

Lean Implementation at Behlen Industries



Behlen Industries is a leading manufacturer of steel buildings, sold through a network of dealers and distributors to customers around the world. Located in Brandon, Manitoba, Behlen Industries employs 250 people and has been named one of Canada's 50 Best Managed Companies.

In an ongoing effort to improve operations, Behlen Industries has embarked on a lean journey. Recently, Manufacturing Engineer Doug Riddoch and Shipping Manager Stefan Levasseur graduated from the Canadian Manufacturers & Exporters Lean Greenbelt program.

As part of the Lean Greenbelt program, Riddoch and Levasseur selected "I" beam welding as a lean project. The "I" beam welding area was typically a dirty area, plagued with lots of work-in-progress and excessive material handling due to the need to weld on the flat. This area was also never previously analyzed for single-piece flow.

A team consisting of Riddoch, Levasseur, Maintenance and Engineering personnel and "outside eyes", was assembled to analyze the area. Current state and future state process maps were drawn and today the improvements are evident in a number of areas. Flow has improved from raw material entering the building, all the way through to finishing. The old routing had material traveling all over the plant. The new routing doesn't allow material to backtrack.

One particular area of focus was final welding, where flanges and mounting plates are added. For a number of reasons, these pieces must be welded on the flat. This means flipping the "I" beam a number of times in order to complete the welding. The old method required the use of overhead cranes. The new method, developed in-house, uses "flip scissors" enabling operators to single handedly flip the beam without the use of overhead cranes. With the simple pull of a lever, the beam is flipped into the required position.



"I" beam flip scissors

The area also underwent a significant 5S blitz to better organize materials and tooling and create a safer work environment. This opened up a lot of floor space. Rigs for the welders were built on tracks so that they could be easily transported to the required area.

"We are slowly changing the culture of the workplace. Eliminating unnecessary work-in-progress has been one of the biggest challenges. Teaching employees that they do not need so much work-in-progress requires the employees to learn, understand and change the way they work" said Levasseur.

"Some of the initiatives from this project are still being implemented and the final results have yet to be tabulated, but a significant decrease in material transportation, reduction in set-up-times and increase in usable floor space has already been realized" said Riddoch.

