RO Film Manufacturer Increases Customer Service and First-Pass Quality through Lot Tracking and Positive Release

A major reverse osmosis (RO) film manufacturer needed to implement a process of lot tracking and positive lot release in order to help increase customer service, first-pass quality and reduce problems in the field.

Objective
The customer was experiencing a variety of issues because products were shipped that did not fully meet specifications or did not successfully complete all steps in the manufacturing process. This became especially challenging with geographically diverse customers, each with different specifications for the same products. They needed a system to manage the specifications, track the lots and release the lots only after specifications were met and the proper steps were completed.

Results
The customer uses this solution to track the lots through the manufacturing process and verify specifications are met at each individual step. At the end of the process, this solution provides a final verification of the lot against the specifications. The quality and customer service issues have been virtually eliminated.

Solution
MAVERICK built the solution using a SQL Server database and .NET software components.

The SQL Server database maintains the specifications for the products, which are managed based on products and product families. This supports a wide range of products and allows for variations for individual countries and even individual customers.

Quality test results are also maintained in the database, which are entered both manually and automatically throughout the manufacturing process.

The SQL server database maintains information on the work orders, including details on the customer, the specifications and the manufacturing steps to be executed.

Throughout the manufacturing process, the lot tracking solution updates the SQL Server database to store details on each individual product to ensure all manufacturing steps were completed and the product meets all specifications.

Bar code scanners are used to scan the package labels through each manufacturing step.

Displays at each major step of the process update the operator on the manufacturing steps, test results and results against the specifications.

The solution verifies the product against specifications at all steps in the process and ensures the products meet the specifications for the individual country and customer.

Each individual package has its own unique serial number, and all data about that package is stored in the SQL Server database using that serial number.

The serial number is printed on the package label along with the work order number, the product specification number and other key information about the product.

A special shipping label is used, and only packages that meet specifications and have completed all steps in the manufacturing process are shipped.