

Lemont facility replaces high costs with steam traps



Projects:

Stream trap replacements



Nicor Gas incentives: \$43,000



Estimated annual energy savings: 660,000 therms

International-Matex Tank Terminals (IMTT) is an industry leader in the handling and storage of bulk liquid products. They own and operate 19 terminals in North America including one in Lemont, Illinois. From blending and packaging antifreeze to storing specialty chemicals, the Lemont terminal is a high-consumption facility. With capacity to store up to one million barrels of liquid, they were in need of energy-saving solutions.

When Matt Burbach, terminal manager, joined IMTT three years ago, he identified some major operational efficiency improvements that could save money in the long term. He was able to identify key natural gas-saving opportunities. Working with a Nicor Gas-approved contractor, Burbach learned that the Nicor Gas Energy Efficiency Program had offerings that could benefit the facility. The program team partnered with Burbach and the contractor to provide support, working toward IMTT Lemont's goals to be more sustainable, conserve energy and save money.



The project

In 2019, Burbach noticed that they were using a lot of steam during the heating process. As steam cools, condensate develops in the piping, which is removed by steam traps. The hottest steam is dry steam, and it is important to remove as much condensation as possible to make the heating process more efficient. However, looking around the facility, Burbach found that there were a large number of steam traps that were not working properly.

Through a longstanding relationship with the contractor, Burbach was introduced to the Nicor Gas Energy Efficiency Program team. Together they identified and replaced 147 steam traps—close to half of all traps within the facility. Not only was IMTT able to improve its heating operations considerably, they are now estimated to be saving around \$300,000 a year in natural gas costs.

MTT DESTINATION ZERO

How IMTT made it happen

Burbach has always been an environmental steward. He knew that being able to provide a solid case for investing company resources into energy efficiency upgrades would be important, and the Nicor Gas incentives were key to obtaining project approval.

"You have to do the legwork and provide them with savings opportunities they can validate," Burbach said. "I let them know that Nicor Gas was helping us improve our bottom line. We spent the money that we needed to spend to maintain our system properly, and got paid by Nicor to do it."

The program team and the contractor worked together to calculate and verify potential energy and money savings.

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 Matt Burbach, terminal manager

The experience

As IMTT applied steam traps, another efficiency opportunity appeared in its calcium chloride system. Calcium chloride—salt water—can be burnt at temperatures above 235°F. Previously, the steam was open vented to avoid the burn point. Burbach identified this significant energy waste as a way to save natural gas and water while improving safety. By regulating the steam to the desired temperature, IMTT was able to eliminate this open venting.

Burbach noted that the ease of the process has led their team to explore three custom projects. IMTT installed flue-gas economizers on their 400 horsepower and 600 horsepower boilers, along with thermal insulation jackets on exposed steam valves.

For 2021, IMTT is looking into other potential energy-saving projects as well.

"If we're able to reduce our energy consumption and improve our cost, it helps everyone in the long run," Burbach said. "It contributes to reducing the carbon footprint of the entire supply chain and the bills of our end users. These programs help us do our part to positively impact the big picture. Easing global warming by reducing our carbon foot print, we are in it to try to do what is right for our environment."

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