USC CONSULTING GROUP™

Empowering. Performance.

Manufacturer increase efficiency, grows revenue.

Client:

A manufacturer of heat transfer equipment

Challenge:

Like many of our clients, this one came to us after seeing the results we'd produced for an industry peer. The company had committed to year-over-year production increases, but had concerns over meeting these commitments.

Process:

We identified a number of problems, including the plant's disconnected floor plan layout. As a result, moving materials from one station to another involved a lot of unnecessary travel. Also, fabrication areas were not connected to the main line, and assembly line workers had to constantly retrieve parts. This slowed production considerably. The entire process needed to be better choreographed to function more efficiently.

To determine the true capacity and capabilities of each work cell, our team quantified the waste in the existing processes and calculated the potential for increased output. Using direct, on-the-floor observations and applying Lean Manufacturing principles, we were able to eliminate redundancies to produce more products more quickly.

A key component of our solution was to leverage the vast knowledge of the company's experienced employees. These people were desperately seeking change and success. By earning their trust and confidence, we were able to help them achieve the success they desired.

As part of the process, we implemented a number of new procedures to make the assembly line more efficient:

- We created a new floor plan and consolidated two shifts into one to decrease labor costs.
- We pushed for a more comprehensive management style rather than the silo style currently used.
- We helped the client become more proactive in confronting obstacles using short interval control.
- To eliminate the need for workers to walk off the assembly line, we recommended a Kanban system to ensure all necessary parts would be available on the line as needed.

- Using capacity analysis as a baseline, we introduced new ways to work with sheet metal and unit coolers.

Performance Results:

- By consolidating two work shifts into one, we were able to increase throughput from 136 to 164 per day, a remarkable 20.5% improvement that required less staff.
- Labor to sales in the unit cooler segment decreased from 8.68% to 7.12%, while efficiency jumped from 91.01% to 115.15%.
- In the Minicon segment, labor to sales decreased from 6.08% to 4.96%. Efficiency increased from 140.21% to 168.87%.

Conclusion:

Based on the success of the project, the manufacturer decided to implement the same philosophy across the remainder of the plant. Improvements involved capacity studies, process mapping, floor layout, equipment layout, key performance indicators, line balancing, crewing guidelines and work instructions.

The manufacturer's projected financials across the remainder of the plant, based on similar improvements, forecast labor to sales at 7.3% through the end of that year, beating the previous 8%. The company also expected efficiency to increase from 94% to 104%. Most importantly, the company adopted our approach of prioritizing effort versus rewards, using cross functional and interdepartmental action to accomplish goals. This new methodology enabled our client to meet production expectations and earn greater sales revenue.