

Case Study

Lincoln Electric Cleveland, OH



Lincoln Electric, headquartered in Cleveland, Ohio, is the world leader in the design and manufacture of arc welding products, robotic welding systems, environmental systems, plasma and oxyfuel cutting equipment. Lincoln Electric implemented Catalyst WMS at their Cleveland facility in December, 1998. The Cleveland facility runs two shifts of 10-12 hours each, with over 35 people working per shift. This site inventories over 20,000 SKU's, including wire, welders, rods, flux, and consumables, and receives 70 and ships about 70 trailers per day.

Physically, the site covers 450,000 square feet. The warehouse is zoned by product type, such as motors, welders, consumables and build-to-order merchandise. Storage media includes pallet rack locations and bulk pallet lane positions. For bulk locations, product moves, such as picks and puts, are verified through RF entry of location codes. RF verification of moves in and out of pallet racking is confirmed via scan of the location.

Efficient Receiving and Putaway

Receipts arrive from manufacturing to one of seven inbound docks. Lincoln Electric's SAP manufacturing system builds trailer loads at the plant and downloads the expected trailer contents to Catalyst for warehouse receiving. At Cleveland, a two-step inbound receiving process is employed. At the dock, all pallets are off loaded and bulk received by load. Then, an employee RF identifies, receives and stages the product. Another employee is directed to putaway the product in a WMS selected location. RF putaways are interleaved with other warehousing tasks.

Order Processing, Picking and Shipping

Orders are selected for inclusion into a wave based upon user-defined criteria, including transportation mode by shipper number. Generally, a wave equals a truck at Lincoln, but they also build waves for rush orders and UPS orders. All pick activity is by order and RF dispatched by zone, 47% of picks are performed at the case level with the remaining 53% full pallet. Lincoln also supports a build-to-order operation for certain customers, such as nuclear and bonded product for the military. These operations require the WMS to direct RF picking of specific lots of material in the warehouse and includes RF capture of certain product's serial numbers. When picking is completed, the WMS RF directs the staging of products based upon transportation mode. Staged containers are then loaded and the outbound paperwork, including BOL and HAZMAT, is generated.

The Cleveland site ships to Home Depot, Lowes and Wal-Mart, their own 200-400 distributors and also re-supplies other Lincoln Electric distribution centers. The distribution center ships an average of 2,000 orders per day at 3-6 order-lines per order. These products are shipped 40% TL, 56% LTL, and 4% parcel. Replenishments are RF directed and typically performing during the morning shift.

Technology and Integration

Lincoln Electric installed Catalyst's WMS Version 7.1 running on an IBM RS/6000 with Oracle RDBMS and Telxon RF terminals. The Catalyst system is interfaced to a SAP host ERP system.

Benefits Received and Future Plans

Implementing Catalyst has benefited Lincoln Electric at Cleveland in the following ways:

- Paperwork and data entry have been nearly eliminated. Now everything is real-time.
- Greatly improved their outbound efficiencies through wave planning.
- Improved discipline and inventory control through use of real-time task direction.
- Reduced order cycle time from 4 days to 2 days.

Lincoln Electric also has the Catalyst WMS running in their Atlanta distribution center and plans to implement WMS at two more facilities in Chicago and New Jersey.

Corporate Headquarters

8989 North Deerwood Drive
Milwaukee, WI 53223
phone: 414-362-6800 800-236-4600
fax: 414-362-6794
e-mail: info@catalystwms.com

European Headquarters

Capitol Court, 30 Windsor Street
Uxbridge UB8 1AB, United Kingdom
phone: +44 (0) 1895 450400
fax: +44 (0) 1895 450401