



Glass Transport Rack Material Flow Simulation

PROJECT SUMMARY

The client was a major automotive manufacturer, glass division. A Witness simulation model was developed to simulate the flow of glass within the manufacturing and transport systems to estimate the quantity of racks to purchase to support proposed automation at the facilities.

SYSTEM DESCRIPTION

Under the old system, numerous rack types were utilized to move glass between the client's glass plants and customer facilities.

OPPORTUNITY

The client was planning to incorporate new automation at their glass manufacturing plants. The old-style racks were incompatible with the new automation system. Consequently, a new rack style was designed to replace the old racks.

APPROACH

The objective of the project was to use simulation to model the flow of glass within the system and determine the "optimal" number of new racks to purchase. Further complicating the problem was the division's uncertainty over just how many of the old-style racks were currently being used in the system.

SOLUTION

Each of the division's 3 U.S. glass manufacturing plants were visited and data was collected. A model was developed of the system in which racks were pulled into the model as needed. Multiple simulation runs were performed and the output was used to present to management recommendations for the "optimal" quantity of racks to purchase.

BENEFIT

The purchase of thousands of new racks was required, with the total cost running well into the millions of dollars. Simulation was able to provide the client with estimates for just how much money should be spent on new racks.