NEWS from:

CREFORM® MATERIAL HANDLING SYSTEMS

Creform Corporations
P.O. Box 830
Greer, SC 29652-0830
800.839.8823
Email: SCsales@creform.com
www.creform.com

For Further editorial information contact:
Ed Szykula, Kracoe Szykula & Townsend
szykula@ksthip.com

New Product Information—For Immediate Release

Get busy movin.' How one parts supplier helps support its process equipment with a Creform AGV…again

Automotive/truck parts supplier uses AGV to handle moving production trays from the end of the line back to the start for reloading

Greer, SC—Creform Corporation has designed and built a new custom AGV system to help support the parts supplier's 24/7 production facility. This marks the second time Creform has supplied an AGV to the operation. The system was custom designed with detailed requirements to support the process production line.

The system, which consists of two AGVs, moves stacks of special 30 in. x 20 in. empty trays from the end of the production line back to the starting positions. Handling the trays safely and without damage is paramount. Each end of the vehicle follows a peel-and-stick guidepath independently to ensure accurate and repeatable tracking in space restrictive areas. The guidepath is easily and quickly installed, repaired or changed.

A stack of trays weighs up to 500 lb. and is conveyed on/off the AGV using a powered chain conveyor with side guides. The stacks are then transferred to powered conveyors for automatic load transfers. During the operation, the parts are transferred off one end of the AGVs. Since transferring off only the one end, the AGV is required to turn around in transit so it can head into the conveyor station with proper orientation.

The AGVs are managed by Creform's traffic control system which communicates to each vehicle via 5Ghz radio link. This allows vehicles to safely pass one another and

-more-

share some common guidepath sections. Vehicles stop and start automatically while maintaining a home position at the upstream of the process and called downstream based on machine demand.

Photocells/sensors are placed along the AGV's transfer conveyor to facilitate slow down and stop functions of the system. The sensors are also used for secure load verification while the AGVs are traveling. Any improper load shift is detected and will stop the AGV. In addition, within the system, mechanical load safety stops swing down for load transfers with off-board conveyor stations and swing-up via gravity when pulling away to assure load security during transit.

As the supplier's production area generates dust and debris, most of the AGV and the conveyor section is covered, while hinged doors provide access for maintenance.

The bolt-on bi-directional AGVs are built with a heavy-duty fabricated steel base for strength and rigidity. They travel at a maximum speed of 50 m/min over an approximate 325 ft. guide path. The overall footprint of each of the AGVs is 63 in. long x 31.5 wide (1600 mm x 800 mm).

A floor sweeper, both front and rear, help ensure that the guidepath is clear ahead of drive wheels. Each of the four support casters also features toe guards to prevent wheels from running over obstacles or feet of nearby associates.

Each AGV has a total load capacity of 1460 lb. (660 kg) and features a 24-volt system, powered by two 12V AGM batteries. An opportunity charging system minimizes the need for the supplier to change batteries. With each circuit of the guidepath, batteries are automatically charged by just pulling into the charging station positioned along the route. No human intervention is necessary.

The system comes with floor-positioned RFID tags to control the speed and obstacle sensor views. An optical communicator between the AGV and other stationary devices is used during auto charging and load transfers.

Safety category 3 features safety circuit to cut power, audible warning device, flashing light, E-stops and laser scanners. The four laser scanners are located two at each end. One is mounted in the traditional manner down low looking horizontally. The

second is mounted up high on an angle looking down for an extra measure of safety.

The Creform System is used to create an array of material handling and efficiency enhancing devices and is a proven component in continuous improvement and Lean Manufacturing programs. The company partners with customers in developing and implementing these programs.

-30-

Visit www.creform.com for additional information regarding Creform Corporation and its products.

Caption CRE-561: Creform bolt-on bi-directional AGV.