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**Food and Beverage International – Cleaning Methods Feature (Sept issue)**

**Improving hygiene – a practical approach**

Sian Thomas, Regional Manager for the Hygiene Group, looks at ways of improving cleanliness and boosting hygiene in food and beverage manufacturing.

Brand reputation, high customer expectation and legislation all combine to make it more important than ever to maintain the highest possible levels of cleanliness and hygiene in food and beverage production. As specialists in food hygiene and the established UK market leader in this area, the Hygiene Group is well placed to offer expertise and practical advice. Different areas and applications within the plant all require a carefully planned and specialised approach, as Sian Thomas explains.

Sanitising and deep cleaning processes for plant and equipment at end-of-run represent a particular challenge, especially where raw food materials such as meat are involved. The imperatives here are to remove debris and contamination, ensure micro integrity and prevent pest infestation – while at the same time minimising downtime. A structured procedure is therefore required at the end of every production run, typically involving the removal of gross debris followed by pressurised washdown with alkaline detergents, then sanitisation using foam spray. Kitchens and ovens similarly require deep cleaning with detergents and caustics. Here as elsewhere, efficient processes and specialised equipment will ensure high levels of hygiene combined with minimal disruption to production.

For applications where caustic cleaning is insufficient or inappropriate, cryogenic cleaning can provide a safe and effective alternative. Using this

new and innovative process, solid pellets of CO<sub>2</sub> are accelerated by an air jet onto the desired surface. Food residues are instantly frozen, shattering into smaller pieces and blown away by the airflow. As the pellets evaporate instantaneously, all that remains is a 100% clean surface and frozen debris that is easily removed by suction cleaning. Cryogenic cleaning can be especially useful for removing dry carbonated deposits in hot environments such as baking, as well as around motors and on wrapping belts.

Dry steam cleaning is ideal for roller conveyors, wall/floor junctions and pillar footings. Using a variety of handheld tools, pressurised steam vapour at 130°C acts swiftly and powerfully to loosen and release dirt particles from the surface, while removing and preventing germs and bacteria in inaccessible grooves and corners. Cleaning agents can also be introduced into the steam flow at the tool tip in order to speed up cleaning and degreasing.

For floors in production areas, corridors and stairways, foam-activated scrubber/dryer systems – are used to remove contamination, reduce the risk of slips and falls, and raise hygiene standards and perceptions to a high level. Modern, environmentally-friendly cleaning technology uses foam to reduce consumption of both water and chemicals, as well as achieving more efficient use of machinery and manpower by reducing filling and emptying time.

Cleaning in confined spaces can involve unusual challenges. Production area vessels such as storage tanks and ventilation systems require oxygen level checks and often special breathing apparatus. By contrast, cleaning in large sugar or grain storage silos at depths of forty feet can sometimes involve internal access using a winch and bosun's chair for high pressure washing or dry cleaning and sanitisation.

High level cleaning of ceilings, structure, pipework, tanks, ducting and conduit can also be challenging – as well as vital for removing contamination and controlling pest incidence. With health and safety an obvious critical issue, specialist equipment such as mobile towers and operator harnesses are essential, together with risk assessments, method statements and strict

procedural regulations. One innovative solution for reducing risk and enhancing safety at high levels comes in the form of environmentally-friendly “reach and wash” pole-fed cleaning systems for windows and cladding. Tap water is deionised by an operator at ground level and then fed through lightweight polycarbon fibre poles up to heights of 60 feet – eliminating all the risks of working at height on ladders.

The cleaning of offices and general environs including road sweeping and grounds maintenance can be an important factor in reducing the risk of dirt transfer and keeping the whole environment as hygienic as possible. With new technologies now available for carpet-cleaning and dirt extraction, hygiene standards and perceptions on an entire site can be raised to a new level. Waste segregation and streaming into categories such as food, packaging, hazardous and confidential is similarly important – not only for hygiene and environmental reasons but also on economic and legislation grounds. Source, segregation and target treatment planning all contribute to effective control and management.

Specialising in food hygiene, the Hygiene Group is accredited to ISO9001:2000 and ISO14001:2004 and structures its business around these standards. The company is IIP certified and registered with the BPCA. Hygiene are members of the British Safety Council and ROSPA, and accredited by the Chartered Institute of Environmental Health to carry out Foundation Health and Safety and Foundation Food Hygiene. The company's services include site surveys, gap analysis, and the provision of expert operatives with specialised equipment, trained in advanced food hygiene, health and safety, and pest control. Hygiene's unique web portal Datapoint provides password-protected site-specific information on every aspect of cleaning schedules, practices, risk and COSHH assessments, measurement and performance – an invaluable tool to assist environmental agency audits.

The company is also able to advise and assist with areas such as pest control, with specialised procedures for identifying and eliminating the infestation risks posed by rodents, beetles, cockroaches and ants. Allergen

control and management is another important and developing issue which can be tackled via enclosed areas and colour coding of **equipment, coupled with** effective training and working practices. Emergency escalation procedures for dealing with water damage, flooding and fire can help to minimise production impact following a major incident. Where required, Hygiene can also deploy rapid hygiene test systems for measuring organic matter by detecting the presence of ATP, the energy carrier found in all living cells. Any biological material left on the surface such as food debris or microbes can be detected using swab tests, evaluated in less than one minute and handled without delay.

One of the largest breweries in the UK, Carlsberg's Leeds facility occupies a 30-acre site and produces 2.8 million hectolitres of beer every year – famous brands such as Carlsberg lager, Tetley's Smoothflow keg bitter and Tetley's cask bitter. Accreditation to the British Retail Consortium standard was a key driver in Carlsberg's review of cleaning specifications, and this led to a contract being awarded to the Hygiene Group for the entire site including the brewery, packaging and warehousing areas. Challenges included a mix of new and old buildings, and the need for a close understanding of production issues to integrate the cleaning programme into brewery shift patterns. Hygiene invested in ride-on machines for the scrubbing and rapid drying of warehouse floors, and worked closely with the brewery's technical team to develop an audit system. As Alison Rance, brewing and processing manager for the Carlsberg site explains, “We were impressed by Hygiene Group's approach and their extensive experience of the food processing industry. We have seen real improvements all round since the Hygiene Group contract started.”

Other major customers who benefit from the Hygiene Group's expertise and specialisation in food hygiene include CPUK, Fox's, Walkers, Safeway and Heinz.

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