

LEKOS DYE & FINISHING

Lekos Dye and Finishing, located in Rancho Dominguez, CA, is a commission dye and finishing house, treating natural and synthetic fabrics for the textile industry. Founded in 1994, Lekos has grown to \$10 million in annual sales and 80 employees. They continually strive to reduce expenses and maintain profitability.

Challenge

The dyeing and finishing processes require large quantities of water, gas and electricity to produce a high quality product, resulting in utility bills that exceeded 20% of the company's annual operating budget. This was considered an unavoidable cost of doing business. Daniel Lee, General Manager, attended an Economy, Energy & Environment (E3) presentation and recognized an opportunity for cost savings by conserving water, gas and electricity.

Solution

The E3 Review utilizes customized technical assessments to determine sustainable approaches to improving operations. The program's goal is to identify opportunities to reduce cost, be more environmentally sustainable through waste reduction, decrease carbon footprint and drive innovation throughout the company.

The project started in June, 2012 with the assessment team tour of the Lekos facility. To develop the economic component of E3, CMTC delivery personnel developed current and future state Value Stream Maps to document production processes. These documents identified areas to increase throughput and eliminate operational inefficiencies. Opportunities identified included revision of inventory management procedures to eliminate time searching for customer inventory and installation of new technology to improve the testing process. CMTC conducted a financial analysis to help Lekos management quantify potential savings from implementing assessment recommendations. Additionally, a Worker Safety Analysis was conducted assessing safety procedures and providing suggestions to enhance worker safety.

To identify energy opportunities, Lekos' historical gas and electric bills were analyzed in relation to production levels. This assessment resulted in recommendations such as Variable Frequency Drive (VFD) installation on pumps and boiler replacement to reduce energy usage due to maintenance and operation of the aged equipment.

The environmental component was developed with the local Environmental Protection Agency representative and the municipal water district conducted an environmental assessment of the facility and reviewed historical water bills. To reduce water use, the team recommended replacement of older dye tanks with more efficient models. Recommendations were made to improve and increase recycling efforts.

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In August of 2013, CMTC provided the client a comprehensive assessment report. This document provided the client the tools and information to proceed with implementing recommendations.

Since completion of the technical review, Lekos has installed Variable Frequency Drives (VFD) on pumps and realized a \$10,000 per month savings on their electric bill. Incentive rebates from the utility have helped pay for VFD's reducing Lekos' investment and shortening the payback period. Another VFD was installed to allow smog arrestor equipment to work more efficiently and thereby reduced the amount of emissions during the manufacturing process while further reducing electricity usage.

The client also changed their inventory management process to streamline the fabric location process. By following the recommendations developed through Value Stream Mapping, Lekos was able to reduce inventory location time from one hour to ten minutes.

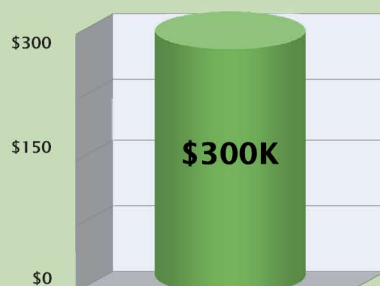
Another benefit to the project was a change in the company culture. Mr. Lee stated "We weren't really focused on our environmental impact. As the project progressed we realized the amount of our carbon foot print and now look for ways to reduce it. Our employees took a more active role in looking for ways to reduce their impact on the environment, whether it be sorting trash or re-using office paper. Our customers haven't requested a report on our sustainability efforts but we want to be ready. Going 'Green' is good for our business and our environment."

"CMTC was key to the project's success and helped us to rigorously implement several of the recommendations from the assessment. The E3 Review provided us with the tools to reduce utilities expenses."

Daniel Lee
General Manager
Lekos Dye & Finishing



\$300,000 in Energy Savings Annually (Dollars in Thousands)



FINANCIAL & PRODUCTIVITY RESULTS

- \$300K in energy savings annually
- \$800K in plant and equipment investments
- \$12K in IT and software investments
- \$3K in workforce development investments