



Background

This worldwide company is a major producer of cosmetics. They offer a full line of women's cosmetics such as lipstick, foundation, eye shadow, mascara, lotions, face soaps, etc. In their manufacturing plants, cleanliness is of paramount importance - should bacteria ever contaminate their products, they would be faced with a multi-million dollar recall as well as a public relations disaster.

Problem

After a batch of product is manufactured, it is moved over to the filling lines where the bulk material is inserted into the small containers you see on the store shelves. Every time they change product (e.g., one color foundation to another color), the filling machine must be torn down into dozens of individual pieces which are then meticulously cleaned. The company was washing all the pieces by hand and then wiping them with alcohol for sanitization...this was terribly time consuming.



Solution/System

Design a jet washer that can clean and sanitize two (2) complete sets of parts (all parts from two filling machines) within one(1) hour. The parts included funnels, mixers, drum adapters, etc. The system automatically cycles through wash, rinse, steam sanitization, dry, and cool down stages. Both turntables are fixtured and labeled for the myriad of pieces. The system meets sanitation standards and actually has a self cleaning cycle. The system designed was an F-7000LX-ZX Precision Cleaning System with all wetted parts are stainless steel including pumps and blowers, 70" dia turntable/ 60" working height, large wash tank with steam heat, 20 HP pump, and self-cleaning nozzles. Wash spray manifold pivots through a 30 degree sweep asynchronous to the turntable rotation. During steam sanitization stage, chamber maintains a 190° F temperature.

