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Sealy: No Rest for the Competition

By Carl Deeley, Director, US Consulting and Rodney Hammett, Senior Management Consultant

"Without change, something sleeps inside us and seldom awakens. The sleeper must awaken."
Frank Herbert

No matter how different our lives, every human being shares a single need: sleep. For seven or eight hours in 24, we need to become oblivious to external events as the pulse slows and dreams take over. The experts might disagree on the exact amount of sleep a human needs to stay healthy both physically and mentally, but the value of a good night's sleep is not in question.

Which brings our attention to where we spend about one-third of our lives: the bed. It is not enough anymore to have a warm, secure place for sleep. We need to have our bodies properly supported to avoid aching necks and backs in the morning. We need inner coils and European pillow tops and maybe that memory foam that conforms to the exact shape of one's body. Of course, today's consumer also needs it tonight.

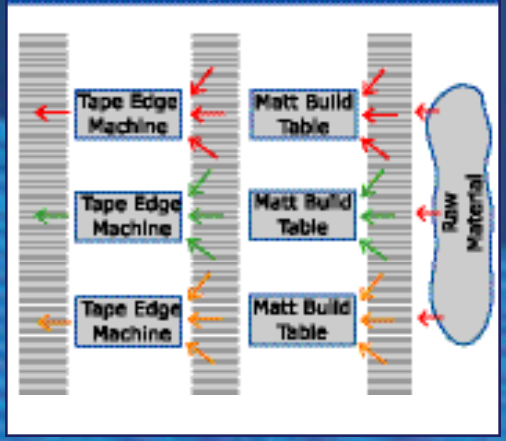
If you add to all of these newly discovered needs the new anti-flammability requirements that are gaining momentum in certain states, you've got a lot of stress on the mattress industry. And until lately, most of the industry was not exactly prepared for the challenge.

A few years ago, most mattress factories looked alike. Like seamstresses, production workers were paid piece-rate and worked quickly to make the maximum money for their time, slinging twin- and king- and queen-sized pieces of foam and fabric onto spring-loaded frames and work surfaces, stitching furiously and reaching for the next piece. Most often, these factories were individually owned and simply licensed a brand name – adding to the fractured quality of each brand, company and factory.

About 15 years ago, Sealy bought all of the individual licensee factories in the US but one and began creating a unified company. But the work processes remained largely unchanged.

In the Sealy mattress factory in Batavia, Illinois just outside of Chicago, a video taken in "matt build" is a good illustration of the old way: materials come down a conveyor in build order while final assemblers rush to pick orders off the belt. Hoisting huge pieces of foam and material over their heads, the final assemblers flip the work onto tables, rushing past each other; arguments sometimes breaking out as workers rushed for the easiest, quickest job off the line. Then assemblers sit on their work tables between bursts of activity, watching as janitors sweep up the debris.

Before: Batch and queue with mountains of WIP and "every man for himself"



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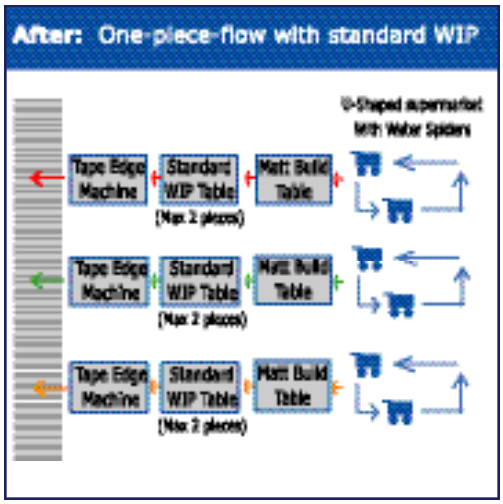
"So, you had 300 entrepreneurs out there working for themselves," recalls David Winter, the Midwestern regional manager for Continuous Improvement. "I don't fault them. They were just responding to the way the system was set up."

Unionized, yet with very individualistic working habits in a strictly build-to-order business with very little in the way of visual controls, the Sealy workers and factories were a mass of contradictions. When we launched LeanSigma work in 2003, however, we could also see the strengths that would help them transition to lean: a hard-working, stable work force, senior management commitment to lean, low inventory and direct-pull from the customer already in place.

In the past year Sealy has made remarkable strides in converting to a lean and unified environment, largely by focusing closely on fundamentals such as standard work and Managing for Daily Improvement.

"Because of our history of licensees, where you had different facilities, structures and equipment, we had a lot of fragmentation," said Michael Hofmann, Sealy senior vice president who was lured from the very lean environment at Hill-Rom to lead Sealy's operations. "We need standardization, so we are driving the discipline of standard work – first and foremost – in every facility, from housekeeping to safety and quality issues."



Batavia was the fourth of Sealy's 17 assembly plants across the country to adopt the new production processes, beginning with new employee contracts that substituted measured day work (hourly pay) for piece work as each area of the plant moved from batch processing to one-piece flow and work cells. In the first year Batavia held 27 kaizen events; training workers, creating cells and erecting kiosks in each cell that display standard work, hour-by-hour and SQSCM (safety-quality-service-cost-morale) charts, and kaizen newspapers.

Today, mattresses are built using just-in-time principles. Each cell builds one mattress kit at a time, with all materials presented to the assemblers in order of use. Gone are the days of "cherry picking" mattresses to maximize each person's piece-rate incentive. Rather than gathering materials from mountains of scheduled batches, materials are picked from U-shaped supermarkets.

The result: matt build productivity improved 39 percent in three months. This initiative, along with other kaizen events on the floor, has improved overall factory productivity by 19 percent in 12 months.

"We chose the tougher road, doing an event for each cell instead of simply duplicating the work," said Shailesh Patel, former Batavia plant manager and now vice president of Operations for the Central Region. "But we needed to get every employee personally involved in planning events."

This focus on using lean principles and kaizen events to drive cultural change has been a hallmark of Batavia's efforts. Besides training operators with kaizen events, management has trained the plant's dozen supervisors in Managing for Daily Improvement and pushed them to embrace planning instead of firefighting. *(continued on pg 4)*

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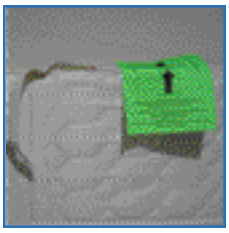


Batavia's coordinator of Continuous Improvement, Christian Rergis, created a series of working lunches with supervisors that includes a book club – in which everyone reads a chapter of a lean classic and one person is assigned to open the discussion – or skill development in problem-solving. When it appeared that supervisors were having a hard time updating SQSCM boards due to technical problems, Rergis arranged Excel training courses.

And Plant Manager Don Pflug tours those SQSCM boards every morning at 10:30 a.m. with all 12 supervisors and plans on inviting the plant controller or auditor to join them on the morning tours soon.

"We're all interdependent on one another," said Pflug, who just arrived in Batavia in June, but has been managing plants since the age of 23 and prefers the plant floor to his glass-walled office. "We need to see and discuss the metrics together."

New corporate owners have assisted the lean effort by imposing a "discipline of data" and keeping everyone focused on a dozen key measures, David Winter said. This focus not only helped create a unified view of this once fractured company, it clearly illustrates the benefit of supervisor development through MDI. The St. Paul, Minnesota plant, for instance, was running at 10 percent over budget. One year after an MDI training event and focused implementation of those principles, the plant was 10 percent under budget, Winter said.

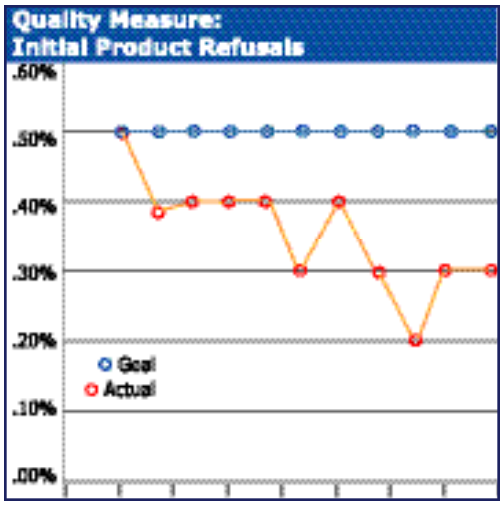
Supervisors who go through MDI and book clubs and Excel training may be on the front lines of the lean transformation, but in Batavia, the extra work doesn't seem to be causing undue stress. In fact, it's just the opposite.

Rick Stallman, a long-time Sealy employee and supervisor, doesn't even pause before answering how lean has changed his environment. "It's streamlined my job and made everything more visual," he said. "A year ago, if you had asked me how we were doing at any one point, I couldn't tell you. Now I know. And knowledge is power."

Like many new converts to lean, Mario Nieto – one of Stallman's supervising colleagues – has found that lean has followed him home, where he teaches his seven children to apply lean principles to their rooms and clothes.

"It changed my life around. Honestly, I didn't believe in C.I. before. We didn't care about making our jobs easier. We just cared about making money," Nieto said. "It's like we had a cloud in our heads before and a tornado came along and took it all away." ■


Labor Hours Per Piece
Labor hours per piece
5 week MAVG


Quality Measure:
Initial Product Refusals
.60%
.50%
.40%
.30%
.20%
.10%
.00%
Goal
Actual


Safety Measure:
Rate of Recorded Injuries
2002
48
2003
38
2004
25


Quality Measure:
BOM Audits
100%
98%
96%
94%
92%
90%
88%
86%
84%
82%
Goal
Actual