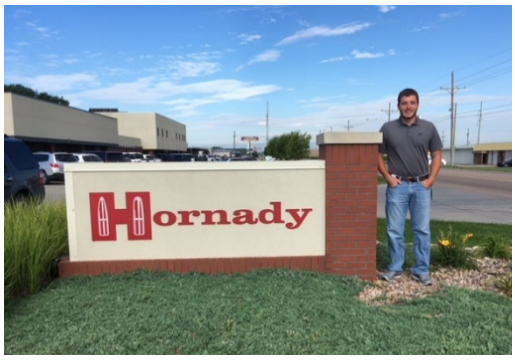

Partners in Pollution Prevention Intern: Jason Wurst

Major: Mechanical Engineering

School: University of Nebraska-Lincoln

Company Background

In 1949 Joyce Hornady started Hornady Manufacturing in order to meet the demand for good bullets for reloaders and hunters. The company started in a small shop on 4th St. in Grand Island, NE and in 1958 it moved to its present location on Old Potash Highway in Grand Island. A 200 yard underground test facility was installed in this location and is still in use today. In 1981 Joyce was tragically killed in a plane crash and his son, Steve Hornady, took over as president of the company. Hornady now employs over 800 people and is one of the largest independent producers of bullets in the world.

Project Description

The goal was to reduce the generation of solid waste and improve product quality by improving cup consistency and concentricity. The task was to plan and execute a statistical design of experiments using the factors that can possibly influence cup concentricity. The compressed air system was also studied and evaluated for efficiency. Recommendations were made to reduce the amount of copper that is recycled and to reduce energy usage in the compressed air system.

Pollution Prevention Benefits

Reduction of the amount of pollution caused by the cupping process and compressed air system was the main goal of the summer. The factors within the cupping press die sets proved to be more complex to control so future work on this project is warranted. If implemented, the recommendations in this report could reduce the greenhouse gas emissions due to these two waste streams and save money on energy bills as well as save money that is lost due to copper being recycled. These benefits are shown in Table 1.

Results

Table 1: Savings Totals

	Annual Cost Savings	Greenhous Gas Reduction
Cupping Process	$16,040	1.4 $MTCO_2E$
Compressed air system	$4,150	445 $MTCO_2E$
TOTAL	**$20,190**	**446.4 $MTCO_2E$**