

1132 – Cadbury Schweppes

Installation of waterless conveyer technology

October, 2006



FOOD & BEVERAGE DIVISION

Project Report

CONVERSION OF PRODUCT CONVEYORS FROM “WET” LUBRICATION SYSTEM TO “DRY” LUBRICATION SYSTEM.

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Company Background

Cadbury Schweppes is one of Australia's major food and beverage companies, engaged in the manufacture and distribution of products under well known brands people love and enjoy.

We employ over 5,500 people across our food and beverage operations in Australia and New Zealand. Australian manufacturing sites are located in Victoria, Tasmania, New South Wales, Western Australia, South Australia and Queensland.

The Tullamarine (Victoria) beverage manufacturing plant employs over 400 people and produces such long standing brands as Schweppes, Pepsi, Spring Valley, Solo, Gatorade, Sunkist, Tarax and Cottee's.

Company Environmental Policy

Cadbury Schweppes views sound and responsible environmental management as an integral part of our ethical business practice. In accordance with the Cadbury Schweppes global environment policy, we aim to ensure that in the course of our business activities we minimise our impact on the environment around the world and seek opportunities to improve our environmental performance. We believe that such an approach will generate and sustain significant environmental, social and financial benefits, contributing to our objective of long-term sustainability.

Project Background

The product bottle and can conveyor belts at the Tullamarine plant were traditionally lubricated with a water based lubricant mix (wet lubricant which allows bottles and cans (both empty and full) to slip over the conveyor surface without falling over.

The conversion of product conveyors from “wet” lubrication system to “dry” lubrication system at the site will reduce the amount of water used on site and the requirement for water to be used in the process of lubricating product conveyors. Employees are aware of this initiative and have become involved in smaller water savings projects throughout the plant.

Project Brief

This project was undertaken to convert the conveyors to using a concentrated lubricant mix (dry lubricant). The water saving is calculated to be approximately 21,620KLt per year.

The lubricant is added to the conveyors through a system of storage tanks, supply pumps and valves, delivery pipes and finally through spray nozzles. The spray nozzles are located at the conveyor surface. With the dry lubrication system, the nozzles are changed to drip product onto the conveyor and not spray it.

The plant operates plastic bottle and aluminium can fillers and each area of line has a different requirement for conveyor lubrication. This requirement has been met by conducting trials of each area with dry lubrication to ensure that plant efficiency is maintained and water reduction targets are met.

Project Success Factors

1. Reduction in water use and wastewater production.
2. Maintenance of production line efficiency.
3. Increased awareness of water conservation.

Lubrication Trials

Conveyor lubricant has traditionally been a high water content product. To allow bottles and cans to slip over the conveyors without falling and to maintain the integrity of the bottle composition.

Trials of dry lubricant commenced on PET plastic bottle filling lines in late 2004. The dry lubricant was delivered to the bottle conveyors through the same lines that the wet lubricant was previously delivered in.

The trial indicated that overall production line efficiency was maintained with the dry lubricant system, however some sections of the line were affected due to increase in slipperiness which resulted in bottles not transferring into packing machines and delaying production.

The use of dry lubricant reduced the amount of water on the floors which created a better and more desirable environment.

The decision was made to progress with installing permanent dry lubricant pumps and delivery equipment in late 2005. Ecolab Pty Ltd assisted with design of delivery equipment.

Dry lubrication delivery equipment was installed into the plant during May and June 2006. The delivery lines were located and controlled in a manner that allowed individual conveyors to be lubricated according to bottle type and machine entry requirements.



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Spreading the Word

In early 2005 a visit to the plant was conducted by interstate-based members of Cadbury Schweppes' beverage management team. This resulted in the completion of trials and installation of dry lubrication systems at our Sydney site.

Information regarding conveyor dry lubrication has been published in trade magazines. This has enabled all companies involved in the production of beverage products to view this new technology. This will lead to installation at further plants and the appropriate saving of water.

In June 2006 a visit to the plant was conducted by members of management of two major Melbourne based beverage company's to view the dry lubrication system. They were suitably impressed with its performance .

The installation of dry lubrication to the bottle and can conveyors has made a noticeable difference to the plant. The floor of each line is dryer which has created a safer environment for employees. Employees have embraced the company's water-saving commitment and have approached management with further water-saving ideas .