ARMSTRONG

COOLING SYSTEM UPDATE

A COMMERCIAL FACILITY CASE STUDY

La Ronda Chocolate Factory in Dubai

Design Envelope 4200H End Suction Pumps, with integrated intelligent sensorless control, deliver highly efficient variable speed pumping without separate variable frequency drives. Active Performance Management ensures sustained energy and operating cost savings, and a split coupling design simplifies maintenance work.

An investment in Design Envelope pumps paid for itself in just seven months, achieving energy cost savings of 90% within 90 days and supporting Notions Group's reputation for sustainable business operations.

"Intelligent parallel sensorless technology works wonders for us and the Active Performance Management service ensures savings are achieved and maintained."

Omar Masri
General Manager of the La Ronda Emirates LLC

Background

The La Ronda chocolate factory is located in the heart of Dubai Investment Park and is considered the crown jewel of Notions Group's property portfolio. Management proudly employs state-of-the-art production technology and takes sustainability extremely seriously. LED lighting and an extensive rooftop photovoltaic array are both reducing the plant's greenhouse gas footprint.

Armstrong Fluid Technology's Design Envelope pump technology was a natural choice for the cooling system energy upgrade. Following a walk-through, Armstrong provided 4200H Design Envelope End Suction Pumps with integrated intelligent sensorless control. Design Envelope technology, combined with Parallel Sensorless Pump control and efficient pump design is capable of achieving savings of up to 90% compared to traditional constant speed systems.

Designed for long life and ease of maintenance, each pump has a split coupling, which enables all mechanical seal components to be withdrawn for servicing without the need to disturb other pump components or the motor connection.

In the three-month period after the installation, the plant saved 118,355 kWh of energy, for a cost reduction of US$14,633.

Integrated inverters in Design Envelope 4200H pumps save the added cost and technical complexity of installing variable frequency drives. These advanced engineering design elements deliver immediate financial benefits. Along with the highest manufacturing quality standards, they ensure the lowest long-term lifecycle costs for customers.

The Design Envelope 4200H pumps at La Ronda are connected to the global Pump Manager database, allowing Armstrong to support the local team through performance tracking, and alerts to any smart device, anywhere. Pump Manager is a cloud-based application that uses the embedded intelligence and connectivity of Armstrong Design Envelope pumps to provide performance reports to system operators. With this information, operators can make changes and address issues to optimise HVAC performance. Online trending and analysis across multiple parameters on single pumps, or on an aggregated basis for multiple pumps, assists in identifying performance degradation and facilitates a predictive and proactive approach. Pump Manager will, for example, report issues such as excessive vibration, pump in hand, risk of cavitation or a dead head should they start to occur.

"The Armstrong team was very knowledgeable and provided the right solution," said Omar Masri, General Manager for La Ronda. "It works wonders for us and the Active Performance Management service provides insights, and ensures savings are achieved and maintained. Throughout the life of the equipment, the Active Performance Management service will help us to optimise efficiency and reduce our environmental impact. "

Tech-info

- Design Envelope 4200H End Suction pumps
- Pump Manager Active Performance Management service

TORONTO
+1 416 755 2291
BUFFALO
+1 716 693 8813
DROITWICH SPA
+44 8444 145 145
MANCHESTER
+44 8444 145 145
BANGALORE
+91 80 4906 3555
SHANGHAI
+86 21 5237 0909
SÃO PAULO
+55 11 4785 1330
LYON
+33 4 26 83 78 74
DUBAI
+971 4 887 6775
MANNHEIM
+49 621 3999 9858
JIMBOLIA
+40 256 360 030

FILE NO.: 9.581
DATE: MAY 2021
SUPERSEDES: NEW
DATE: NEW