

INTERNSHIP: Lead a project focused energy and waste reduction in a plastic injection molding operation

COMPANY: Miller Manufacturing Company, Anoka, MN

The Minnesota Technical Assistance Program (MnTAP) is seeking a junior or senior college student to lead a project focused on energy and waste reduction at a market-leading injection molder of farm, ranch, and pet products. The intern will work with Miller staff to: understand cardboard packaging and scrap generation and determine how the operation could be modified to reduce, reuse or recycle packaging and scrap; reduce energy use by reducing motor idle time, minimizing compressed air use; and other projects as time permits.

JOB DUTIES:

As part of this project, you will be asked to complete the following tasks:

1. Develop a high level understanding of facility manufacturing processes, including material in-flows and out-flows, utility usages, and wastes.
2. Identify sources and destinations of cardboard packaging, and identify opportunities for reduction or reuse.
3. Analyze and quantify waste and develop procedures to ensure proper disposition of regrind, recycling, and trash.
4. Study machine usage and propose procedures which reduce energy by minimizing motor idle time, with an initial focus on grinders.
5. Understand the mechanics and economics of compressed air at the facility, including optimal system pressure, flow restrictions and pressure drops, pneumatic tool usage, leaks, and inappropriate uses, and identify strategies to reduce energy used by the compressed air system.
6. As time allows, make recommendations to shorten machine change over time, reduce molding defects, improve process flow, or improve lighting.
7. Prioritize suggested changes using simple payback methods to financially justify the alternative processes or equipment.
8. Work with company management and employees to determine feasibility, implement and document approved changes or outline a strategy for implementation.
9. Summarize findings in a detailed report, including recommended procedures and vendor proposals along with an economic analysis and justification of changes.
10. Present findings to the company and at MnTAP-hosted public presentation events, one of which may include a presentation at the Minnesota Pollution Control Agency (MPCA).

As an intern, you will work at the company and report back to MnTAP. The position is full time, 40 hours per week, for three months to start after the conclusion of spring semester or quarter. Pay is \$15/hour, with a lump sum stipend of \$1,000 upon completion of the project deliverables: a final report and presentations. Cumulatively, this equates to \$17.00/hour when averaged over the project. Candidates must pass a background check and drug screening.

QUALIFICATIONS:

- Cumulative GPA of at least 3.0
- Good oral & written communication skills
- A technical academic background
- Troubleshooting skills
- Self-motivated
- Excel and other software skills
- Appropriate majors: *Engineering, environmental or physical sciences and others as applicable*

TO APPLY:

Apply online at:

www.mntap.umn.edu/intern/student_apply.htm

Remember to submit your application form, cover letter, resume, and unofficial transcript.

Cover letters can be addressed to:

Matt Domski, Intern Program Manager

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MNTAP IS THE HIRING BODY: DO NOT CONTACT THE COMPANY