

Keeping contaminants out of food processing plants

by the technical team, CM Process Solutions, 1269 Pomona Road, Corona, CA 92882, USA.

The Food Safety Modernisation Act (FSMA) was created to ensure the safety of the US food supply. This Act shifts industry focus from responding to contamination, to preventing it, thus making food processors take a more proactive approach to eliminating and preventing foodborne contaminants from entering their plants.

Under FSMA, food processors are required not only to identify known and potential hazards, but also to prevent the occurrence of them.

Thus, conventional methods of cleaning and sanitising are being re-evaluated, as hand washing operations, including power spraying, cannot uniformly eliminate contaminants and pathogens, nor achieve water temperatures hot enough to properly sanitise large containers, such as buggies and bins.

Efficiency and safety

In the case of GoldCoast Salads, a Naples Florida-based producer of high quality seafood spreads, the goal was to acquire an automated washing system that would improve productivity and efficiency while maintaining maximum food safety.

Director of Operations, Adam Radno, explains that, in general, "hand washing is a very tough job that is still widespread throughout the industry, and our employees have worked very hard to maintain our high standards of food safety."

Founded in 2001, GoldCoast Salads is a highly successful family-owned business that produces a premium product. Protecting its brand reputation is a high priority that spans production from the preparation of genuine Maine lobster, blue crabs and smoked salmon, lobster and shrimp and tuna spreads, thorough cleaning and sanitising of the 400 and 600lb stainless steel buggies that transport seafood spread ingredients and finished products. As part of an expansion into a new processing facility,



The ET75 tunnel washing system.

GoldCoast Salads has installed a customised washing tunnel that will further ensure that its food buggies will be cleaned and sanitised.

"Not only does the new system completely wash and sanitise, but it helps prevent contaminants or bacteria from reaching the food processing area," Adam explains.

"Food safety is critical throughout our industry, but it is even more critical for us because our products are RTE (ready-to-eat), and there are no post-production safety measures such as post-pasteurisation.

This new tunnel washing system helps to ensure that we continuously maintain our stringent safety standards."

In choosing to automate its buggy washing and sanitising operation, GoldCoast Salads considered a number of different designs before opting for the tunnel-style system.

"We are a growing business and as we grow, we consider automating some processes with machines that will help us operate more efficiently. Up until recently we were cleaning buggies by hand. Operations included hose washing, hand scrubbing and drying, a very time-consuming process."

Adam explains that the starting point for his washing system research was simply to automate the process. Many of the designs reviewed were not fully automated because they required hand loading and unloading of the system, which still required manpower. Others were conveyor-type systems that

spray the containers as they pass through, which did not appear to be thorough enough to meet GoldCoast standards.

In his travels Adam began to broaden his system features criteria. He wanted auto loading and unloading, as well as very thorough washing along with a sanitising hot water and chemical rinse. He was also concerned about the washing system's ability to handle more than one size of buggy. He decided to visit CM Process Solutions in California, a manufacturer of hygiene and food processing equipment that services large and small food companies. Adam soon learned that CM equipment designs ranged from one-off systems to more or less standard ones that were customised to fit their customers' production and product requirements.

He became very interested in the concept of a tunnel washer, which is designed to offer a continuous, in-line washing solution for buggies, trays, bins and other containers.

This type of system not only cleans and sanitises thoroughly, but also offers a wide range of options, including various different heating methods including gas, steam coils, live steam injection and electric.

Convinced that the tunnel-style system would do the job for his application, Adam enquired about other possibilities, including automating the loading and unloading of the 400 and 600lb buggies, which weighed approximately 75 and 95lb each. He was also con-

cerned about throughput – how could he ensure that enough buggies could be handled quickly enough to meet increased processing demands?

"The engineers at CM worked closely with us, to ensure that each system feature we wanted could be included. In the end, we chose the ET75 Tunnel Washing System," Adam told us. "But while it was a highly customised system, the cost was in no way exorbitant."

The system is also designed to handle up to 75 buggies per hour, a volume that would take a large crew and a lot of equipment to handle manually.

GoldCoast Salads' new tunnel washing system automatically lifts and mounts each buggy in an inverted position, to enable the most thorough washing of internal surfaces. Both 400lb and 600lb buggies are recognised by the system, and handled according to size. Each buggy is transported through the system's tunnel by a stainless steel chain conveyor. After the wash process is completed the buggy is then automatically unloaded and delivered to the floor level allowing the operator to remove.

In the main wash chamber, each buggy is washed by a 'travelling' jet system. Essentially, the buggy stays still inside the chamber while a set of jets wash up and down the length of the buggy at high speed. The jets make 30-35 passes on the stationary buggy, spraying backwards and forwards, to ensure that all surfaces are thoroughly cleaned.

Green benefits

In addition to saving on time and labour, the ET75 tunnel washing system also offers green benefits. The system is supplied with a recirculated hot wash and hot rinse tanks, providing savings on water and energy. A fresh sanitising rinse can also be employed. The system is designed with sloping exterior surfaces where possible, and electrical interlocked service covers, to allow for efficient cleaning. ■

✉ sales@cmpsolutions.net