CARTER INTRALOGISTICS

Fulfilling the Future.

INERGY

ROBOTICS CASE STUDY

THE CLIENT

Inergy, a division of Plastic Omnium, is the first to use extrusion blow molding to produce plastic fuel systems. The tanks are made of high-density polyethylene and are corrosion-resistant without any need for coating. Once formed, the tanks are sent through a cooling tower and placed on conveyor where it continues down the line. Previously, operators manually moved the tanks from the cooling tower to the conveyors. Carter's one step fabrication system allowed manufacturing to remain simple, despite complex tank shapes.

THE PROBLEM

Operators were jumping between lines. At times they were not able to keep up with the tanks coming out of the tower.

The tanks range in size and weight making it difficult to have the correct operator on hand at all times.

Operators were hurting themselves lifting and carrying the tanks to the conveyor.

From a financial standpoint, Inergy wanted to reduce labor costs.

THE SOLUTION

Implemented Multi-Axis Robotic Arm

The robotic cell is placed at the exit of the cooling tank. It then grabs tanks of differing sizes and structures out of the tower and places them at the start of the conveyor system.

Developed Specialized End of Arm Tool (EOAT)

The robot had to not only grab the tank out of the cooling tower, but also pick it up and place it on the conveyor. Providing a custom EOAT to complete two tasks eliminated the need for more than one robotic cell.

Customized Robotic Programming

The robot needed to be able to place a tank on any one of the three conveyors. Carter had to factor in the type of conveyor the tanks would require to move down the line as well as a robot that had the range to complete theses movements.

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