

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

Internship: Lead a project conserving energy at a horse shoe manufacturer

Company: Mustad USA – Forest Lake, MN

The Minnesota Technical Assistance Program (MnTAP) is seeking a junior or senior college student to lead a project focused on energy efficiency with Mustad USA in Forest Lake, MN. The intern will work with MnTAP and Mustad USA staff to identify alternate die steels to decrease horse shoe sticking and energy efficiency options for the site's induction heaters. Other energy efficiency and process improvement projects will be pursued as time allows. The intern will quantify these opportunities and develop suggestions to increase efficiency, as well as outline plans for implementation.

JOB DUTIES:

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

1. Design and conduct an experimental study (DOE) to reduce sticking on the forging dies through manipulation of die material, design, and treatment process.
2. Research and evaluate energy efficiency opportunities for the induction heaters.
3. As time allows, investigate other energy efficiency and process improvement opportunities such as:
 - a. Optimizing length of material on horseshoes used for robot pick-up
 - b. Reducing energy use in ventilation of work environment
 - c. Assess benefits of continuous vs. billet feeding for new product line.
4. As appropriate, initiate implementation of approved process changes or develop plans for future implementation.
5. Summarize findings in a detailed report, including recommended procedures and vendor proposals along with an economic analysis and justification of changes.
6. Present findings to the company and at MnTAP-hosted public presentation events.

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 \$16/hour, with a lump sum stipend of \$1,000 upon completion of the project deliverables: a final report and presentations. Cumulatively, this equates to \$18.00/hour when averaged over the project. Candidates must 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
- Metallurgical background preferred
- 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.

Applications can be addressed to:

Matt Domski, Intern Program Manager

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MNTAP IS THE HIRING BODY: DO NOT CONTACT THE COMPANY