Co-op Experience at Cast Nylons Ltd.

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Introduction

I have worked in the Engineering Co-op position at Cast Nylons Ltd. since Spring of 2022. Cast Nylons is the largest producer of cast nylon in North America. I am supervised by the Project Engineer and Safety, Health and Environmental (S.H.E.) Manager at the company. During my time with Cast Nylons, I have been able to gain a tremendous amount of experience in a wide range of projects. I have learned and applied a great deal in the areas of general project management, industrial plastic casting, building construction, industrial safety programs, and environmental regulations and initiatives.

Objectives

From an educational perspective, the objective of this experience was to gain engineering work experience while still working on my education. I was able to apply skills I learned in school to solve real world problems. While this was a good learning experience, the objective was also to do good work for the company. I was not just learning, I was working.

Overview of Assignments

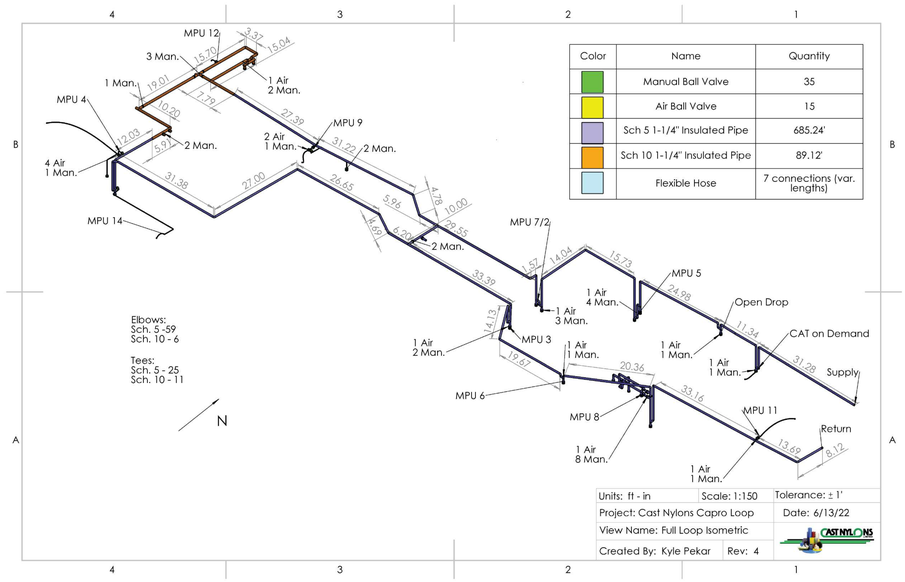
While I cannot discuss everything, I would like to highlight two of the main projects I worked on.

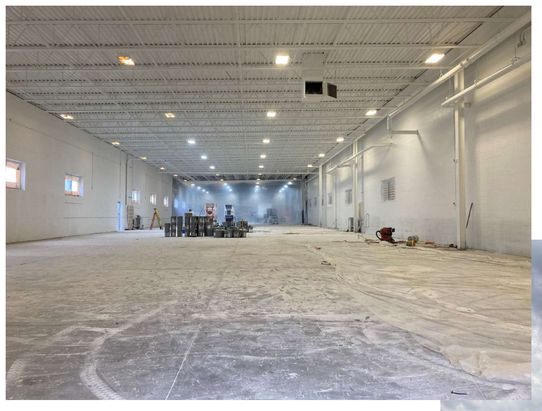
Casting Plant Addition

- 15,000 ft^2 addition to the main casting plant is currently under construction. Considerable changes to workflow, machine locations, etc. required both during construction and once fully complete.
- Created and modified floorplan after discussions with executives, engineers, and operators
- Worked on the development and implementation of new 4’x10’ nylon plate press

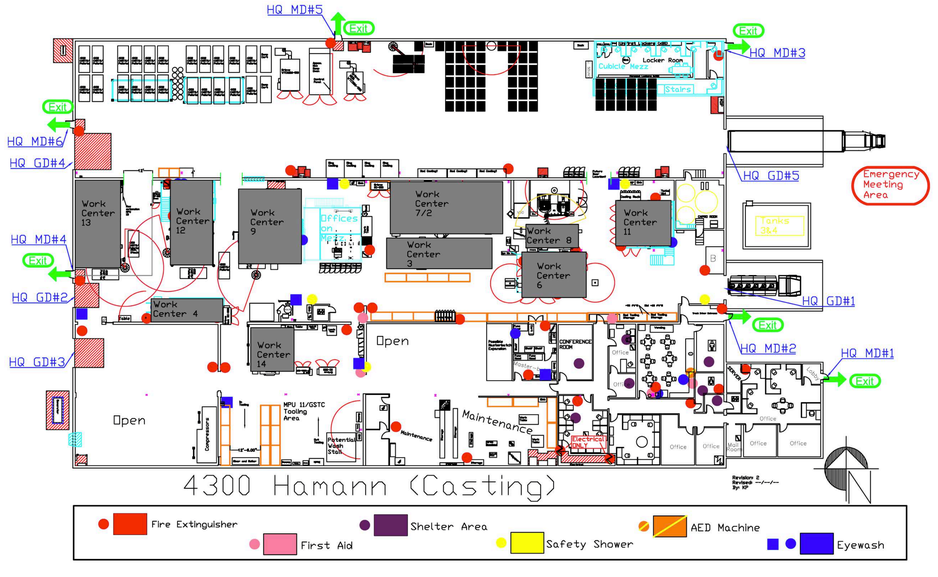
Safety Program

- Developed and improved numerous aspects of the safety program in two major categories.
  - Safety communication to employees
  - Upkeep and maintenance of safety equipment









Results

These projects are ongoing, however so far my work has been essential in the development and success of the projects thus far. The addition move-in has had no major issues and is progressing smoothly. All safety equipment and communication is up-to-date and the process to keep it that way is working as intended. Feedback from coworkers has been positive in both areas.

In my role, I found the “soft skills” I developed at CSU to be most beneficial. Being able to work and communicate effectively in a team, mediation of different points-of-view, critical thinking, problem solving and time management skills have been invaluable. Training on Computer Aided Design, Engineering Analysis and Design at CSU have also been helpful but have been far more limited.

My abilities in all the aforementioned areas have increased significantly. I learned a great deal about the specifics of casting nylon plastic, but also about the industrial manufacturing space in general.

Future Work and Goals

I am going to begin the “+1” of a Master’s program in Mechanical Engineering at CSU this Fall. Cast Nylons has expressed that they would like to retain me part-time during that period. The addition and new press project is coming along smoothly and this coming year should see the partial completion of these projects. I will also possibly be widening my role by training under the mechanical engineer who manages mold and tooling development. I will also begin to prepare for my eventual transition out of the co-op role. This will involve detailed documentation of all relevant information and hopefully a significant overlap period where I can train one-on-one with them. This will give my successor the best foundation to continue the programs I created and be successful in future projects.

Acknowledgments

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And

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