

Keeping contaminants out of meat and poultry processing plants

by **CM Process Solutions, 1269 Pomona Road, Corona, CA 92882, USA.**

Automated washing ensures that meat transfer buggies and bins are thoroughly cleaned and sanitised, to keep contaminants such as campylobacter and listeria out of food processing plants.

The Food Safety Modernization 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, meat and poultry 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.

Maximum food safety

In the case of DG Foods, a Hazlehurst, Mississippi-based producer of high quality poultry products, with a newly established poultry processing facility in Bastrop, LA serving customers in Texas, Louisiana, Arkansas, and others located west of Mississippi, the goal was to acquire an automated washing system that would improve productivity and efficiency while maintaining maximum food safety.

The new operation, which processes over four million pounds of poultry each week, required an automated washing system that could clean and sanitise the totes and bins used to transfer chicken from the slaughtering facility to the new processing plant.

"We needed an automated wash-

ing system to recycle the totes as part of our continuous processing operation," Bill Bryant, general manager, told International Meat Topics.

"Without it, we would be unable to efficiently clean and properly sanitise the totes and lids and could not re-use them in the processing operation."

According to Mark Corser, CEO of CM Process Solutions, "An automated system can completely wash and sanitise, while also helping to prevent contaminants or bacteria from reaching the food processing area. This type of system gives processors a proactive leg up on improving food safety, which is critical throughout the industry, even more so now with the FSMA."

CM Process Solutions is a manufacturer of hygiene and food processing equipment whose engineers can custom design hygiene solutions to help food processors meet and exceed FSMA guidelines.

Any food, particularly protein-rich animal foods such as meat, can carry micro-organisms that can cause disease or spoilage.

According to a report from Frontline, American public television's flagship public affairs series: "The campylobacter bacteria, a weak bacteria that can be killed by exposure to oxygen is often found in chickens. The bacteria are present in

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The ET 75 tunnel washer is designed to offer a continuous, in-line washing solution for buggies, trays, bins and other containers that not only cleans and sanitises thoroughly, but also offers a wide range of options, including various different heating methods, such as gas, steam coils, live steam injection and electric.

more than half of the raw chicken in the United States." Similar statements exist for listeria and salmonella.

As such, sanitisation in facilities processing raw meats must be thorough. And now with FSMA, food processors need to look newly at their hygiene standards and take proactive steps to improve sanitization of equipment.

The starting point for many food processors is simply a desire to

meet FSMA guidelines ahead of time, but also to not let new regulations hinder the production of their products.

A way to meet the new standards while improving throughput in their facility to meet growing demand is an ideal solution.

One of the key areas isolated for improvement is typically the washing operations. This also happens to be one of the points of greater risk for food safety – as improperly washed equipment and containers can lead to the spread of contaminants.

After researching suppliers of automated washing equipment, Bill's team contacted CM Process Solutions to review the system requirements and specifications.

"They did a very good job in recommending and configuring the system we eventually purchased," Bill told us. "It was exactly what we needed at a competitive price."

Automated tunnel washing

An automated tunnel washing system, designed to offer continuous, in-line washing of buggies, trays, bins and other containers can clean and sanitise thoroughly and uniformly, eliminating the hazards associated

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with hand washing operations. Some of the better systems offer a range of options, including various different heating methods including gas, steam coils, live steam injection and electric.

A system that automated loading and unloading of 400 and 600lb buggies, with a throughput of 75 buggies per hour, would increase facility production. It can also cut costs, as that volume would take a large crew and a lot of equipment to handle manually.

Maximising quality

Maximising safety and quality are also a priority at Jack Link's, the number one US meat snack brand and fastest-growing meat snack manufacturer worldwide.

In late 2011, plant management decided to upgrade a key internal production area where beef sticks and sausages are ground and blended to maximise efficiencies and ensure safety and quality standards are not only met, but exceeded.

"We purchased the washing equipment to streamline processes in our redesigned formulation room," Jeff Abrahamson, quality assurance manager, told International Meat Topics.



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

"It is important that our vats and buggies are cleaned and sanitised quickly and thoroughly. The vats are too big to be cleaned manually, so we needed a washing system that would clean and sanitise multiple vats and buggies automatically."

A good system should provide auto loading and unloading, as well as very thorough washing along with a chemical wash and a sanitising hot water or chemical rinse. It should be able to handle more than one size of buggy.

The ET 75 from CM Process

Solutions automatically lifts and mounts each buggy in an inverted position, to enable the most thorough washing of internal and external 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 it.

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.

Additional 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.

The new tunnel washing system will help save in a lot of ways. In addition to water usage, it will cut down on water treatment and cleaning chemicals.

Plus, because it is an automated system, there is ongoing control over the washing process – and that makes food processors more efficient. ■