



Advanced Manufacturing Center

Premier resource for engineering and manufacturing development and technology in the state





History & Overview

- AMC Program established in spring of **2000**
 - State Referendum bond **2002** AMC funded for **\$5M**
 - Building completed Dec. **2004**
- \$500,000 MTI Cluster Initiative Grant with USM **2011**
- Maine Manufacturing Acceleration Partnership Cluster Grant with MEP, MAMe, USM **2014**
- Joint Staff with Maine MEP **2014**
- Collaboration Between College of Engineering and Department of Industrial Cooperation
- Provides “**one-stop rapid-response center**” for prototyping, development, and engineering support for manufacturing industries
- Provides a complex roster of unique services that **promote economic growth and development** in Maine





History & Overview, cont.

- Average 50 clients and 150 projects a year
- 4 full time staff /~10 engineering students /5+ associate staff including professors, and contract engineers
- Funding ~ 700K year budget
 - Project fees including MTI client projects 75%
 - State Economic Investment MEIF 10%
 - Grants and NIST MEP 15%
- Goal is to leverage staff and alliances with **Academic** and **Industry** resources to increase economic development impact in Maine



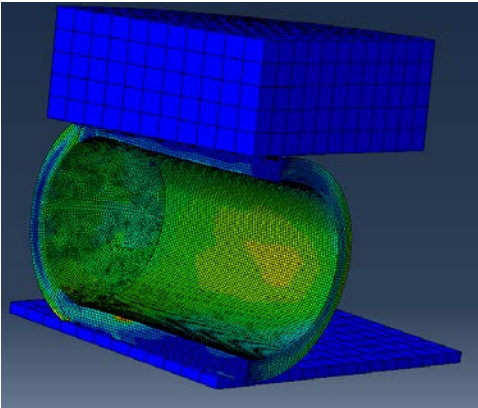
AMC Student Involvement

- Engineering students involved in all aspects of project
- Hands-on real world experience in design and manufacturing
- Advanced CNC machining
- Typically get jobs instate as manufacturing engineers
- Ready to start day 1 with 2-3 years of experience.
- 50% of student time is training





- **Manufacturing Systems**
 - Host of machine tools, manual and CNC machining, welding fabrication
- **Testing Laboratory and Equipment**
- **Development and Design**
- **Reverse Engineering and QC**
- **Complex Analysis**



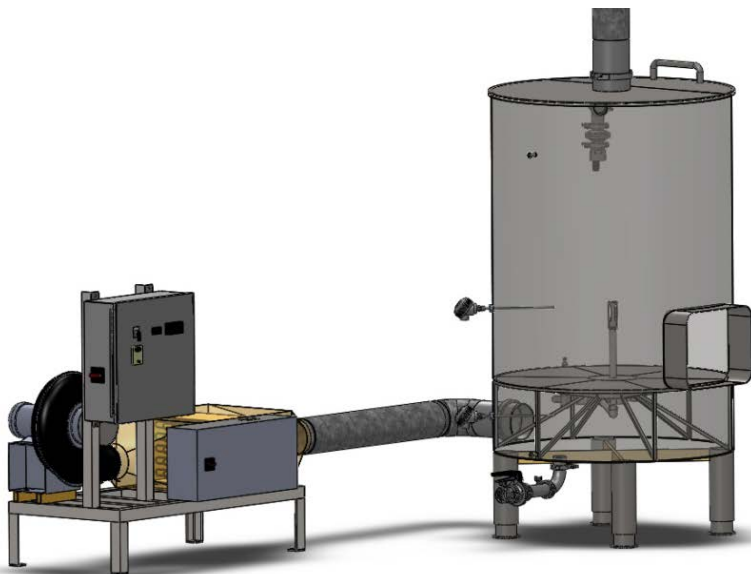


Blue Ox Malt House

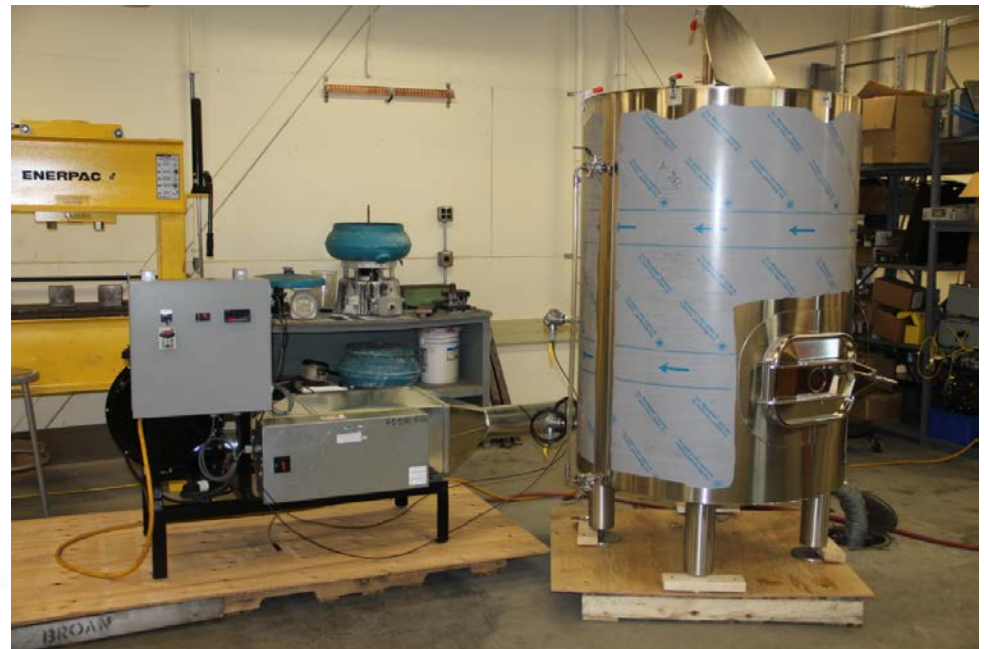


- MTI funded company AMC built prototype combination Malt Steeping and Kiln system.
- Working with customer on testing and transfer of knowledge to fabrication company to build scaled up production versions.
- Finalizes process for commercialization.
- McCann Fabrication built the vessel
<http://www.customfabricationnewengland.com/>

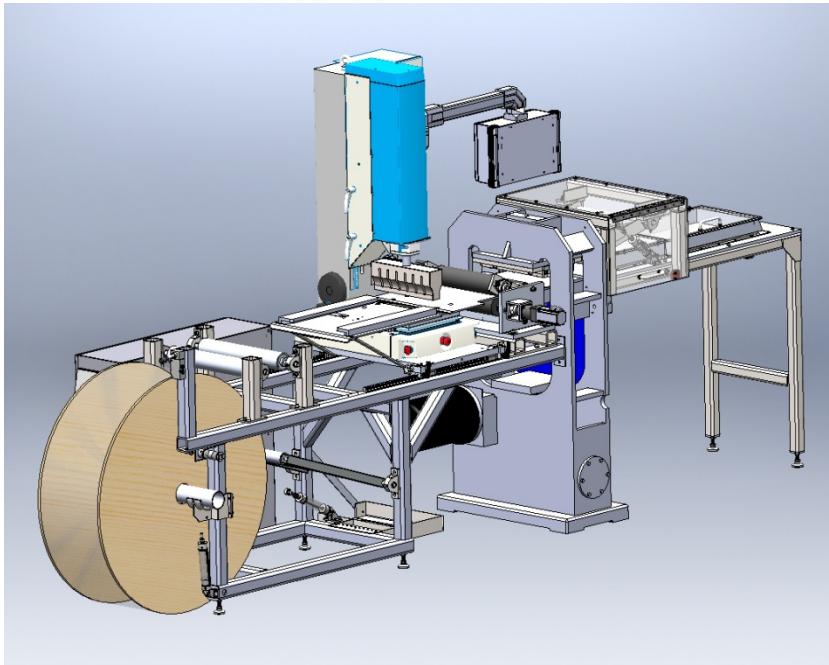
3D SolidWorks design



Completed system



- Developed a second automated filter bag production system that further refined automation efficiency and cycle time
- Integrated ultrasonic welding and die cutting in one automated machine to increase production capacity.
- Reduced cycle time by 30% and increased quality over the original system
- Company can now meet increased production volumes with same workforce and floor space.





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