

PAPER & CHEMICAL SUPPLY

Executive Summary

Paper & Chemical Supply is a janitorial supply company located in Leighton, AL. They are a full line janitorial supply company delivering on their own trucks.

The issues they were confronted with in the warehouse were inventory control, lost inventory, inventory damage, rotation of product, too much paper work, not enough room, not enough dock doors, picking errors and loading errors. Due to the existing building being land locked and height restrictions within the warehouse we could not re-engineer the existing facility. Therefore, we sized a new facility, added Warehouse Management System (WMS), and eliminated all of the paper work. Under this design inventory control went to 99.9% accuracy, picking errors went to 99.8% accuracy, loading errors went to 100% accuracy and warehouse personnel dropped from 15 to 9. The return on investment was 1.5 years not inclusive on the new facility.

Detail

Paper & Chemical Supply engaged Distribution Consulting to perform an overall review of existing warehouse systems. They were totally out of room, operations were too tight, product damage was excessive, they did not have enough dock doors, labor cost was too high, picking errors and loading errors were excessive.

The very first assessment was to see if there was any possible way to re-engineer the existing facility to make it workable. The single big issue with re-engineering the facility was the low ceiling heights. To gain more pick fronts they had installed several mezzanines that compounded the problem for re-engineering. They were totally landlocked thus eliminating any facility expansion.

We gave up trying to do anything within the old facility. Therefore, we told management that we needed to design a new facility. Everyone was in agreement and the decision was made to forge ahead with a design of a new facility.

The first step in the process was to take their existing SKU base and convert to storage types by the SKU. After this was complete a conversion was done to develop total pallets by the SKU. With storage types and pallets to storage it gave us the data needed for what sort of storage types. We used a combination of floor stock, push back rack, selective rack and shelving. We used their existing three wheel counterbalanced trucks for the lift truck aisles. Therefore, the lift truck aisles were designed around their existing equipment. We located dock doors, charging areas, lighting centers, lighting requirements, bollard protection for rack and dock doors, set the dock height, truck ingress/egress, facility shape and emergency doors.

We worked in conjunction with the contractor on getting the facility built and getting us ready to occupy the facility. We developed a move plan to move from the existing facility into the new facility.

During the phase of the project of building the facility it became evident we needed to add Warehouse Management System (WMS) into the overall scheme. We selected HAL Systems to provide the WMS.

<http://webserver.halsystems.comwarehousemanagementsystem.aspx> By doing this it allowed us to eliminate all of the internal paper work, reduce picking errors, reduce loading errors, gain inventory control and product rotation.

To attack the move issue we profiled the entire SKU base into its new location within the new facility. We loaded the profile data along with the locator scheme into the WMS. We printed bar coded labels by the SKU with their new location within the new facility. These labels were put on pallets and or cartons, thus making the put away go very quickly via scanning with radio frequency at the new facility. This allowed us to move the entire old facility into the new facility starting on Friday and finishing on Sunday. They were back in business on Monday receiving and shipping.

All of the racking for the new facility was supplied by BIPCO along with the installation. BIPCO (www.bipco.com) supplied a combination of push back rack, selective rack with and without wire decking and full case flow rack. Once the

racking was in place we put on the entire bar coded location scheme labels. Once this was complete we were ready to move.

On the start of the business day on Monday after the move we started the on line receiving process. This included printing and placing on license plates/master unit labels onto pallet loads and cases at receiving. This allowed us to move product and put it away using a radio frequency device. We kept using their existing paper pick ticket to allow all employees to get used to the new facility and to get use to using the radio frequency devices.

In two weeks, we eliminated the paper pick tickets and started picking with the radio frequency devices. The picking was done by the route and a batch pull of the route was done and the pallets dropped at the dock. They used a call out system to load in stop sequence within the route. A caller called out the SKU and it was found on the staged pallets and taken into the truck and stacked. This would continue until the entire route was loaded.

We continued this process for several months to ensure the elimination of picking errors. When management was convinced that picking errors were under control we started picking in stop sequence. If the picker came to the dock and scanned the bar code label at the door for the route, the WMS would tell the picker to load the pallet or to stage at the dock. The reason behind this was to assure we were loading in stop sequence within the route.

The positive results of the new facility were the almost complete elimination of product damage due to wider aisles and the type of racking structure. Paper work and all of the associated clerical disappeared. Picking errors were at 99.8% accurate and loading errors were at 100% accurate. Inventory control due to start up of cycle counting went to 99.7% accurate. Rotation of product went to 99.9% accurate.