

Senior Design Project Description

Company Name	Ametek – Controls Southeast	Date Submitted	Nov 27, 2017
Project Title	Optimization of Project Management Process (AMETEK_PM)	Planned Starting Semester	Spring 2018

Personnel

Typical teams will have 4-6 students, with engineering disciplines assigned based on the anticipated Scope of the Project. 250 hours are expected per person.

Complete the following table if this information is known, otherwise the Senior Design Committee will develop based on the project scope:

Discipline	Number	Discipline	Number
Mechanical	2	Electrical	
Computer		Systems	4
Other ()			

Project Overview:

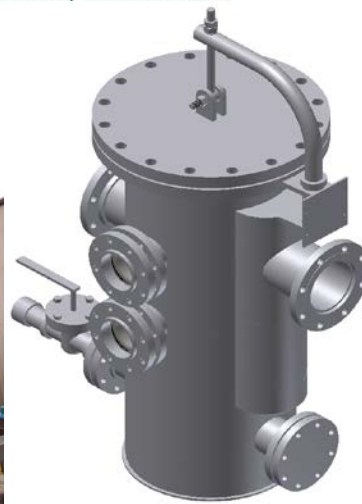
AMETEK, Inc. is a leading global manufacturer of electronic instruments and electromechanical devices with annual sales of approximately \$4.0 billion. AMETEK has more than 15,000 colleagues at nearly 150 manufacturing locations around the world. Supporting those operations are nearly 100 sales and service locations across the United States and in 30 other countries.

Ametek - CSI is a division of Ametek corporation and is located in Pineville, NC. CSI provides thermal maintenance systems for heating and cooling of liquid/vapor processes in the petrochemical, chemical, and refining industries. CSI does this through a combination of proprietary products and engineering methods developed over 40+ years of practice. The flagship products are ControTrace® engineered tracing and ControHeat® jacketing. For less critical processes, CSI can provide TraceBOOST™ enhanced tube tracing. Additionally, CSI can supply pre-insulated tubing and steam traps. As a technology-neutral supplier, CSI evaluates all aspects for each project to deliver the most optimized heating solution available – maximizing savings for both capital and ongoing operational costs. Some product examples:



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The majority of CSI's sales are from custom designed systems for specific petrochemical process industry applications. A typical project may be an entirely new plant or it could be the upgrade of a single process line. For each project, a Project Manager is assigned and a process followed from inception to shipment. This process has evolved over time and as the company believes that optimization of the process is needed. The objective of this process is to improve the Project Management process that CSI uses.

Project Requirements:

In order to improve the process, the current process must be thoroughly understood. The first step in the project will be to baseline the current Project Management process. This will be done through the documentation CSI has for the process as well as interviews with staff. This process will be simulated to establish a model for the current operation.

The second phase of the process will be to apply System Engineering principles to define areas of improvement for the process. Students will seek to develop a new process that is more efficient, easier to use and importantly be standardized so that new employees can quickly grasp the process and successfully execute it in a short amount of time.



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The new process will be simulated and comparisons made between the new model and the proposed model. The proposed model will be tested and verified during the second semester to demonstrate to the company that the new processes are sound and can be introduced with low risk. Project team will develop documentation of the process to meet the ISO standards that exist at CSI.

Expected Deliverables/Results:

- Simulation model of existing process
- Simulation model for proposed process
- Verification and Testing of the new process and complete metric comparisons that demonstrate the benefits
- ISO Documentation in company format for the new processes
- Powerpoint training presentation for new process

Disposition of Deliverables at the End of the Project:

No hardware deliverable

List here any specific skills, requirements, knowledge needed or suggested (If none please state none):

- Simulation software capable
- Design reviews must be done at CSI's Pineville campus
- Students must be capable to travelling to company's Pineville campus to gather data
- Metal fabrication knowledge will be extremely useful