

## NLB Telescopic Tote Cleaning System

A customer who manufactures blended products (resins) asked NLB to help solve its problem in cleaning stainless steel tote tanks. The totes are reusable, but require thorough cleaning before new product can be loaded.

The customer had been using a chemical and solvent soak followed by manual cleaning with workers inside the tanks. This method of cleaning was costly, risky, and time consuming. The customer also incurred heavy costs associated with the purchase and ultimate disposal of chemicals and solvents used for cleaning. Personnel safety was jeopardized when workers entered a tote for cleaning. And, a cleaning time of three to five hours per tote was unacceptable.

NLB supplied an efficient and productive solution to the problem: an automated tote cleaning system, which featured a telescoping lance on a multi-axis nozzle manipulator. The tote is placed, by forklift, on a rotation platform with a center floor drain. The lance extends into the tote as the tote rotates on the turntable platform. The end of the lance features an articulating nozzle mechanism with a swing of 120-degrees to insure complete cleaning coverage inside the tote. Also, the lance moves along an x-y axis while inside the tote to enable the nozzle to reach far into the top and bottom corners. The automated tote cleaning system reduced cleaning time to 30 to 60 minutes per tote.

The system is powered by an NLB 20135E electric pump unit, which delivers 13 gpm (49 lpm) at 20,000 psi (1400 bar). Additionally, the system includes a large control panel with PLC to control all system functions and automate the cleaning cycle.



*The Leader in High-Pressure Water Jet Technology*