Intern: Tony Wilson
Major: Mechanical Engineering
School: University of Nebraska - Lincoln

Background
As part of the Nebraska Industrial Assessment Center (NIAC)during the summer of 2020, the intern participated in two assessments. The intern was the lead analyst at Flexmag Industries Inc. in Norfolk, NE where they primarily manufacture flexible magnets. He was also the equipment manager at Timpte Inc. in David City, NE where they manufacture dry bulk commodity trailers.

Project Description
As part of these assessments, the following are the recommendations prepared:

- Adding insulation to the exposed surfaces surrounding a reactive desiccant dryer. Two desiccant tanks are put in line with an air compressor to pull excess moisture out of the compressed air. While one tank is drying the air, the other tank is having a small percent of heated dry air passing through it in order to dry the desiccant. By adding insulation to the tanks and the exposed piping, much of that heat can be contained and directed towards drying instead of lost through the exposed surfaces.
- Eliminating water leaks and implementing a preventative maintenance plan. Over time, water leaks will spring up. Without a proper maintenance plan that actively searches for these leaks, many will go unnoticed. These leaks can cause problems with other equipment or the foundation if they are left unchecked.

Pollution Prevention Benefits

Summary of Savings and Benefits

Recommendation	Annual Cost Savings	Implementation Cost	Payback Period	Annual Utility Savings
Insulate Dryers	$1,476/year	$459	0.3 years	7,339 kWh
Eliminate Water Leaks	$435/year	$85	0.2 years	90,000 gal of water
Total	**$1,911/year**	**$544**	**0.3 years**	