CONTROL TECHNIQUES

DRIVE TO PRODUCE MORE POT NOODLES

UNILEVER | FOOD & DRINK

DRIVE OBSESSED

12 UNIDRIVES VARYING FROM 1.1KW UP TO 7.5KW

Unilever Best Foods plant in Crumlin South Wales makes one of Britain's most popular hot snack foods, producing approximately 150 million Pot Noodles every year. Unilever was looking for a way to boost production to meet the ever-increasing demand for instant fast-food.

The Challenge

Production lines had already been improved and upgraded with Unidrive variable speed drives, reducing downtime and increasing throughput, and production line three had recently been automated to give greater reliability and production.

Mark Edwards, Project Manager at Unilever explained, "Line three had been running Control Techniques Vector drives for 10 years, and these had performed well, but we wanted to bring the whole line under PLC control".

The Solution

The line comprises a number of pasta mixing and processing operations, and a feed into the next section completes the packaging process.

There are 12 Unidrives on this section of the production line, varying from 1.1 kW for the fryers, up to 7.5 kW for the roller drives and communicating via Profibus with the PLC. Each motor on the line (Leroy Somer MV AC motors) is fitted with an incremental encoder feeding back to its drive.

The speed of the line as a whole is taken from a reference on the rotary cutter Unidrive and is digitally locked, with a small off-set on two of the drives on the stretcher conveyor and steamer to provide slight stretching of the noodles. Adjustment of this off-set gives a direct correlation with the weight of the noodles in each pot.

Overview

- **Increased throughput**
- **Reduced downtime**
- **Extremely reliable**
- **Additional flexibility**

> ***"The result has been excellent, with the line exceeding its daily targets.*** *The most crucial factor has been the synchronisation of the drives from the process end right through to the packaging section. The PLC only provides initiation and switches on fans and pumps. All of the programming is on the co-processor modules within the drives themselves.* ***This gives us added flexibility if there is a problem and means that the whole line doesn't stop unnecessarily"***
>
> **Mark Edwards** | Unilever Project Manager