CONTROL TECHNIQUES

COOL ENERGY SAVING SOLUTION

HENRY DENNY & CO | REFRIGERATION

DRIVE OBSESSED

PLANTS TOTAL POWER USAGE REDUCED BY 50%

Henry Denny & Co manufactures a wide range of foodstuffs at its Portadown plant in Northern Ireland. As well as its own products, the company stores a vast amount of chilled products from other companies in the Kerry Group, which are housed in a complex of 20 chilled rooms.

Overview

- **50% Energy saving with compact drive**
- **Six-month payback period**
- **Improved temperature control**

The Challenge

The plant has a large ammonia compressor to keep the rooms within carefully controlled temperatures. The compressor controller calls for more or less compression of ammonia coolant with immediate response from the drive.

Previously the compressor was soft-started and run up to full speed on demand but when the company had to replace the soft starter, Ciaran McSherry, Henry Denny's Electrical Engineer, recommended a change to a variable speed AC drive.

The Benefit

The drive has improved temperature control and the benefits proved to be better than estimated with savings of approximately 7,500kWh (equivalent to around £23,400 of the company's annual electricity bill).

A reduction of approximately 50% of the plant's total power usage.

The Solution

A large free-standing variable speed AC drive is set up in the chiller to give a feedback pulse for each kWh to the factory management system so that controllers can monitor energy usage very precisely.

"We used to have a slow reaction time to temperature swings with the soft starter but now it is easy to hold the temperature pretty well bang on our target of minus 10°C, as well as cutting our energy bill by around 50%," said Mr McSherry. "The project has been enormously successful and has really reinforced the energy-saving benefits that can come from variable speed drives."

> *"The compressor is a major contributor to the plant's total base load, and I felt that there were savings to be made by providing more precise control of the compressor.* ***But even I was surprised when the payback turned out to be just six months!*** *All of our engineering team has been trained on Control Techniques drives, and we've used them for over five years.* ***We find them easy to programme, install and maintain. Plus Control Techniques' support and service is very good."***
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> **Ciaran McSherry** | Electrical Engineer