Uponor

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Company Background

Uponor's roots go back to 1620 when the company (formerly Wirsbo) made weapons for the King of Sweden. Today, Uponor is an award-winning, international manufacturer of crosslinked polyethylene (PEX) plastic pipe and provider of plumbing and indoor climate (radiant heating and radiant cooling) solutions as well as residential fire sprinkler systems. Headquartered in Finland, the company employs about 4,100 people in 30 countries. Uponor North America's headquarters and manufacturing plant (244,138 square feet) is located in Apple Valley and employs more than 500 employees. Distribution and processing facilities are located in Lakeville, Minnesota; Calgary, Alberta, Canada; and Brampton, Ontario, Canada.

"The experience you gain from a MnTAP internship is invaluable. People recognize that being a MnTAP intern means something. For me, I appreciated the opportunity to manage my own project, investigate options, and find meaningful solutions"

Project Background

With a strong corporate culture dedicated to continuous improvement, especially relating to efficiency and quality, Uponor is proactive in exploring opportunities to improve efficiency and increase revenues. Uponor wants to reduce scrap in order to increase production yields.

Incentives To Change

Every year, Uponor identifies primary goals that each employee works toward. The primary focus areas in 2014 for those working in production were decreasing weighed scrap and increasing production yield, each by 15%. Uponor has identified a potential for increased efficiency and revenue to increase overall production yield. Scrapped product is a waste of raw materials and energy – both of which affect Uponor's productivity and bottom line. Customer satisfaction is extremely important and high quality products are expected and delivered. A MnTAP intern was enlisted to research and recommend cost-effective ways to decrease product scrap.

Solutions

Opportunities For Improvement In Quantifying And Tracking Waste Recommendation

Implement Maintenance Scrap Tracking Program
Because this was the largest stream of previously unknown or unreported scrap, it is recommended that this be continuously monitored in order to maintain accurate reporting.

Introduce Additional Specific Scrap Codes
By implementing new scrap codes for certain waste-streams, Uponor will have a better baseline understanding of current and past states of scrap for little capital cost.

Include Reason For Scrapping Mix Batches When Transferring Data From Daily Logs To High-Level Spreadsheet
This saves labor hours by eliminatomg the need to manually sort through paper logs. Future continuous improvement project baselines will then be easier to establish.

Opportunities For Waste Reduction

Improve And Standardize Procedures For Central Unit Maintenance
The extruder machines are assembled and repaired by in-house mechanics. It has been determined that there is a direct correlation between machines running out of specification and product yield. The production process could become more efficient if central unit housings, feeding blocks, hydraulic cylinders and extruder sub-assemblies were torqued to a higher value during assembly and maintenance.

Standardize Procedures For Inspecting And Cleaning Parts
Uponor receives machine parts from multiple suppliers. Installation of these parts "as is" has resulted in scrap. By implementing formal procedures for inspecting and cleaning newly received machine parts, a portion of production scrap could easily be eliminated.

Recommendation	Reduction	Annual Savings	Status
Improve and standardize procedures for central unit maintenance	40,000 lbs	$85,000	In progress
Standardize procedures for inspecting and cleaning parts	440 lbs	$950	Implemented