

The Dexter Company

CASE
SUMMARY

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THE DEXTER COMPANY

Fairfield, Iowa
Jefferson County

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Major: Environmental Engineering
School: University of Iowa



The Company

The Dexter Company is a locally owned company comprised of three divisions providing more than 575 jobs and headquartered in Fairfield, Iowa. The Dexter Company is a leading manufacturer of commercial laundry equipment, which is sold nationally and internationally. The Dexter Foundry is the second largest foundry in Iowa and produces gray, ductile, and specialty ferrous castings for more than 250 customers located in 35 states. Century Laundry and Dexter Financial Services comprise the retail division, increasing the Dexter brand presence in the state of Iowa and providing financing for laundry equipment sales on a national and international basis.

Project Background

The purpose of this project was to find alternatives to landfilling spent foundry sand as well as assess energy consumption at the washer/dryer factory. Dexter uses large quantities of sand to make molds for iron castings. The spent foundry sand is currently being landfilled onsite. The landfill will eventually run out of space, leading to a sharp increase in disposal costs. Finding a way to reduce the amount of waste foundry sand will lengthen the life of their landfill as well as reduce disposal costs. The Dexter Company also does not have an official energy management plan in place. Consequently, there are many opportunities to reduce energy consumption and subsequent costs.

Incentives to Change

The Dexter Company is environmentally conscious and looks for ways to decrease its environmental footprint as well as reduce costs. Spent foundry sand is Dexter's largest waste stream and they wished to address this problem and research alternative disposal options. Dexter was also interested in identifying energy saving practices with the laundry factory to help reduce operating costs.



Results

Sand Reclamation System: \$83,170

A sand reclamation system would clean the foundry's spent green mold sand and yield a percentage that would be reusable in the sand system. The reuse of the sand would reduce disposal costs, new sand costs, and sand binder additions. This project is recommended and the next step would be to test spent foundry sand in a reclamation system to determine expected clean sand yields. Dexter can save approximately \$83,000 using this system and divert 2,760 tons of foundry sand from their landfill each year. The capital cost of the system is approximately



\$79,000, which would result in a pay back period of just under one year.

Energy Conservation Practices : \$ 8,175

The Dexter Company does not currently utilize the power management functions on their computers because of problems with the network. Technical support is available through the Energy Star program to resolve these problems and implement company wide power management. This would save approximately \$2,200 each year. Many lights and fans are left on in the factory during 3rd shift when only one department is operating. Ensuring that only necessary lights and equipment are running during 3rd shift could potentially save \$5,125. It is also recommended that office printers are shut off at the end of each work day.

Project Summary Table

Project Description	Environmental Impact	Economic Cost	Status
Sand Reclamation System	2,760 tons of sand diverted from landfill/year	\$83,170 per year	Recommended, requires further testing
Energy Conservation Practices	155,000 kWh/year	\$8,175 per year	Recommended