

Textron

CASE
SUMMARY

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TEXTRON FASTENING SYSTEMS

Decorah, Iowa
Winneshiek County

Intern: Justin Friedrichsen
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School: Iowa State University



The Company

Established in 1969, Textron Fastening Systems is an international manufacturer of fasteners. The Decorah site produces over 10 million fasteners daily for companies such as Harley-Davidson, Ford, Motorola and Leatherman. Textron Fastening Systems is ISO 14000 certified.

Project Background

Textron Fastening Systems is committed to reducing energy consumption and protecting the environment. Textron has reduced lighting energy consumption over 60 percent by purchasing new, efficient lighting, as well as participating in an Alliant Energy One-2-Five Energy Management Review. Textron also has an active plant recycling program.

Incentives to Change

Textron Fastening Systems strives to reduce energy consumption and operating costs through employee training and by installing energy saving equipment.

Results

Five areas were identified for potential energy and waste reduction.

1. Computers - \$3,700

Textron purchased 49 LCD monitors while replacing older computers. The LCD monitors use one-third the energy of CRT monitors, have twice the life span, and are ergonomically superior. The savings associated with the LCD monitors is \$1,100 annually. The cost difference between the LCD and CRT monitors was an additional \$7,800. Training about the energy costs associated with computers was also performed. Turning off computers and monitors while not in use has potential savings of an additional \$2,600.



2. **Lighting** - \$21,800

Motion sensors were installed in 22 offices, conference rooms and bathrooms to reduce the energy consumption of unoccupied rooms. The motion sensors will save \$1,700 annually and cost \$1,300 for parts and labor. Training regarding the production floor lighting energy costs was also completed. Turning off 50 percent of the production lighting and all of the warehouse lighting during the weekend will save a projected \$20,100 annually. As only a skeleton crew operates in the production area during this time period, this project was also implemented.

3. **Water tank insulation** - \$5,100

Two open wash water tanks are located at Textron. The use of 1.5-inch hollow polypropylene balls for insulation will reduce energy usage by \$5,100 annually. The insulation has also helped to decrease the evaporation of heated water and to increase the comfort level of employees working near the tanks. The equipment cost \$900.

4. **Compressed air** - \$46,600

With the use of an ultrasonic detector, 31 compressed air leaks were found and repaired. The savings and repair costs associated with the leaks are \$25,000 and \$3,100, respectively. Vibratory bowl tuning was also performed with savings of \$4,000. The cost of this service was approximately \$5,000. Training regarding the costs of compressed air was also conducted. It was estimated that the air is overused for about one hour per day on certain aspects of the manufacturing machines. Proper use of the compressed air has potential savings of \$10,000 annually. The replacement of 75 high volume pneumatic vibrators with low volume vibrators was also recommended. The savings associated with this equipment change is \$7,600 annually while the initial cost is approximately \$14,000.

5. **Launderable absorbents** – \$500

Textron currently uses disposable absorbents for oil spills and leaks. The use of launderable absorbents would decrease cleaning service costs by \$500 annually and divert 4,250 pounds of solid waste from the landfill. A 60-day trial period was enacted to evaluate the performance of the launderable absorbents.

These five opportunities would provide overall savings of \$77,700, reduce energy by 1,281,900 kWh and reduce solid waste by 4,250 pounds.

