

## Superior Modular Products Partners with IES to Implement Lean Manufacturing

Superior Modular Products, a manufacturer of telecommunication products, is embracing lean manufacturing in a big way, and their early successful results are adding fuel to their desire to incorporate lean into every production line in their 55,000-square-foot facility in Swannanoa, NC.

“I just want to move forward quickly so that our whole plant can be involved in our lean journey,” commented Linda Fouts, Director of Operations at Superior. “ Our results are impressive, productivity and efficiency are way up in these areas, and our team members are enthusiastic and eager to learn more.”

The Company’s lean journey began in June 2003 when Dennis McKenna, Vice President of Global Business Development began sending updates on the lean program from other divisions with a list of books to read on lean to Fouts. With encouragement from McKenna and a visit to the local Eaton Cutler-Hammer facility, AB Tech, NC State, and some private consultants were contacted to review the training available. NC State was selected because they could not only provide training but assist in some of the kaizen events teaching not only the theory of lean but very practical applications. With the help of the Mountain Area Workforce Development Board, Superior received the Incumbent Workforce Grant helping provide the training from NC State.

In February 2004, IES delivery specialists conducted a lean 100 course at the plant, followed in March by an initial value stream mapping course. They conducted their first lean activity (a five-day process) soon after. Team members created a work cell in their Cat 6 module assembly area, moving from a batch process to flow, and reducing the number of operators needed from 10 to 6. They also reduced floor space required by 60%, and implemented visual indicators that improve communications and expose problems quickly.



Before



After

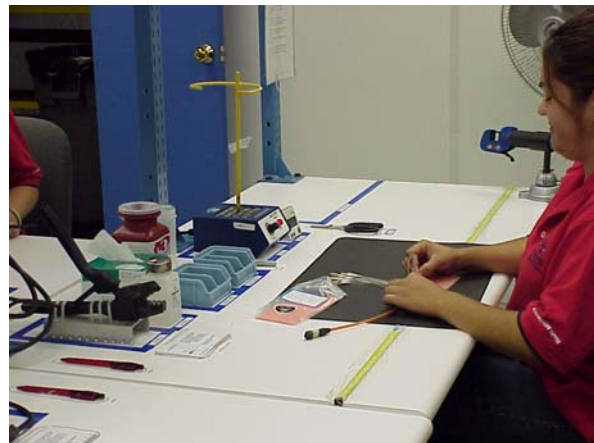
Based on the success of this first focused activity, a second activity last May facilitated by IES professionals focused in the fiber cable assembly area. In this area, operators build fiber cable assemblies. During this four-day activity, implementing lean processes increased efficiency by 30%. The team worked with the employees in this area to help

them move from batch work to a single bundle flow. A major factor in achieving these results was changing the physical layout of the work stations to improve flow and reduce physical steps taken to complete each product. The work stations that previously flowed around the room were arranged into two “U” shape cells. Materials stored at point of use eliminated a lot of travel and counting by the stockroom.

The fiber cable assembly area has been operating in its new lean configuration for about six months now. While the operators continue to fine tune their visual system, efficiency continues to improve and work flows smoothly. “We’re continuing to train our operators in continuous flow, and I see a big improvement,” explained Tammy Cutshall, Superior Modular’s Team Leader, Fiber Lab. “I love the new layout, everything has its place, and there’s not nearly as much walking now.”

The fiber lab area will soon be relocated with the fiber box area to bring all the fiber production into one contiguous floor arrangement during another lean event. This new physical layout will further improve work flow, reduce waste, and reduce physical steps.

“Using these practical applications is the most valuable teaching method for our teams,” explained Fouts. “And the most rewarding part is that our operators are coming up with more ideas, and people are asking when we’re going to come to their areas. Delane Taylor and Chris McGraw (IES staff members) are dedicated professionals and they really care. They are making a big difference here.”



Superior Modular is continuing to implement lean methods in other areas, completing an additional lean activity on their own in the jack assembly area. This three-day event resulted in decreasing the number of employees needed on this line from 14 to nine, while increasing efficiency by 70%.

“This team did a really great job,” said Delane Taylor, IES Delivery Specialist. “They started with a value stream map that helped drive their decisions, and followed the steps they had learned from previous lean activities.”

Another lean activity took place in the panel line area last August with equally impressive results—floor space needed was reduced by 70% while more than doubling available capacity. Work in process was reduced from days to single piece flow. After a couple of weeks, the seven-member team completed their evaluation of the new physical layout and are developing standardized work documents. Three months later, they are still making continuous improvements, exceeding their original production goals by almost 30%. Efficiency has increased by 24%.

Barbara Hunt was a team member on this lean activity, and thoroughly enjoyed the process. “I received a good education by participating in this event, and I see how the work flows faster with better quality. We had way too much material, and by cleaning up the mess and clutter, we stopped fighting ourselves and reduced stress. Now we can easily identify problems and correct them.”

In November, a five-member team conducted a three-day lean event in the fiber box area, working with Delane Taylor, IES lean facilitator. This area is where fiber cabinets are assembled, adding components such as grommets, kits to hold the fiber in place, and adding ties, labels, and door latches. The goals were to reduce physical steps and reduce floor space needed by 25-30%.

“We changed the physical layout from people walking around several long tables, back and forth all day long, to two people working in a L-shaped configuration, developing standard work for each of two cells. We are dramatically improving output,” said Fouts.



The results of this event include a reduction in labor required by 25% and an improvement in efficiency of 24%.

The November event will be the last IES facilitated event for awhile, but Superior Modular will continue their lean journey, and they are fortunate that their General

Manager, Bill Reynolds and corporate headquarters are behind them 100%. “Our corporate group is really into lean, and all plant managers have received ‘train the trainer’ lean education. We are committed,” said Fouts.

“Delane (Taylor), our IES lean facilitator, is very knowledgeable and has a broad range of experience, and we are grateful for all help IES has provided. We realize we’ll never be finished, we continue to work with our team members and get more great ideas. It’s all about continuous improvement,” concluded Fouts.