

Strengthening Minnesota businesses by maximizing efficiency and lowering costs through energy, water and waste reduction

INTERNSHIP: Lead a project focused energy and waste reduction in a plastic injection molding operation (Summer 2017)

COMPANY: Plastech Corp, Rush City, 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 in a state-of-the-art custom plastic injection molding operation. The intern will work with Plastech staff to: understand how scrap is generated within the process and determine how the operation could be modified to reduce, reuse or recycle scrap; reduce water usage in the process cooling system; reduce energy use by reducing motor idle time, minimizing compressed air use, and improving workflow in assembly; and other projects as time permits.

JOB DUTIES:

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

1. Quantify scrap plastic generated during equipment start-up process, and from defects or rejected parts.
2. Identify where scrap plastic can be sold, recycled or reused at locations internal and external the company, recommend standard operating procedures, and develop training for implementing new procedure.
3. Analyze cooling tower water use to determine optimal tank level, and need for capacity. Recommend modifications to the system to optimize water usage.
4. Evaluate tasks performed in assembly, and propose optimal layout and procedures which reduce energy consumption.
5. Study machine usage and propose procedures which reduce energy by minimizing motor idle time.
6. As time allows, make recommendations to shorten machine change over time, assist in identifying leaks in compressed air system, or make recommendations for improved lighting.
7. Estimate reduction or diversion potential and costs associated with implementation of a recommended reduction opportunity.
8. Prioritize suggested changes using simple payback methods to financially justify the alternative processes or equipment.
9. Work with the company's management and employees to determine feasibility of alternative equipment, methods, layout and processes.
10. Implement and document approved changes or outline a strategy for implementation.
11. Summarize findings in a detailed report, including recommended procedures and vendor proposals along with an economic analysis and justification of changes.
12. 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 \$13/hour, with a lump sum stipend of \$1,000 upon completion of the project deliverables: a final report and presentations. Cumulatively, this equates to \$15.00/hour when averaged over the project. Candidates must have a valid driver license and pass a background check.

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:

Nathan Landwehr, Intern Program Administrator
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 Minneapolis, MN 55455 • landwehr@umn.edu

MNTAP IS THE HIRING BODY: DO NOT CONTACT THE COMPANY