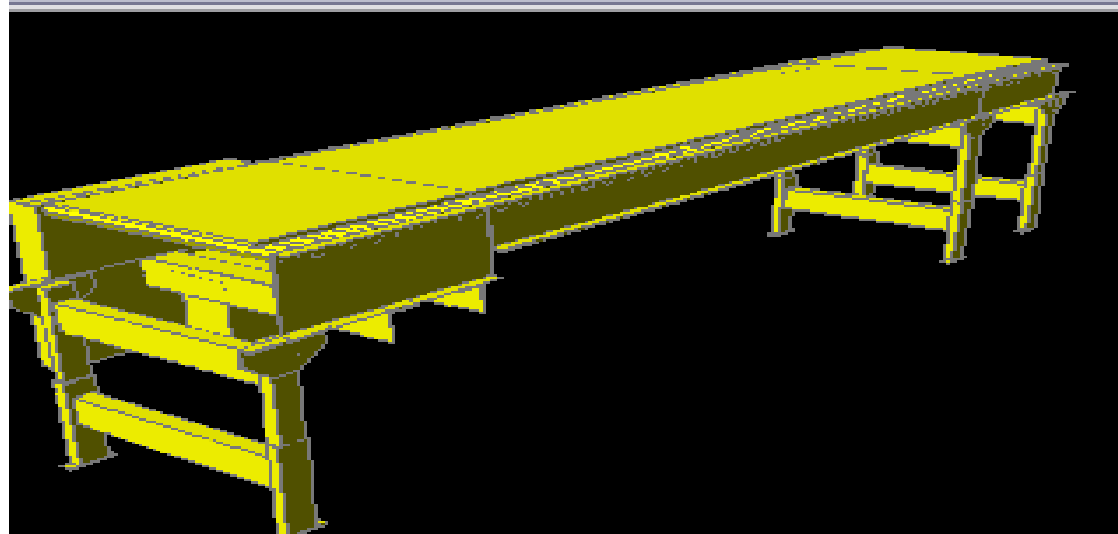
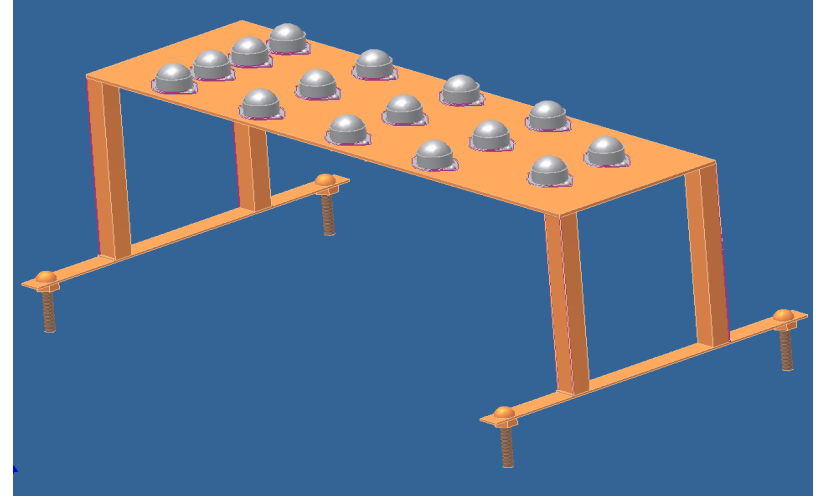
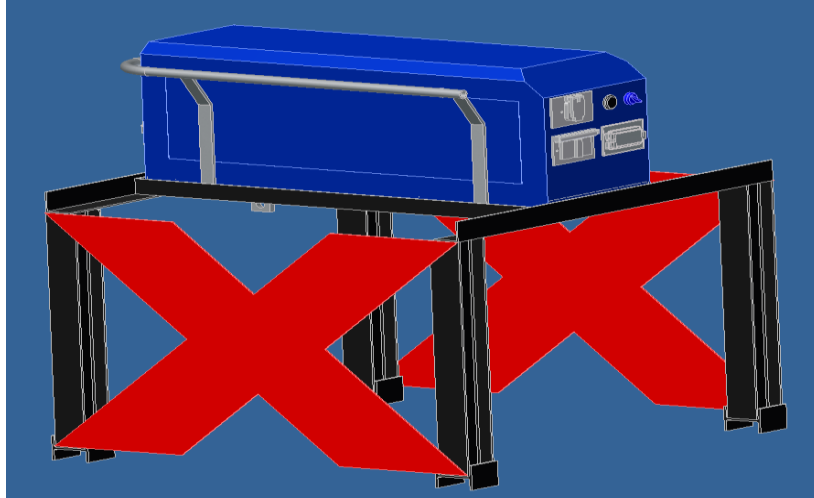
Tim Freemyer



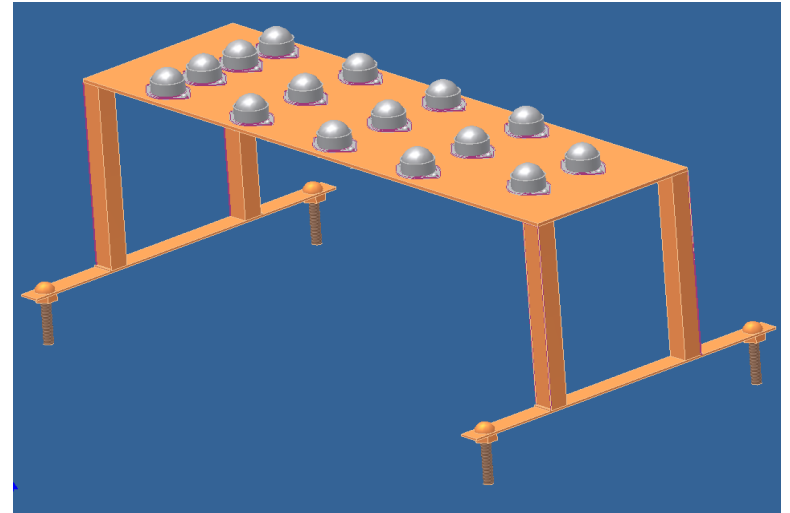
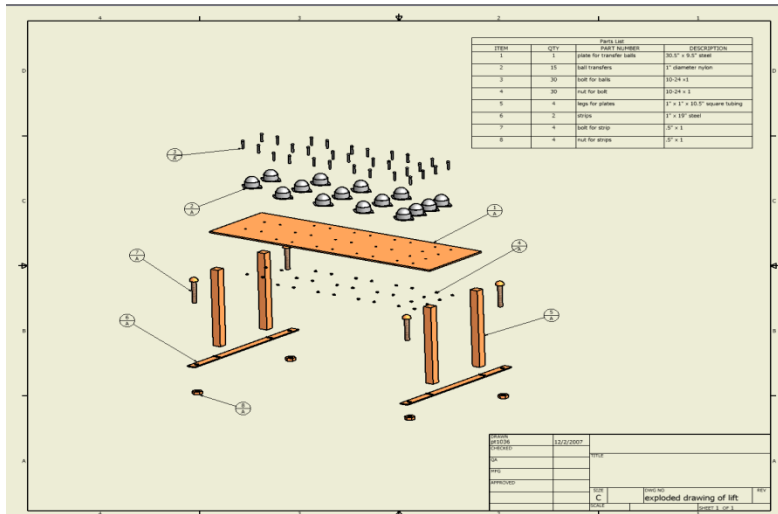
Concept Screening

Selection Criteria	Concept Variants							
								
Ease of Handling	0	+	-	0	0	-	-	0
Ease of use	0	+	-	-	0	+	+	0
Non-Damaging	0	0	+	0	+	0	+	0
Mobility	+	+	+	+	+	0	0	0
Load Handling	-	0	0	0	+	+	0	0
Manufacturing Ease	0	+	-	+	0	-	-	0
Functional	+	+	-	-	0	-	+	0
Pluses	2	5	2	2	3	2	3	
Sames	4	2	1	5	5	2	3	
Minuses	1	0	4	2	0	3	2	
Net	1	5	-2	0	3	-1	0	
Rank	4	1	7	5	2	6	3	
Continue?	NO	YES	NO	NO	YES	NO	YES	

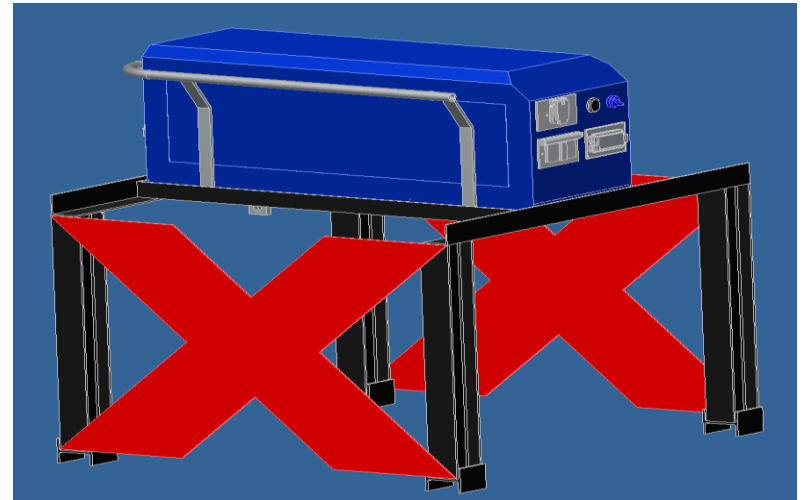
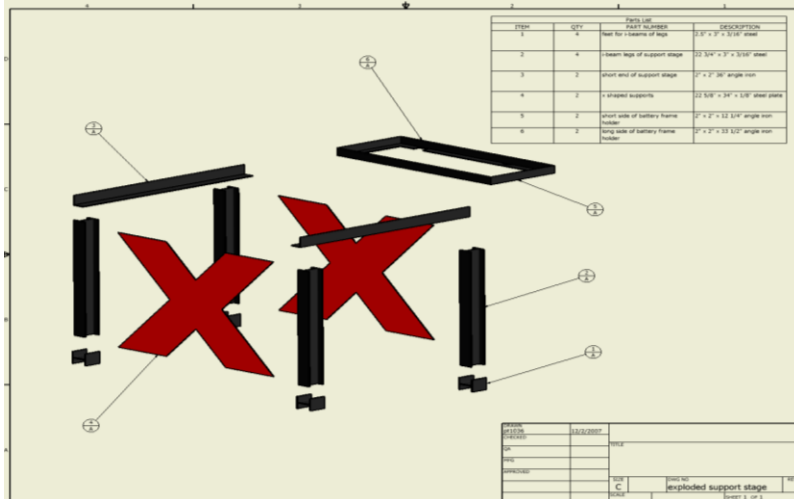
Final System Drawings



Parts List for Lift/Transfer System



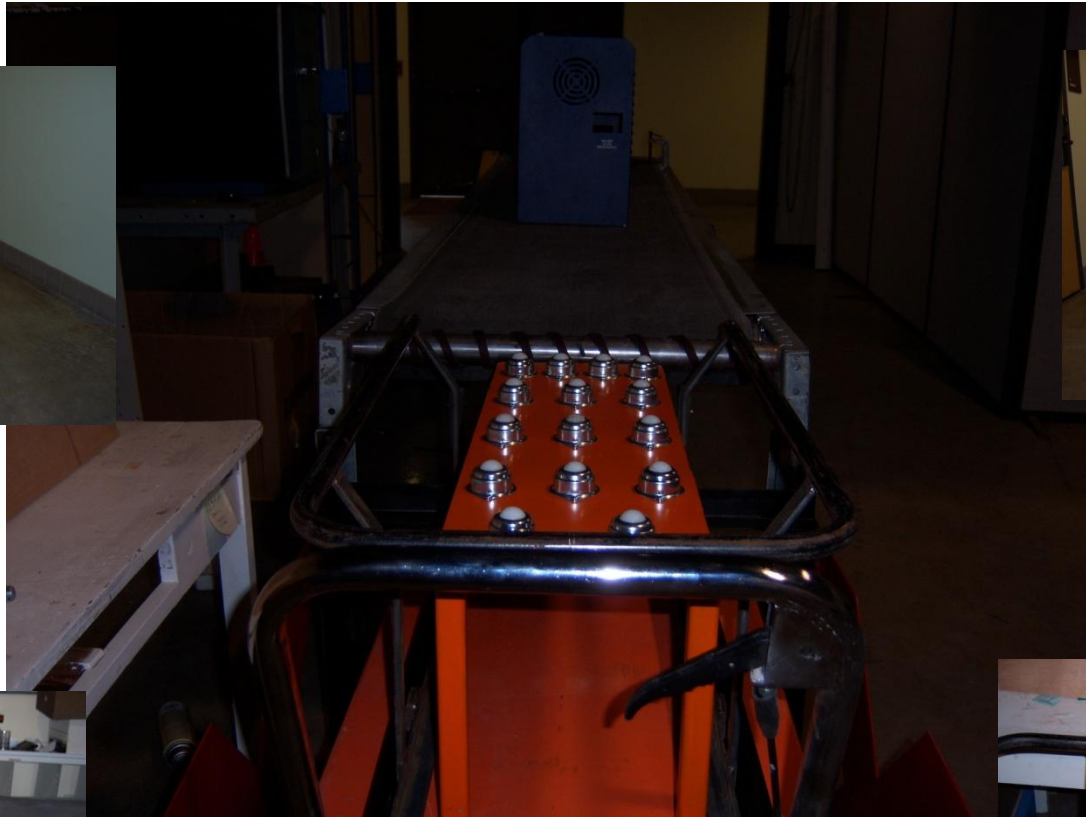
Parts List for Support Cage



Manufacturing



Completed System Test: 30 second Total Process Time! Compared to originally 1 hour



EPMP Forklift Extension and Loading Table

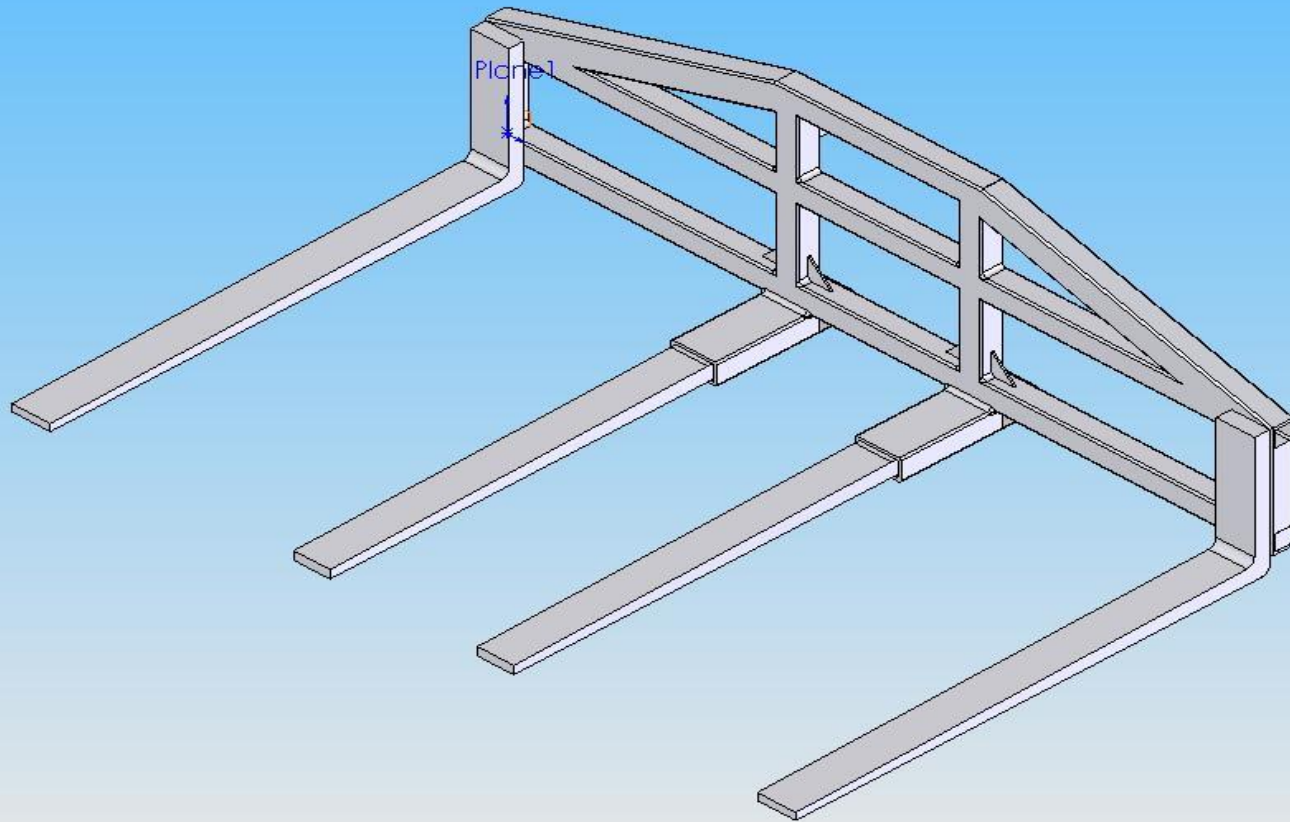
Justin May

Kenneth Taylor

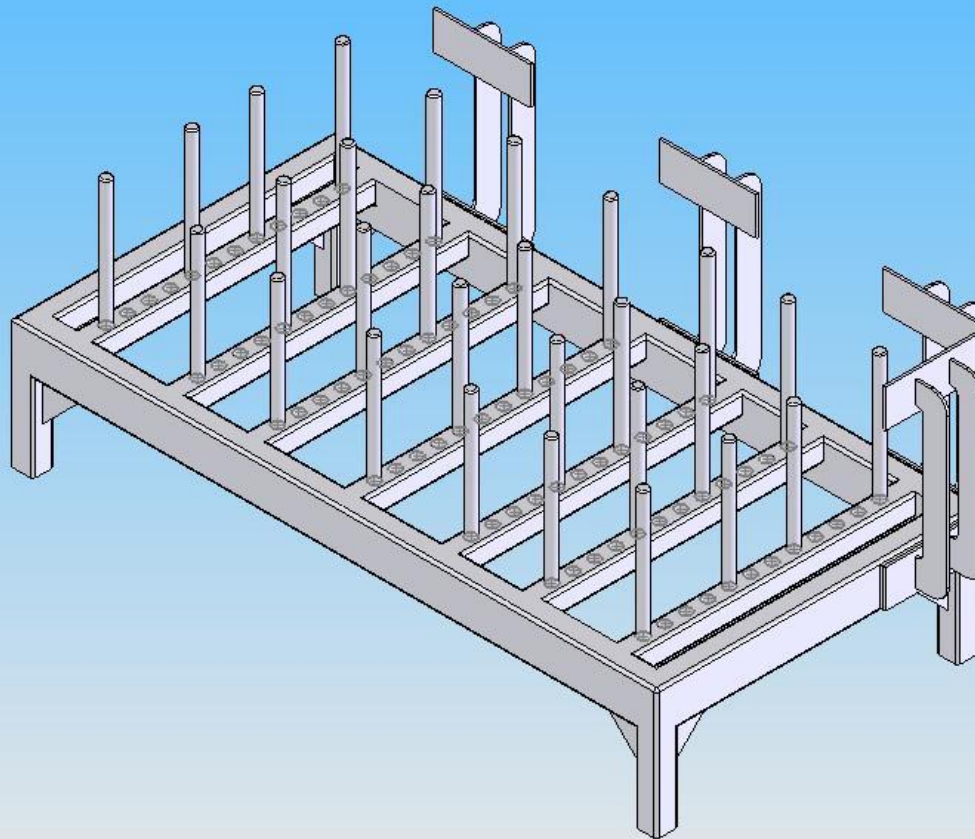
Joshua Garza



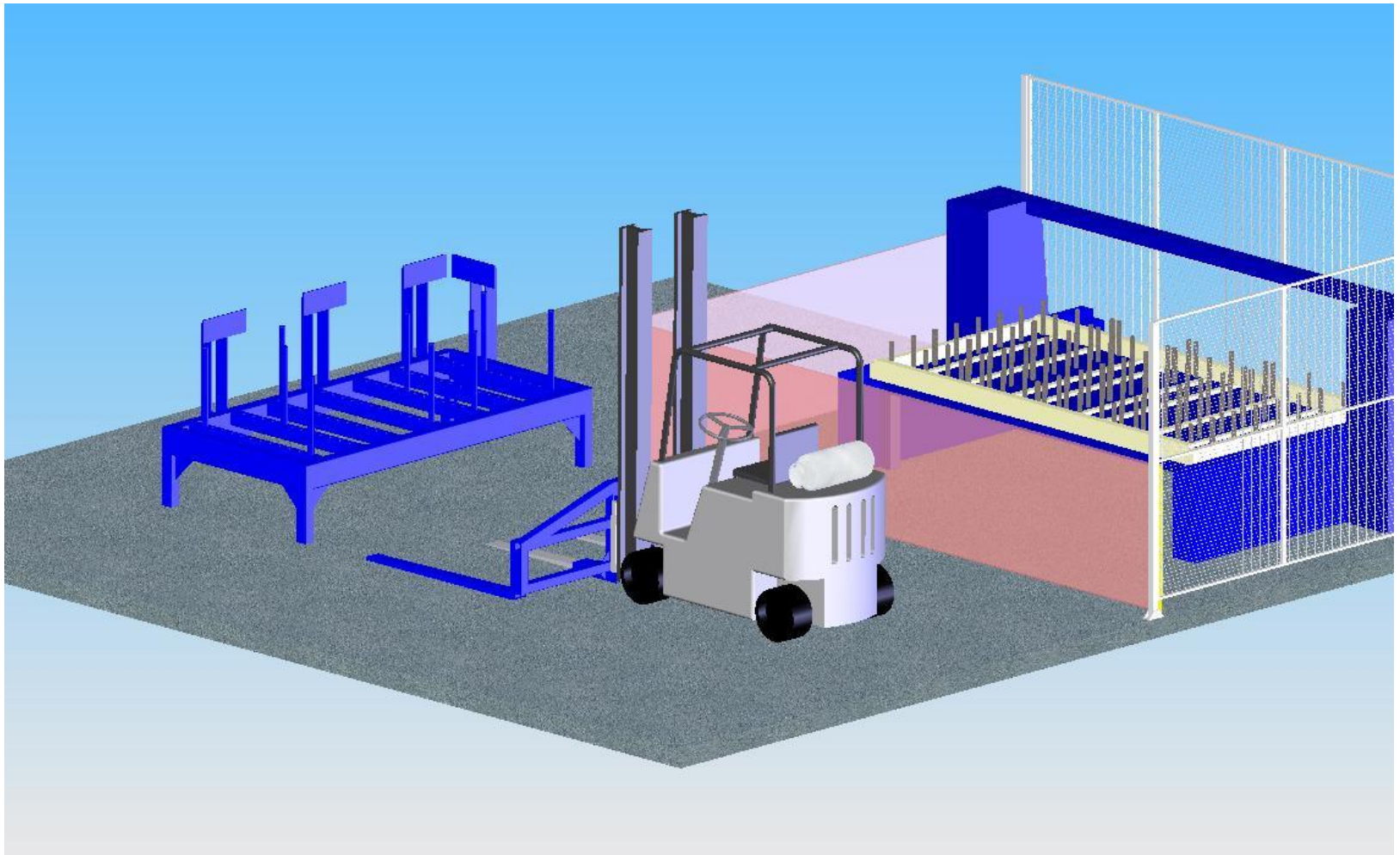
Forklift Extension



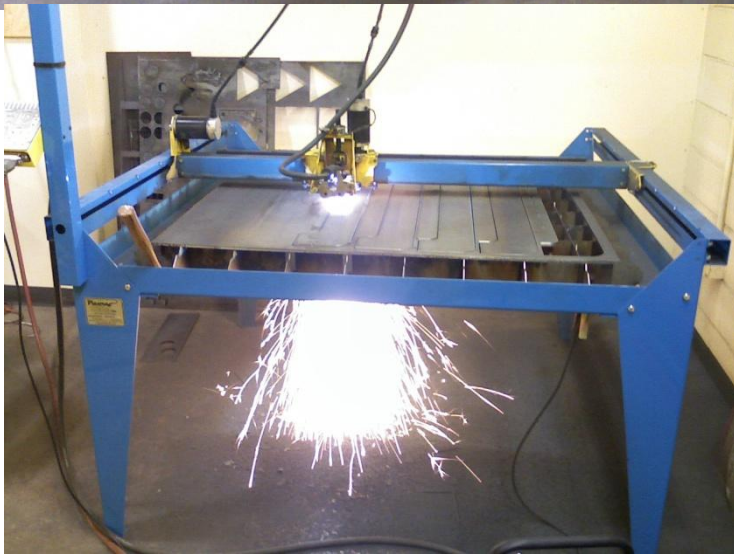
De-Palletizing Table



New Work Cell



De-Palletizing Table Manufacturing



Final Testing



EH Systems Foam Cutter

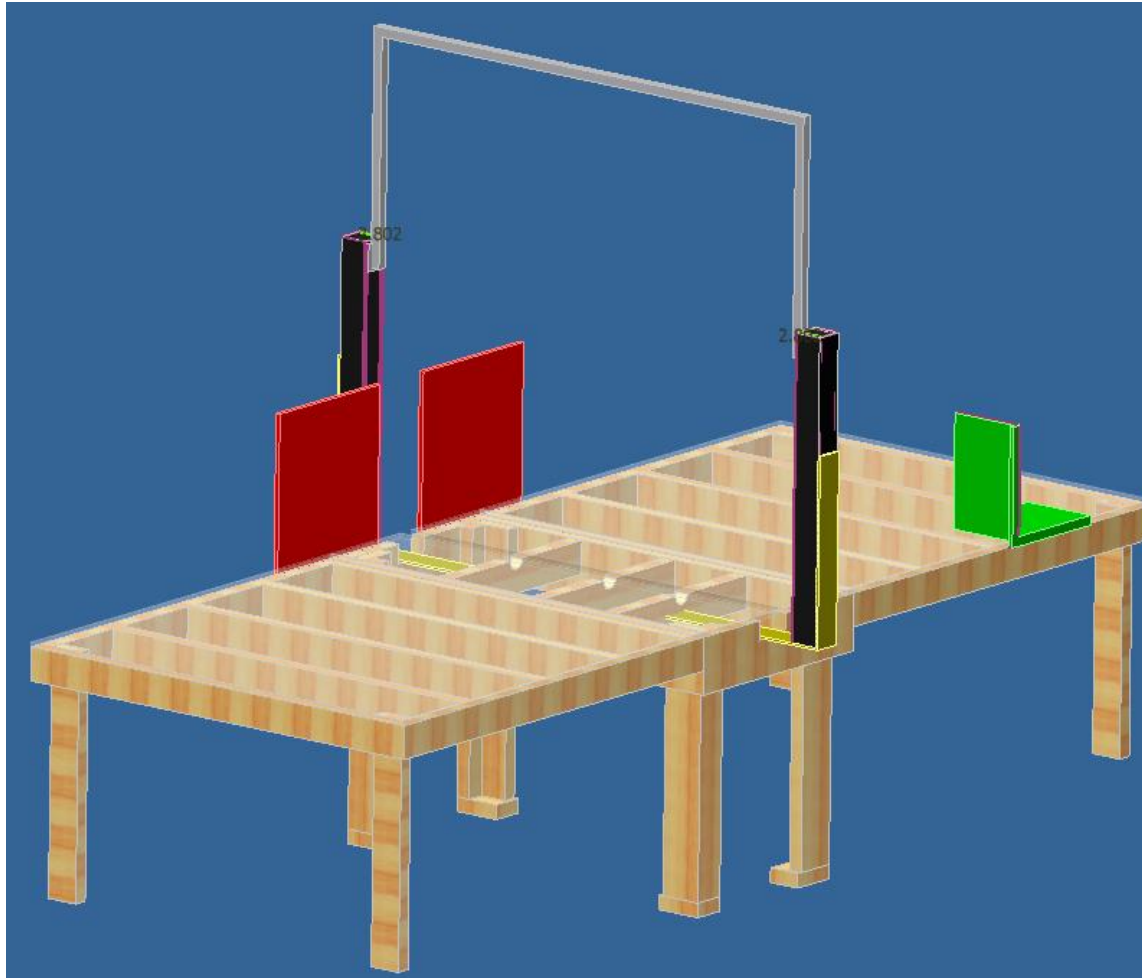
Jimmy Fristoe

Bobby Fristoe

Edward Allen



Final Concept



BOM

Bill of Materials		
Material	# of each	Purchased or made
table	1	made
Foam cutter	1	purchased
caster	4	purchased
square	1	made
measuring system	1	purchased
clamps	1	purchased
sliding weighted tracks	2	purchased



Manufacturing/Assembly – Table



Table- Folding Structure



Setup, test, and training

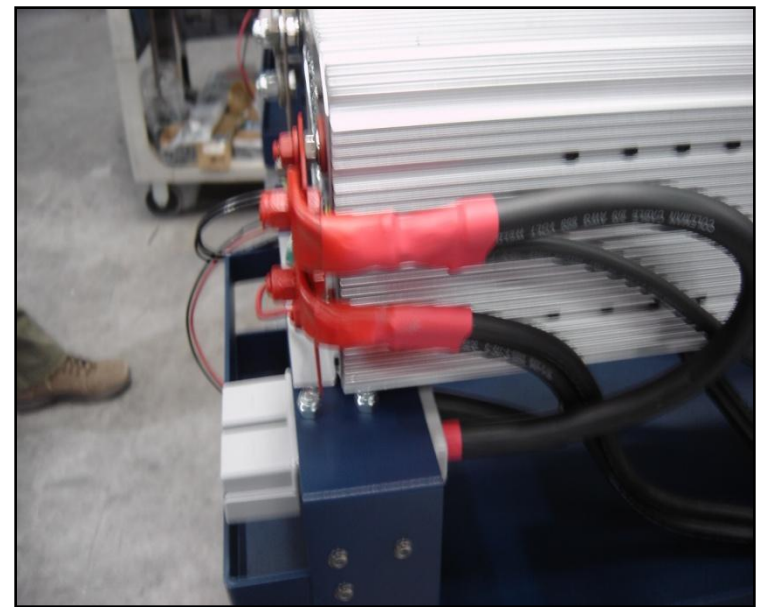
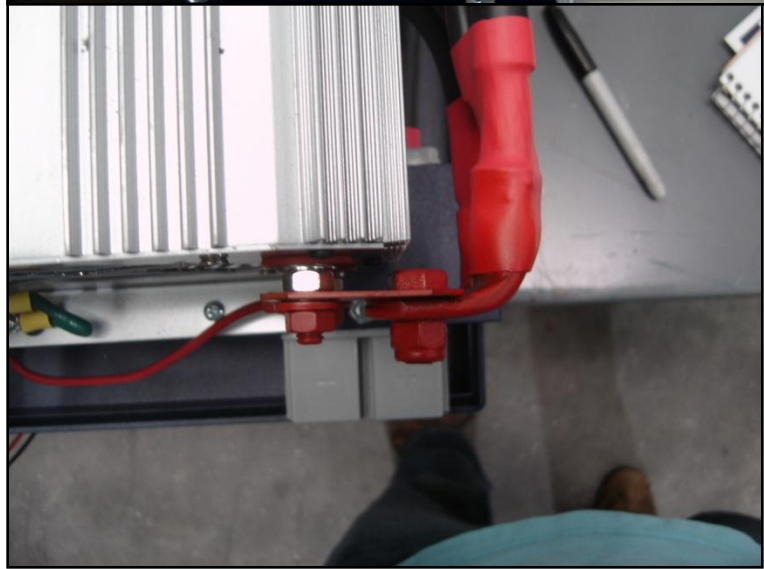
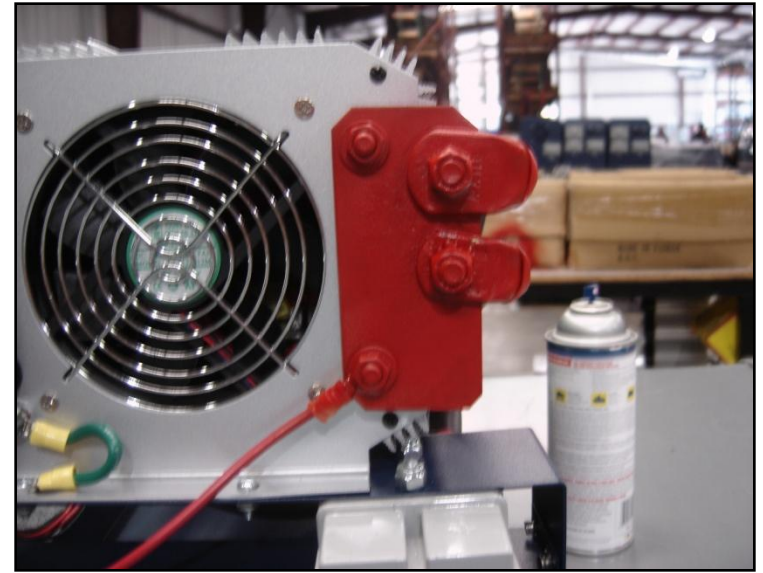


Xtreme Battery Cover

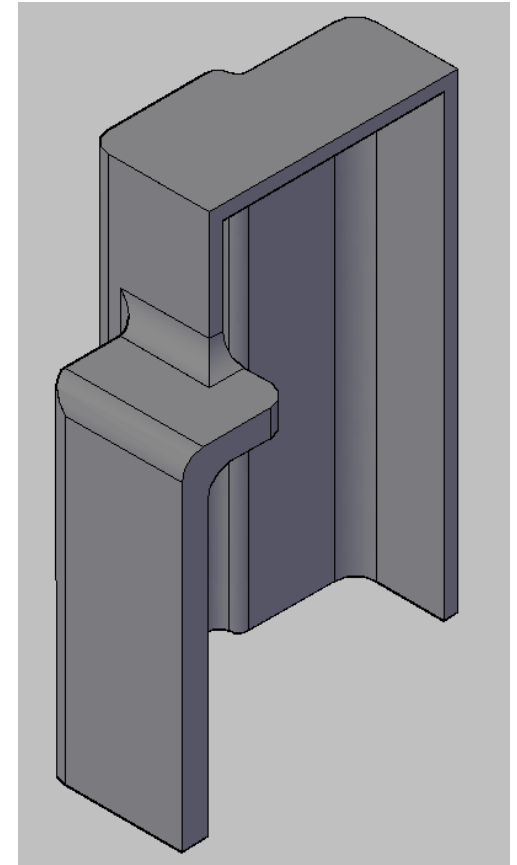
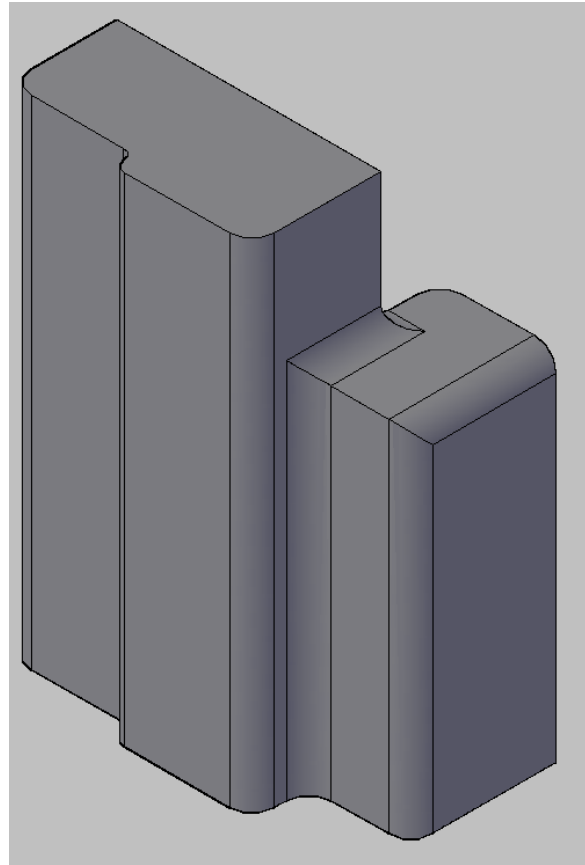
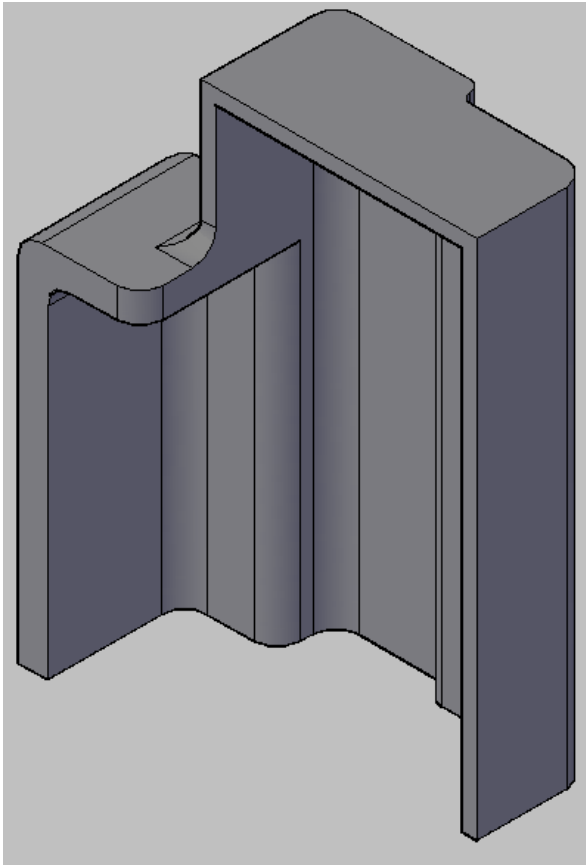
Cade Villarreal
Randy Reyes



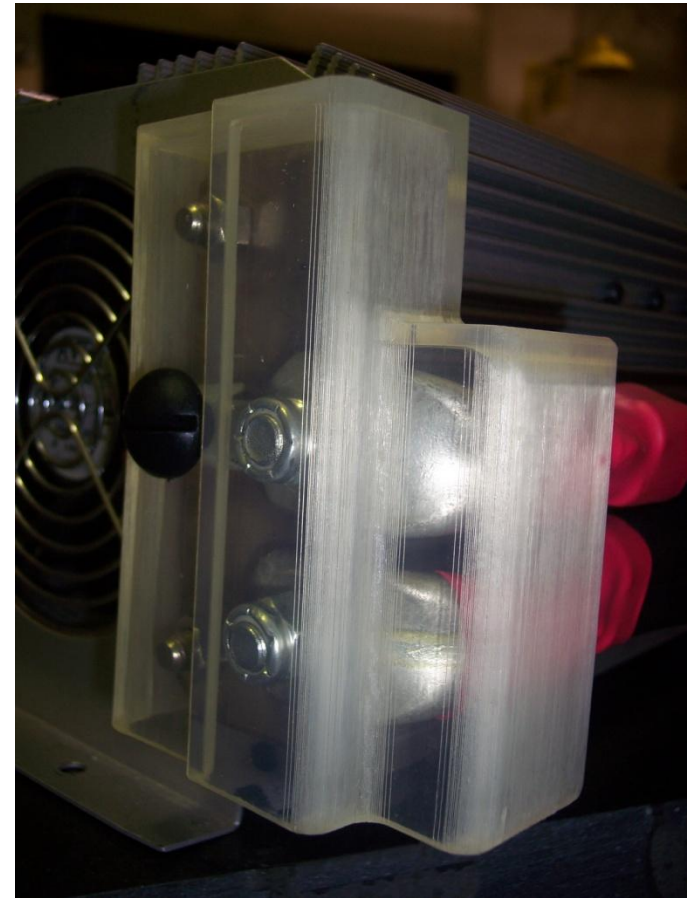
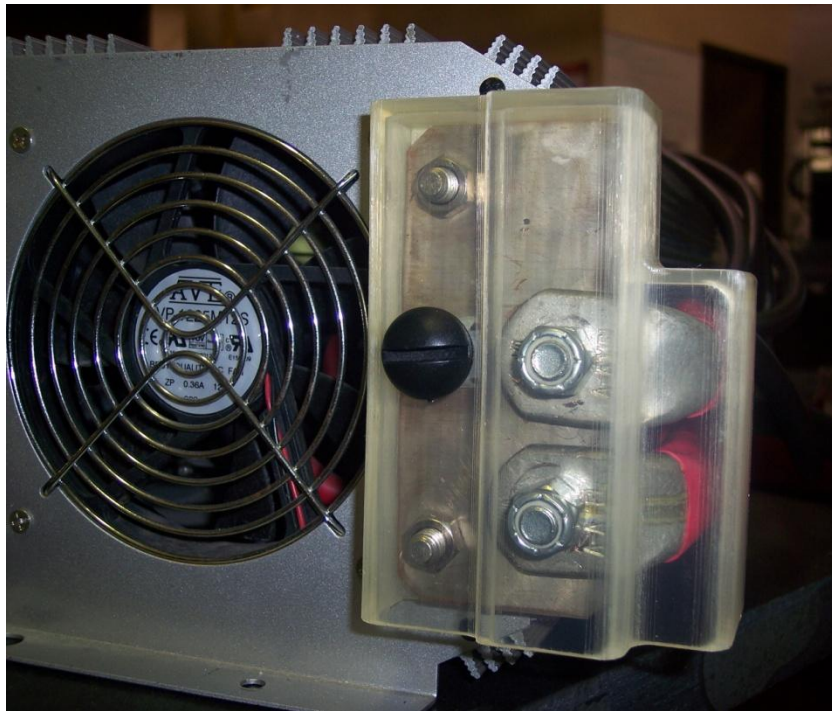
Positive Terminal of Battery



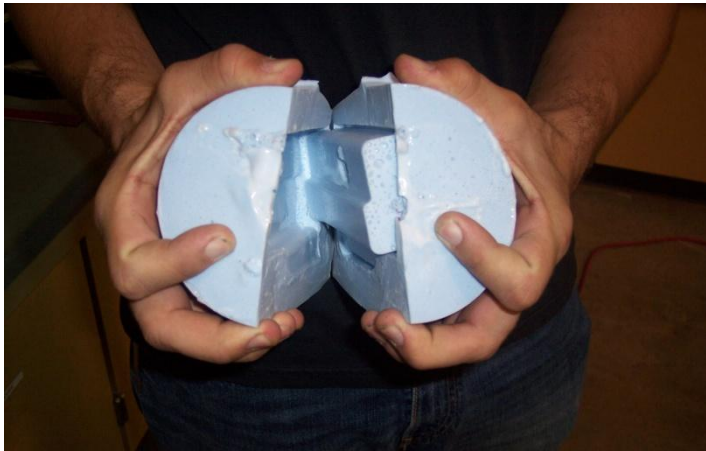
Final Product Design



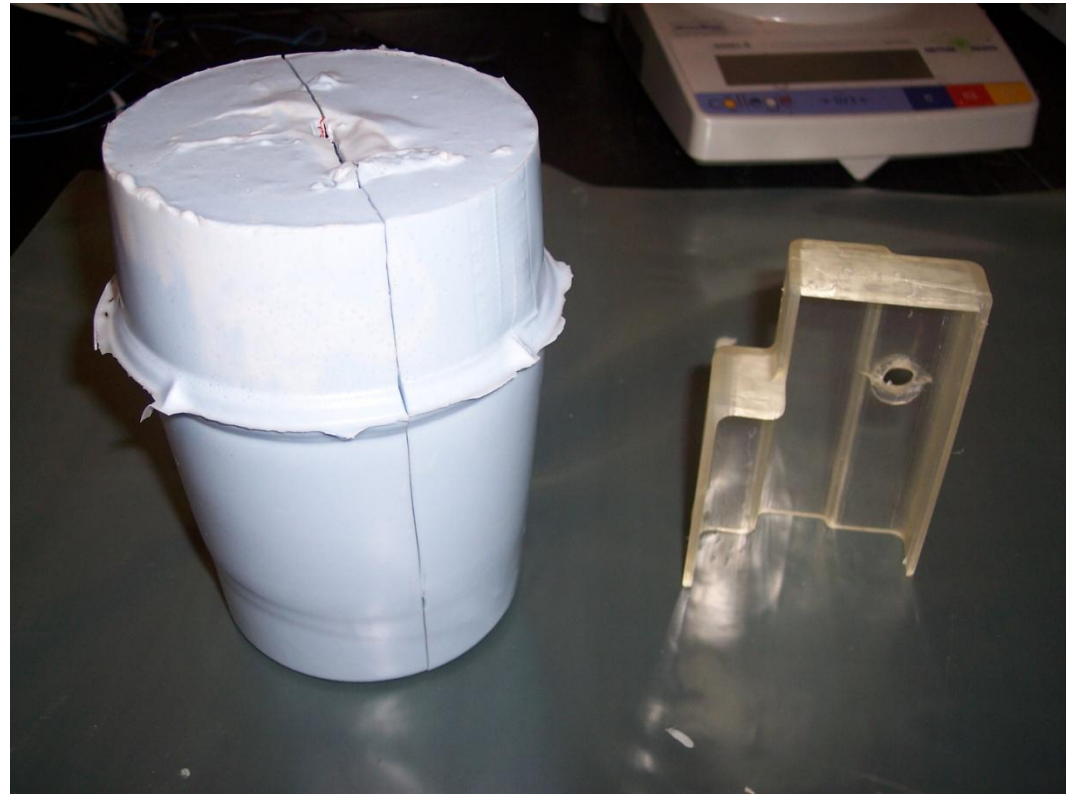
Final Prototype on Battery



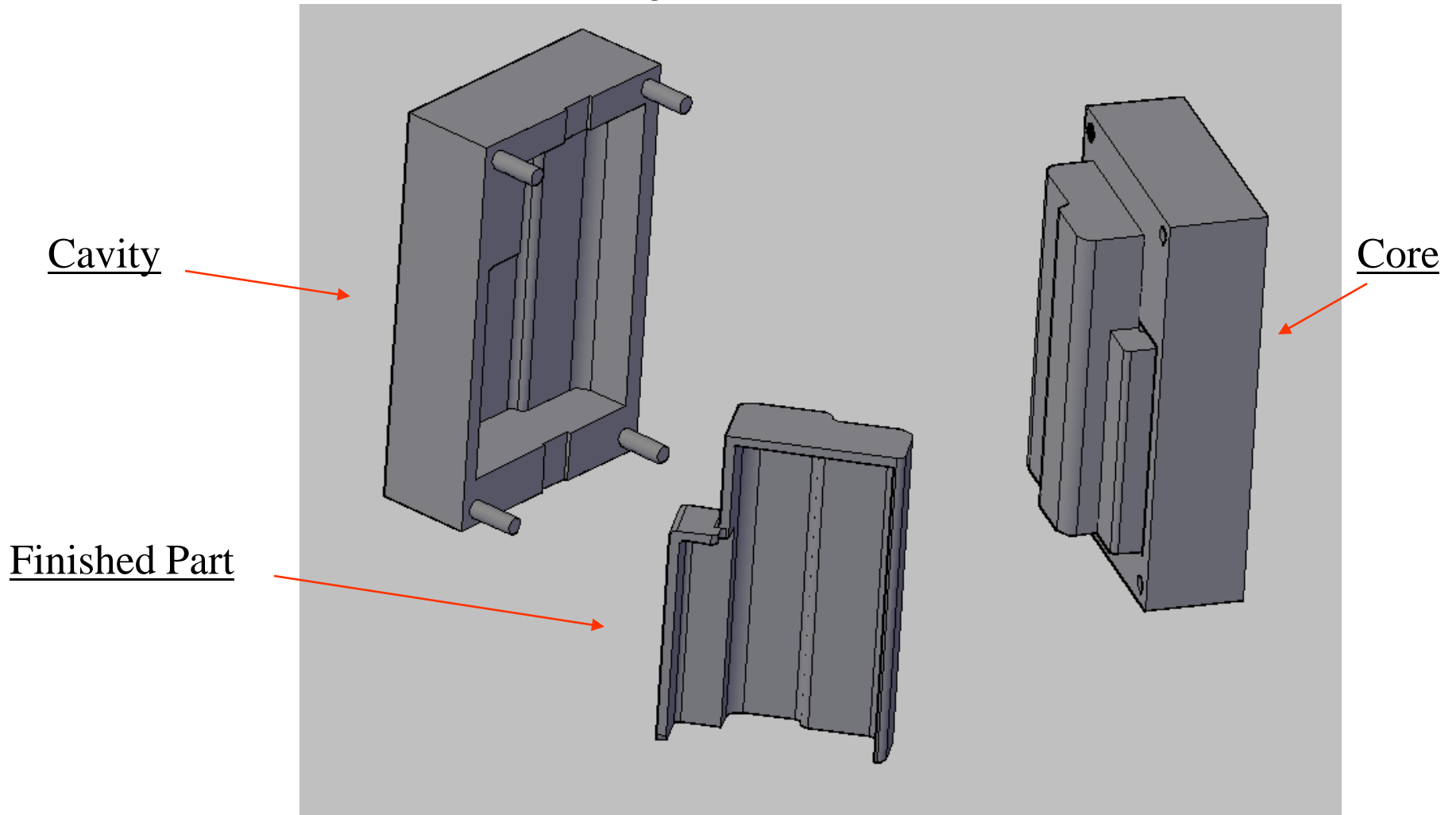
Manufacturing Approach 1: Finished Silicon Mold



Interior of
Mold

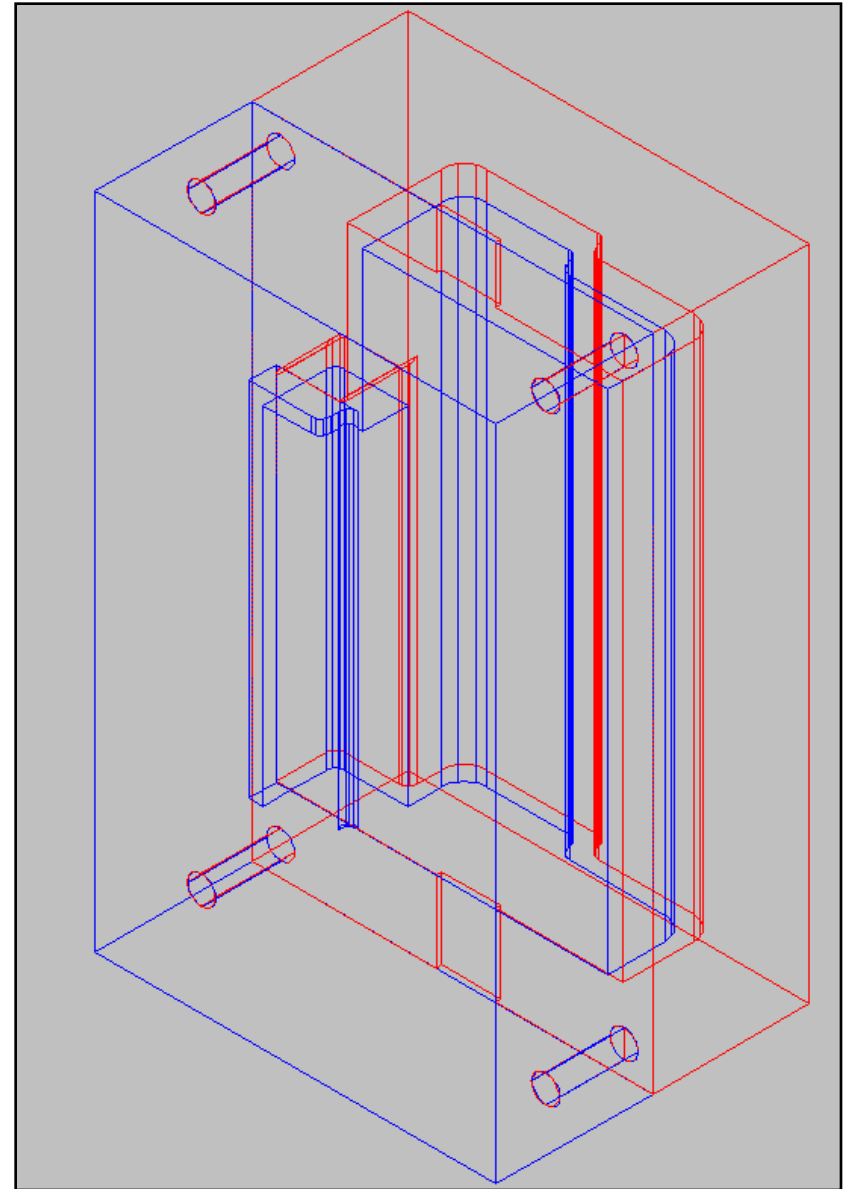
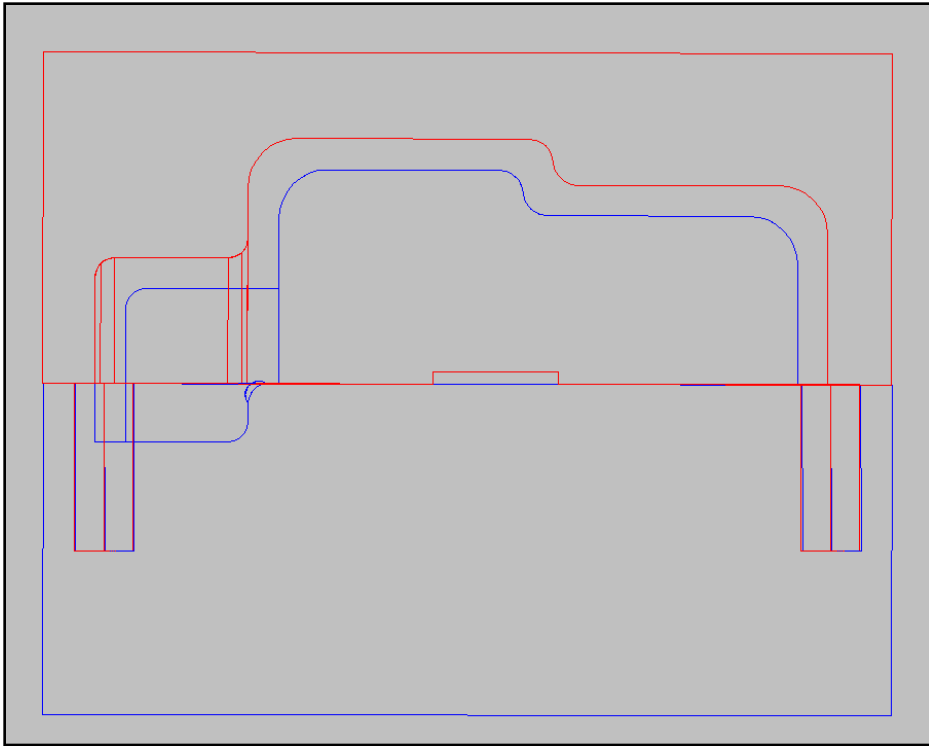


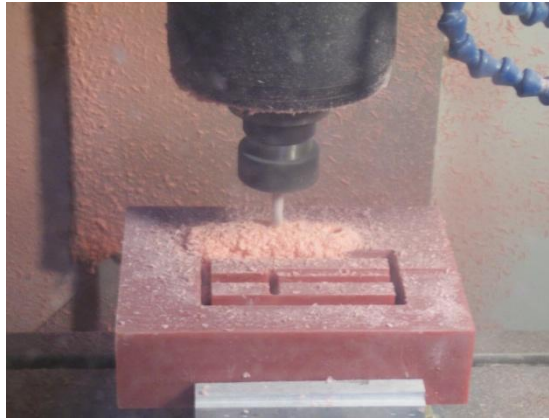
Manufacturing Approach 2: Manufacturing Process – CNC Machined Mold



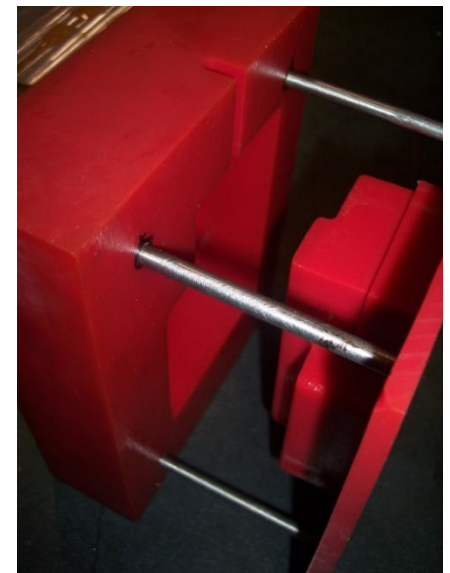
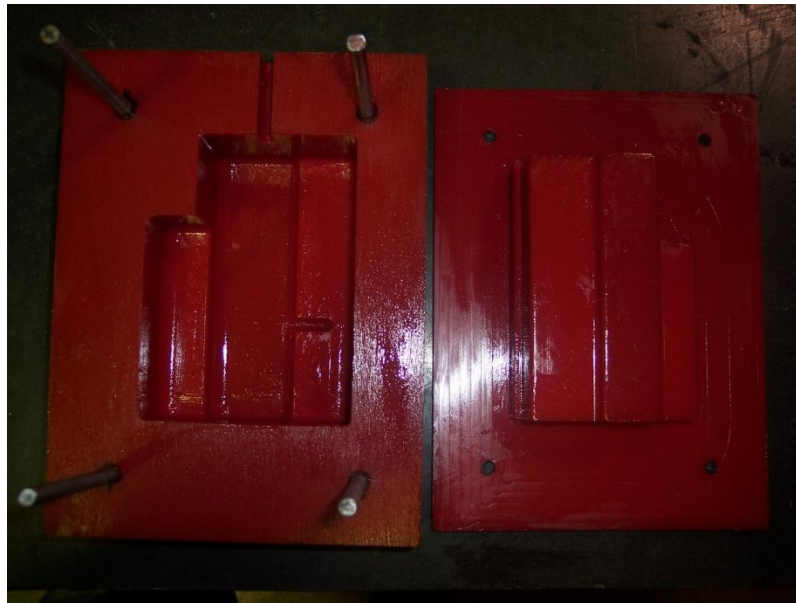
Cavity

Core

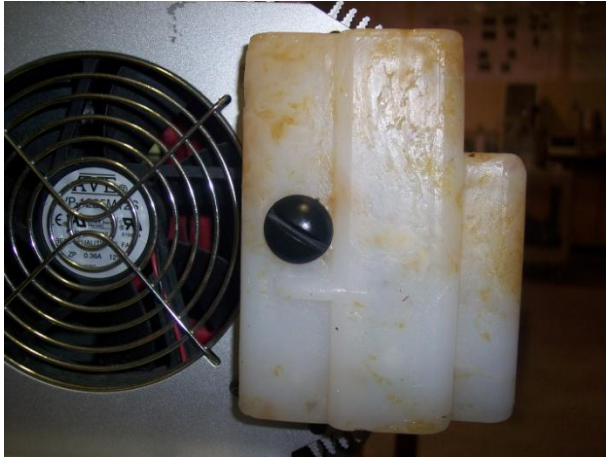




Finished CNC Machined Mold



Final Product on Battery



Networking



Vote counting



Panel of experts

