

CONVEYOR SYSTEM CONTAMINATION CONTROL

No conveyor belt system can entirely eliminate the risk of microbial contamination, but one manufacturer thinks its belting solutions come very close.

In any food industry hazard analysis and critical control point (HACCP) study, the safety of conveyor belts is an area of vital importance for any plant manager. Good conveyor equipment should be easy to clean, it should be free of blind spots where micro-organisms can grow, and it should be durable and reliable.

Conveyor belts cannot be considered in isolation, but in the context of the supports, rollers, fixings and other equipment that form part of a good conveyor system. When processors perform a HACCP study, they should look at the processing line as a whole.

Even when the belt is well designed, it may be contaminated and become a source of hazards, due to faults in its installation or maintenance, or due to insufficient cleaning. Machinery and equipment, accessories and cleaning processes for the food industry may be described as part of low-risk systems if they meet the following requirements:

- › They adhere to food regulations.
- › They are constructed and manufactured from materials that are not harmful to health.
- › Their design conforms to key hygiene requirements: they have smooth surfaces and no dead areas where product and micro-organisms collect, and they are easy to clean.

Manufacturers of the food products being conveyed must be able to provide evidence, through certificates and safety datasheets, that they have met the legal requirements.

Habasit attaches great importance to the quality of its products and services. That is why the quality and safety of its food processing belts have been checked and approved by independent food institutes and consultants, such as RCC (Switzerland), TNO (the Netherlands) and CCFRA (the UK). In addition, the entire group – with 26 subsidiaries and hundreds of distributors worldwide – has long been quality certified. Habasit has developed a range of important technologies to help maintain the quality and safety of its products.

It is increasingly clear that spoilage micro-organisms cannot be completely eliminated from food processing units, even with the most thorough cleaning processes. In fact, food spoilage tends to increase

with the use of aggressive chemical detergents, because these agents are inclined to damage the belts. This not only shortens the service life of the belt, but also provides just the kind of damaged and rough surfaces that trap residues and create an environment that encourages microbial proliferation.

Habasit's solution to the problem of micro-organisms is the HyGUARD fabric belt series, which is approved for use in the food industry and contains an anti-microbial additive. Belts with anti-microbial additives provide exceptionally high standards of hygiene. While these belts are no substitute for cleaning procedures, they can help to enhance safety, especially in cases where the belt is cracked or cut, or in areas that are difficult to clean. HyGUARD belts require less aggressive cleaning, and this brings the added advantage of reducing cleaning costs and increasing the service life of belts.

Conventional belt materials in humid situations or in applications that involve frequent cleaning cycles are exposed to hydrolysis, chlorine and other cleaning chemicals. The surface damage and corrosion that occur as a result mean that these belts need to be replaced at frequent intervals, thereby increasing downtime and putting up costs. For these applications, Habasit has developed the Cleanline range of belts, featuring a modified polyolefin coating called Habilene. These belts are designed to minimise downtime, save costs and optimise cleaning efficiency.

Cleanline belts show remarkable resistance to hydrolysis, chlorine and other chemicals. More importantly, the intact Cleanline belt also enhances hygiene. Chemical agents tend to destroy many commonly used plastics, and residues and micro-organisms are more likely to adhere to these rough, damaged surfaces. The intact surface of Habasit's Cleanline belts guards against this. The cleaning agent used becomes more effective, resulting in lower costs and better protection against food contamination. ■

Company profile

Over the last 50 years, Habasit has been an innovator in the belting industry while remaining highly committed to customer service.