2015 MnTAP Summer Internship: Caterpillar Paving, Brooklyn Park, MN

Energy efficiency and pollution prevention at a manufacturer of road paving equipment

The Minnesota Technical Assistance Program (MnTAP) is seeking a junior or senior college student to lead a project focused on energy efficiency and pollution prevention at Caterpillar in Brooklyn Park, Minnesota. The intern will work to identify and implement process-specific energy saving opportunities in the generation, distribution, and use of compressed air. As a secondary focus, the intern will identify means to minimize or prevent the generation of painting-related wastes. Recommendations for these projects must consider and spell out the practical and economic feasibility of implementation.

**JOB DUTIES:**

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

1. Understand the mechanics and economics of compressed air at the facility.
2. Review past system studies and pneumatic tool inventories.
3. Evaluate machinery and controls to identify opportunities for energy efficient supply of compressed air.
4. Work with equipment vendors to determine benefits of improved systems and/or controls.
5. Assess compressed air distribution throughout the facility to locate unwelcome flow restrictions and pressure drops.
6. Collaborate with line managers and operators to understand end-uses and ensure distribution is appropriately regulated for end-uses.
7. Quantify process-critical and “artificial” compressed air demands, e.g. leaks and inappropriate uses. Document system leaks and investigate energy efficient alternatives to inappropriate uses.
8. Audit processes, wastes, and associated containers in the paint line, identify environmentally-preferable alternatives that minimize or eliminate regulated waste generation.
9. Summarize findings in a detailed report, including recommended procedures and/or system changes along with an economic analysis and justification of any changes.
10. 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 $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.

**QUALIFICATIONS:**

- Cumulative GPA of at least 3.0
- Good oral & written communication skills
- A technical academic background and general knowledge about manufacturing equipment and processes
- Troubleshooting and computer skills
- Self-motivated and high energy
- Good working with hands
- Appropriate majors: *Engineering: Chemical, Mechanical, or Civil*

**TO APPLY:**

Apply online at [www.mntap.umn.edu/intern/student_apply.htm](http://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:

Linda Maleitzke, Intern Coordinator
200 Oak Street SE, Suite 350
Minneapolis, MN 55455 • lmaleitz@umn.edu

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MnTAP is the hiring body: Do not contact the company.