



WERC Certification Awarded Kennametal North American DC

Kennametal's North American Distribution Center, located in Cleveland, Ohio, has been cited as a WERC Certified Warehouse.

The designation from the Warehousing Education and Research Council, the professional association exclusively focused on warehouse management and its role in the supply chain, certifies a warehouse facility's capabilities and its ability to competently perform core warehousing functions.

To conduct the certification audit, an independent third-party auditor inspected the distribution centers and conducted a process assessment, while benchmarking and grading the warehouse operations against recognized industry best practice standards.

These standards are contained in WERC's *Warehousing & Fulfillment Process & Best Practices Guide* that outlines the five levels of warehouse process competencies (ranging from "poor" to "best practice") for the eight common warehouse processes (receiving and inspection, material handling, slotting, storage and inventory control, warehouse management systems, shipping documentation, picking and packing, and load consolidation and shipping).

"We were looking for a method to benchmark our distribution center against the best-in-class," says Tom McNamara, manager, America's Distribution. "The WERC Certification program was the method we believed would provide us with a good measure as to where we stood against the best distribution centers throughout the world." McNamara and his team were looking to confirm if their service levels, quality process, and productivity levels were world-class.

"We were interested in opportunities to improve our current performance levels and have outside eyes take a critical look at our operations, and to then apply whatever we learned during the certification audit to our other DCs around the world," he explained.

The North American Distribution Center provides service to Kennametal customers in North America and throughout the world, distributing parts to customers in aerospace & defense, transportation, energy, general engineering and earthworks industry sectors. Kennametal Inc., Latrobe, Pennsylvania, manufactures a wide range of industrial cutting tools and wear parts for demanding environments, providing customers with innovative custom and standard solutions through advanced materials sciences, application knowledge and commitment to a sustainable environment.

The Cleveland facility includes 163,500 square feet of operating space, four receiving dock doors, four shipping dock doors, and stores 85,000 SKUs on steel shelves, deck racks and pallet racks. A staff of approximately 100 employees perform key operations, such as receiving line items on a daily basis, shipping line items daily, cycle counting, domestic and international shipping, and value added services (laser marking, ink jetting, and labeling of customer part numbers). The distribution center also provides same day shipping to more than 3,500 customers.

The certification experience and best practices

McNamara emphasized, "We wanted an assessment of our current state of operations, an objective look at how we measured up against industry best practices." Therefore no special pre-audit preparation was undertaken to modify processes or procedures. However, he and his team did review WERC's *Warehousing & Fulfillment Process & Best Practices Guide*, and the other materials provided prior to the auditor's inspection of the facility. "The guide gave us an understanding of what the audit was going to be about, and some insight into the disciplines or processes that were going to be reviewed," he said.

“The auditor had many good insights and shared with us a broader view of best practices than we may have previously experienced or considered,” McNamara commented. “He also took a reasonable approach in making improvement recommendations as to what’s feasible over the next three to five years that would enable us to achieve measurable productivity gains with a reasonable investment.”

In reviewing the auditor’s findings and recommendations with the facility’s employees,

McNamara noted that “they were pleased and encouraged to hear that they had some practices that were considered best-in-class, and that overall we were a pretty good distribution center. They also were open to the improvement suggestions and opportunities and have rallied around them.”

A best practice was reported in the area of performance management. KPIs are measured and tracked on a daily basis, and the results are posted the next day to allow for supervisor and employee use. Among the KPIs measured and tracked:

- Inventory piece accuracy
- Inventory dollar accuracy
- Internal quality metric. Picking accuracy, measured in errors per million lines shipped.
- External quality metric. Shipping EPM (customer quality measure).
- Dock-to-stock. Measured in terms of lines received to the shelf same day.
- Return processed and place to shelf within 48 hours.
- Productivity. Measured by lines per hour processed.

“The KPIs are used to improve overall performance of the distribution center,” reports McNamara.

Another best practice is the high percentage of receipts that are processed the same day. The auditor noted the good use of automated conveyor systems, and noted, in particular, the slotting technique at the facility is based on SKU velocity. Further, the report rated their quality management as a best practice and made reference to the application of Lean in distribution. The auditor’s report cited the

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high degree of awareness and application of Lean principles and tools within the facility, with projects driven by the use of Value Stream mapping.

Quest for operational excellence

“There also were opportunities presented to us that we might not have been able to identify as quickly as the auditor identified them, and which will allow us to accelerate our improvement in our key metrics,” according to McNamara. Among the recommendations: better management of the receiving dock as it relates to appointments with carriers (a formal appointment schedule with all carriers has been developed); recommendation to use advanced shipping notification (ASN); add a vendor compliance program to minimize re-work activity on the receiving dock; consider “lot” control to assist with FIFO of materials; use system to drive cycle count strategy as opposed to manual selection; investigate voice picking (actively working with IT investigating voice picking to replace radio frequency); and improve slotting procedures.

“Our number one priority outbound is re-slotting, which will drive our picking productivity,” he said. “We’re reviewing the individual SKU velocities and are in the process of reconfiguring where to store our fastest moving SKUs, the top 3,500 items. When complete we’ll be able to increase our picking and putaway productivity significantly.”

Another outbound project under study is how to convey outgoing shipments directly into the trailers.

In addition to the WERC audit recommendations they also will continue to use their Lean tool kit extensively to improve processes and ultimately their results. “In our distribution center we have a monthly review of our Lean projects,” says McNamara. The supervisors or leads discuss their activities, identify the Kaizens they’ve conducted during the month and describe the benefits that were realized. These are then sent onto corporate for documentation.

Lean is not practiced on a hit-or-miss basis at the North American Distribution Center, or restricted to certain high value projects. McNamara notes that there are currently about 40 “actions” under consideration just for the inbound processes, and another 30 related to outbound activities.

The Lean tool kit includes the full range of tools, including value stream mapping, Kaizen, 5S, and standard work, among others. Plus, other quality tools (failure modes and effects analysis [FMEA] and quality functional deployment [QFD]) are also used as may be required in the DC, which is why their quality operations were highlighted as a best practice in the auditor’s report.

“We develop an annual value stream map of our facility from an inbound perspective in which we include our carriers and plants, taking the map from the beginning of the source through the transportation and all the way to our shelf,” he explains. “And for the outbound, the map goes from the picking process on through to the customer.”

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An annual review of the processes is made using the value stream map, from which an action plan is developed for the following 12 months, after which the individual projects are prioritized. For example, for the receiving area the WERC audit recommended developing a vendor compliance program. “We contacted our purchasing department and we’re now working with them to improve the performance of our vendors whether it’s about labeling, packaging or some other area that will enable us to expedite and receive product to the shelf faster and have it available for our customers sooner,” he describes.

Another recommendation from the audit refers to ASNs. “Since 98 percent of our product comes from our own manufacturing facilities, we don’t have plans to use ASNs,” he states. “Instead, we have a ‘dock-to-stock’ initiative in which our manufacturing facilities are now pre-receiving for us, so when these products hit our receiving dock we move them directly to the shelf without having to do any transactions on our SAP system.”

As an example of “some of the little things” that are done in Kennametal’s North American Distribution Center that can lead to higher productivity, a safer work environment and greater employee morale is similar to a current project that is concerning the review of the workstations in the shipping area.

“We’re looking at them from an ergonomic standpoint and how we can improve them,” he notes. Another project under consideration is the develop-

ment of a routing guide, which is being discussed with Kennametal’s transportation department.

Sharing the lessons learned

“A significant lesson learned is that there is value in having an outside auditor with logistic experience evaluate your operation,” maintains McNamara. “We have recently undergone a system upgrade to our business system, so the benefit of the audit is not easily identified, however, as we spend more time executing the auditor’s recommendations we will be able to see real results and a positive impact on our performance.”

McNamara acknowledges that he and his team’s focus for the next couple of years is to implement better technologies such as voice picking, and improve processes such as slotting techniques, and to then share the best practices with other Kennametal distribution centers throughout the world.

In the North American Distribution Center, the Supervisor position is responsible for global distribution and in his/her capacity he/she conducts monthly or bimonthly conference calls in which one of the primary topics of discussion is best practice and what/how each facility is doing to improve their operational performance.

Many of the WERC auditor’s recommendations and actions already taken at the North American Distribution Center have been documented and shared with the other facilities during these meetings. Now, McNamara plans to share WERC’s *Warehousing & Fulfillment Process & Best Practices Guide* with his colleagues, which will give them additional insights into improving the performances in their operations.

“As a team we felt a great sense of accomplishment and pride in being recognized by WERC,” maintains McNamara. “It was a nice way to personally recognize the employees at the North American Distribution Center who have done an outstanding job of achieving our logistics goals while serving our customers on a daily basis.”

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