

A Cool Way to Clean

By Roger White

Dry ice blasting is a revolutionary method of eco-friendly cryogenic cleaning that removes baked on grime and a multitude of residues from production equipment, inhibiting the spread of harmful bacteria, such as salmonella, E. coli and listeria, that can cause food-borne illness.

This groundbreaking technology removes protein residue with a high-velocity blasting stream of food-grade dry ice pellets. Pellets are made by taking liquid carbon dioxide from a pressurized storage tank and dropping it to ambient pressure to produce snow. The snow is then pushed through a die to make pellets. These pellets are non-toxic, have been approved by the U.S. Food and Drug Administration (FDA) and are used to clean ovens, conveyor belts, moulds, dry mixers, laminators and packaging equipment. Consisting of the same substance used to carbonate beverages, they are ideal for the food and baking industry to prevent contamination during cleaning while eliminating hazardous build-up where bacteria and mould can accumulate. Nabisco, Hunt-Wesson, Uncle Ben's, Pillsbury, Frito-Lay and General Mills are among the food industry leaders that clean using dry ice blasting systems.

The process of dry ice blasting is as follows:

- Dry ice pellets are propelled at a supersonic speed by a compressed

air gun targeted at build-up and residue.

- Upon impact, the dry ice creates a micro-thermal shock (caused by the extreme cold temperature of -78.6 C), which breaks the bond between the residue coating and the substrate. The high-pressure air stream removes grime directly from the surface while the dry ice pellets vapourize (sublimate) on contact.
- When propelled at high speeds with compressed air, the dry ice pellets dissipate on contact leaving a dry clean surface and no secondary toxic or chemical waste.

It is recommended dry ice blasting be conducted by a certified contractor or technician.

Other industries use this technique of cleaning because it is quick and performed without the need for disassembly of equipment. Dry ice blasting is also non-abrasive. It swiftly removes most contaminants without damage to switches, panels, lines, tubes, wiring or belts.

This innovative cleaning method is becoming increasingly popular and is living up to its fame of being the most time-effective, eco-friendly and non-toxic cleaning process for industrial equipment. ●●

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