

Challenges in the fish processing industry

Today, many food manufacturers operate in a highly competitive market with customers demanding high-quality products, and as a result, costs prices are increasing. Also, food safety has always been important, and COVID-19 increases the focus on eliminating cross-contamination.

As demand for high-quality raw materials increases and focus on safety is accelerating, the processing of fish and shellfish places high demand on the hygiene of the process equipment.

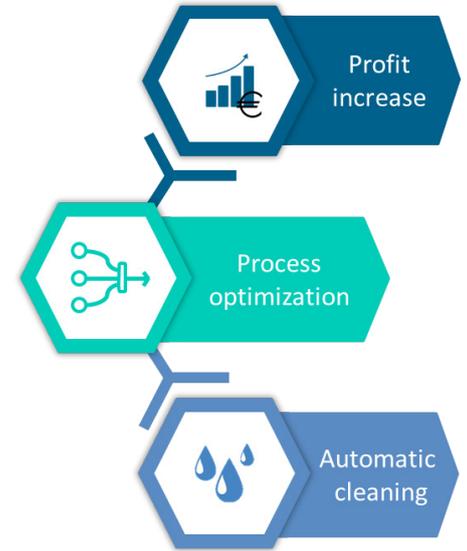
Several studies from the salmon industry show how pathogenic bacteria, such as *Listeria monocytogenes*, are transferred from the contaminated process equipment to the processed products.

This leaves a great need to address food hygiene safety to ensure safe and healthy products.

An increased demand results in increased competition, which is why optimization of the production apparatus becomes a very important focus area to strengthen the competitiveness.

The processing industry is faced with a significant challenge in terms of the reduced time they have available for cleaning, when production time is extended.

An insufficient cleaning and disinfection scheme of the critical process equipment can increase the risk of colonies of microorganisms forming biofilm.



The need for high food safety entails an increased focus on the documentation of the entire value chain, as it is necessary to be able to document all the processes in the production.

Studies have shown that one of the biggest sources of *Listeria* is the process equipment.

Thereby, automatization is necessary to reduce the risk of contaminated products.

- Automatic cleaning
- Consistency
- Quality assurance
- Documented process
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FACT:

An automated and verifiable washing procedure enables you as manufacturer to focus on other critical issues.

Changing the water between the washing phases and offering thermal disinfection gives you as a manufacturer peace of mind.

Contact a KEN partner

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Automated hygiene process

By using an Equipment Washer Disinfector from KEN HYGIENE SYSTEMS, companies can achieve the uniformity that is crucial to eliminate the spread of bacteria, thus ensuring a high product quality.

Likewise, the wash and thermal disinfection take place in a closed washing chamber, which reduces the prevalence of aerosols and the spread of microorganisms to the production environment. This leads to an improved working environment as well as increased food safety.

The wash philosophy of our KEN Equipment Washer Disinfectors is to change the water between each washing phase, which means that the risk of cross contamination between the different production shifts is eliminated, thus obtaining an increased food safety.

Disinfection

There is no legislative requirement for a disinfection. However, there must be a risk assessment of the cleaning effect of the equipment.

Thus, it has to be assessed whether the cleaning has been sufficiently effective, or if there are still too high a number of microorganisms on the surface, so that a disinfection must be carried out before starting the next production.

If the customer needs a disinfection of the process equipment, there are several ways in which this can be done;

- A *chemical disinfection* with detergent, which requires a final rinse to remove the applied detergent. This final rinse is conducted with clean water to preserve the disinfection.
- "*Scalding*" with a final rinse of typically 80°C. This is a short term

exposure, which helps to heat the equipment to contribute to an easier drying afterwards.

- A *thermal disinfection* where the final rinse is done by re-circulating the rinse water at higher temperatures (85-92°C). This is a prolonged process, but ensures a more efficient disinfection, since the heat spreads more in cavities than "scalding".

Drying

A drying system is also an important part of a washing and disinfection process, as moisture can lead to fostering of biofilms, where microorganisms can grow, but also where allergens can be "captured" in the biofilm.

KEN Equipment Washer Disinfectors offer customers a thermal disinfection with temperatures above 90°C, just as drying the process equipment ensures faster commissioning.



SUSTAINABLE DRYING SYSTEM:

The drying system uses condensation and circulation of air inside the washing chamber.

The cooling water in the condenser is heated up by the hot air that circulates inside the washing chamber. The water used in the condenser reaches temperatures of 60-70°C.

The water can be stored in an isolated buffer tank, and can be reused for the next washing process.



Control of set points

Furthermore, it is possible to determine and control set points that can prevent serious consequences for the company's economy as well as their reputation, as a result of product recalls and production shutdowns.

By implementing an automatic cleaning system, it is possible to register and activate warnings for various set points, such as water temperature, water pressure and conductivity.

These registrations can help companies to document and verify the hygiene process, thus guaranteeing a safe operation.

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