



Hygiene and the Engineer

Every employee in a food factory is required to conform to certain standards and rules and receive hygiene training as all other food handlers. As well as those rules an engineer can contribute to higher standards of hygiene by applying the list of following points:

- Engineers handle equipment and machinery more often than other employees. It is, therefore, very important that they wash their hands thoroughly on entering and leaving the production areas, after coughing, sneezing or touching their face, after using the toilet and after all break periods, as they could contaminate food surfaces. Routine hand swabbing could also be used to determine the effectiveness of Handwashing techniques.
- It is also important to ensure that they do not contaminate food surfaces with oily/greasy hands.
- Engineers should take care to ensure that their overalls are not excessively soiled. Change them as often as it is necessary and practicable.
- Consideration should be given to the potential for cross contamination between low-risk and high-risk areas by Engineers, their tools and equipment.
- Be careful not to carry small tools, pens or other equipment in pockets, from which they can fall out whilst working on machines, etc.
- Do not stand or climb over food production machinery with dirty boots. Cover surfaces with cardboard or polythene and move it after the job is finished.
- Take care to cover open hoppers and vessels, especially when drilling or welding thus avoiding any swarf or flux getting into the production system.

Hygiene and the Engineer

- When using steps or ladders over production lines, be aware of the possibility of debris falling off the soles of shoes.
- Be careful with lubricants. Over lubrication can lead to contamination of product and, if possible, always use vegetable based oils for food machinery.
- Take care with bolts, washers and nuts, etc., that you may remove. Do not leave them where they can get knocked into the product, and make sure they are all replaced after the job is completed.
- Where temporary repairs are made, these shall be controlled to ensure the safety or legality of product is not jeopardised. These temporary measures shall be permanently repaired as soon as practicable and within a defined timescale. The use of tape and cardboard engineering should be prohibited due to the foreign object hazard.
- Never use any food containers for storage of components during repairs.
- It is part of your job to check and report on wear and tear, especially the more fragile items such as gaskets, rubber seals, etc., which can deteriorate and end up in the product.
- Be aware of glass/brittle plastic there should be no glass in a food factory except in the windows. Other items such as gauge faces, etc., should be fitted with shatter proof plastic.
- Protect fluorescent light tubes with acrylic sheaths or diffusers, as breaking lights can throw glass for 30-40 feet. Care must be taken when changing tubes.
- No food surface should be painted and, in fact, great care should be taken when painting any surface around food production equipment. Paint can easily flake off and end up in the product.

Hygiene and the Engineer



- It may be your responsibility to take care of belt conveyors. These often fray and the strings and webbing will find their way into the product. Ensure they are in good condition and that the guides are running true.
- Try to minimise dead spots in equipment, where residue can build up and sustain mould growth or insect life.
- Make sure guards conform with legislation, but that they are still practical for removing when cleaning, even if only at shutdown times.
- Use only solid inorganic lagging material for pipe work in the food production area. Foams may not support insect life, but they will certainly allow insects to live in them whilst they are feeding off the foodstuffs around.
- When siting machinery, allow for cleaning underneath. About nine inches off the ground is a rule of thumb that allows cleaning below machinery. If this is not possible, and the machine is based on the floor, seal around the machine with a flexible mastic compound.
- Do not just use spot welding for platforms and structures. Running welds or a mastic seal should fill the crack between steel girders and plates, which can otherwise be an ideal habitat for insects to breed.
- If equipment in a production area becomes redundant, have it cleaned thoroughly and then remove to a proper place of storage do not leave it uncleaned around the edge of a production area.
- Dispose of packaging cases and materials immediately machinery is unwrapped and removed from them.
- Try to avoid dead spots in design, especially in liquid holding vessels. Also make sure these vessels are self draining.

Hygiene and the Engineer



- Avoid welds anywhere, unless they can be ground smooth, as a rough weld will build up residue, and is difficult to clean. This is especially true in pipelines.
- Ensure drip trays are fitted and cleaned, where necessary, under machinery.
- Use only food grade materials such as the specific plastics, polypropylene or stainless steel. These do not corrode or shatter and create hazards in the product. COSHH data sheets should be retained for all materials.
- When designing or ordering new equipment, hygienic construction and the ability to clean must be considered. When commissioning new equipment and plant, a maintenance programme shall be established and put into place based on risk assessment.
- Wherever possible maintenance should be scheduled outside production hours and away from production areas. Where responsive maintenance is required during production, minor adjustments could be carried out without interruption to the production line where appropriate personnel have deemed that it does not present a risk to the product. Major repairs would require the production line/area to be closed down and screened off. Any parts that are removed should be logged and accounted for prior to the line starting up. All details of the work should be documented including the equipment, brief details of task undertaken and any parts removed or replaced. The area or equipment should then be cleaned and formally signed back to the production by the Line Manager and Engineer to authorise recommencement of production.
- Engineering workshops shall be controlled to prevent contamination risks to the product, e.g. provision of swarf mats where workshops open directly into production areas.
- Where external Contractors are involved in maintenance or repair activities, they shall be under the supervision of a nominated person and sign to acknowledge receipt of the sites hygiene and maintenance procedures.