

Helping Oregon Manufacturers Create a Stronger Oregon Economy

Woodfold - Marco Manufacturing, Inc. – A Success Story

Background/Situation

Woodfold-Marco Manufacturing, Inc. (Woodfold), established in 1957 in Forest Grove, is one of the nation’s leading suppliers of custom-crafted accordion, roll-up, and bookcase doors and hardwood shutters for both residential and commercial installations. An employee-owned company (about 100 employees), Woodfold has long been sensitive to environmental issues and has adopted many environmentally-friendly manufacturing practices. In 2004, Woodfold also embraced Lean Manufacturing practices and began on its journey toward becoming a Lean Enterprise. Viewing these as two separate endeavors Woodfold was soon provided with the unique opportunity to combine them in a powerful new way.

In 2007, the Oregon Manufacturing Extension Partnership (OMEP) and the Pacific Northwest Pollution Prevention Center (PPRC) partnered on a “Lean - Green” pilot project at Woodfold. The project, funded by the Environment Protection Agency, purposefully linked Green to Lean strategies to maximize production efficiencies and to simultaneously target and minimize environmental impacts.

Action/Intervention

The project focused on Woodfold’s shutter paint line which involves priming, sanding, and spray painting. With input from Woodfold employees and PPRC, OMEP integrated environmental components into its traditional Value Stream Mapping process by incorporating material, energy, and water inputs/outputs with each “process box.” The participants closely scrutinized the current process and identified potential Lean and environmental improvements. Numerous improvements were implemented.

Production improvements reduced bottlenecks and increased throughput in the shutter paint line. Environmental improvements included standardized spray paint techniques to optimize transfer efficiency and reduce overspray, and reduced energy consumption, solid waste, particulate emissions, and water used for paint flushing. Although small and limited to one production area, this project demonstrates the power of the Lean-Green connection – one that OMEP has begun to incorporate into its Lean practices.

About OMEP

OMEP is Oregon’s Premier Lean Enterprise Provider helping Oregon manufacturers reduce costs, increase sales, and create jobs.

OMEP’s mission is to create a stronger Oregon economy by helping primarily small to mid-sized manufacturers transform the way they do business and become more competitive in the global marketplace.

OMEP delivers proven results which are documented through independent surveys.

Results

Environmental improvements alone resulted in **annual cost savings of \$47,670** from:

- **Increased labor capacity of more than 160 hours**
- **A decrease of 48 gallons of paint required**
- **Improved transfer efficiency of 102 gallons of primer and 980 gallons of lacquer**
- **A reduction of 6 tons of recycled scrap PVC**
- **A reduction of 1,200 gallons of water due to new flush/purge water methods**
- **A reduction of 120,000 kwh of electricity through improved water use leading to reduced used of evaporators**

The Oregon Manufacturing Extension Partnership is a not-for-profit organization funded by a combination of federal and state dollars and client fees. State funding is administered through the Oregon Economic and Community Development Department.