

Emerson digital solutions for cold storage leak detection



Result

Early refrigerant leak detection leads to operational, financial and sustainability benefits. The continuous system monitoring of the cold storage facility provides its operators actionable intelligence which leads to improved overall refrigeration performance. System downtimes are prevented, reducing maintenance costs while maximizing productivity. The facility is better equipped to control the management of food products, keeping them within safe temperatures. Less refrigerant leaks lead to a safer work environment, protecting the health and well being of its workers.

Customer

A leading cold storage and logistics provider with several facilities across the Philippines specializing in optimizing freshness for food products.



XWEB3000



XLH210



XJP60D



Challenge

As the demand for fresh food continues to grow, the need for a safe, reliable and cost-effective cold chain now plays an even more crucial role. An effective cold chain ensures optimal freshness of produce and ensuring food safety and accessibility for consumers in supermarkets and groceries. Many cold storage facilities have turned to ammonia based systems for its practical cost saving benefits. Ammonia refrigerant leaks being an irritant to the public, which negatively affects operational efficiency. Modern ammonia refrigeration systems need a dependable and consistent leak monitoring to minimize the release of refrigerants into the air to help reduce its adverse effects.

Solution

Emerson applied a leak detection system comprised of Emerson digital solutions:

Centralized monitoring system: XWEB 3000
Dixell acquisition module: XJP60D, XLH210

The XLH210 is a microprocessor-based controller, designed to be combined with gas detectors, which enables the constant monitoring of the system and, in case of gas leakage, timely reporting, and immediate intervention would prevent system blocks and reduce the greenhouse gas emissions. This device has two alarm thresholds that can be adjusted on the display screen and recognized as pre-alarm and alarm. XLH210 has a RS485 serial output with ModBUS-RTU protocol and can be monitored remotely via XWEB system.

