ENHANCED HYGIENE COMBINED WITH REDUCED MAINTENANCE

United Biscuits' investment in stainless steel motors has brought significant returns in enhanced hygiene, reduced downtime/maintenance and extended motor life over conventional AC motors on its 'Twiglets' production line.

Initially, replacement Lafert 'Marlin' stainless motors, supplied by MR Engineering of Birkenhead, were installed in a five-leg oil spraying gantry system that coats Twiglets as they pass below on a conveyor. The motors drive spinning discs that distribute the coating across the width of the conveyor. All are 71 frame 0.37kW 4 pole machines.

The oil, which is viscous in nature, inevitably gets deposited upon the disc-drive motors and has to be cleaned off at regular intervals. Previously, with the conventional motors, this meant removal of the motors for cleaning by hand - a fiddly and time consuming operation taking a whole weekend to complete.

Marlin motors before and aftersteam cleaning on the Twiglet line.

In contrast, the Lafert's Marlin motors, because of their easy-to-clean smooth bodies and IP66 characteristics, can be cleaned in situ with steam lances. (IP66 also ensures ingress of moisture is prevented during hose-down cleaning operations and where water is constantly present in manufacturing processes.)The smooth bodies of the motors and the round terminal boxes totally eliminate all angles and crevices that might catch and harbour material build-up. Consequently, these design features help to enhance hygiene by facilitating effective cleaning.

Being located directly above the line, the stainless Marlin motors also offer the benefit of eliminating any potential hygiene risk of contamination from both flaking paint and corrosion.

As well as coating the external surfaces of the original motors, the oil also penetrated the cowls covering the motors' cooling fans. The result was unbalanced running causing wear to the bearings. This, in conjunction with vigorous cleaning routines, shortened the working lives of the original motors to less than a month. Hence there was frequent downtime plus the expense of new motors and the cost of fitting.

By comparison, the Marlin stainless motors have been installed since Easter 2007 and are still functioning efficiently and have not required dismantling for cleaning. Also, because the motors are totally enclosed machines there is no risk of internal contamination to cause malfunction.

"The initial five-motor installation has proved so successful because of easy cleaning, extended motor life and consequent significant savings" commented Mick Edwards, Engineering Manager, "that we have installed a further four motors on the same line. Two of these are employed to drive the pumps delivering the oil to the spray system, the third drives a rotating brush that cleans the conveyor carrying the Twiglets and the fourth now drives the conveyor. We are obviously extremely satisfied with the Marlin motors."

Lafert Stainless Steel Motors

- the cost-effective hygienic solution -