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Spotlight: Unitechnik talks about the INL project
by ASC Staff on Oct 8, 2013

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Logistics

German logistics solutions providers Unitechnik ICM are no strangers to challenging tasks. In the UAE alone, the firm has successfully implemented a system for the Dubai Flower Centre, and did the entire cargo handling system at the new Al Maktoum International Airport. But, despite having done a large number of automated high-based storage systems in Europe, it has not done one for deep freeze storage before the Integrated National Logistics (INL) project.

So, *Logistics Middle East* sat down with Hans Christian Ettengruber, managing director of Unitechnik ICM, to find out the finer details of what he describes as the "biggest automated high-based system for cold storage in the region".

Ettengruber explains that with an automated system, every part has to be precisely engineered and laid out. However, at the end, the client has a solution that does not involve personnel and thus reduces the risk of contamination of the frozen goods. He continues...

The INL project

The Integrated National Logistics project is the biggest automated high-based system for cold storage in the GCC region. It has 14 aisles, with one stacker crane each - all running fully automated. The right hand side facing the system has seven aisles with cold storage as low as -28 degrees, and this has roughly 23,000 pallet positions. It is set up in what they call double deep storage, so there are two pallets, one behind the other on the left hand side of the aisle and two on the right hand side - this is a more economical solution, because more space is needed with a single deep storage system and more stacker cranes, which are expensive. On the left hand side of the system, there is the so-called ambient storage, where the temperature is usually 16 degrees plus.

Logistics chain

The logistics chain is as follows: the product arrives on a ship in a freezer standard sea container. Most of the chicken is imported from South America. When it arrives at INL, they unload the sea containers and put all the chicken in the cold storage. When it is needed in the chains, restaurants, or the supermarkets, the orders are then retrieved and a truck arrives with a freezer.

Cold chain

So the whole cold chain is maintained, at -28, so that during the cold chain, the products will not ever be at a temperature higher than -18. If a product needs to be stored, it is put in the system, and put in a special kind of pallet that is needed for this environment, that has plus temperatures, but since it is -28, it will never go above -18.

Deep frozen success

The so-called deep frozen storage ensures that the products arrive at the customer safely, because food must never be allowed to thaw and then be frozen again. This would change the quality of the food, and it might even be dangerous in some cases. With INL, the deep frozen system is the one part in which they have had the biggest success. The customer really has a nice solution they can offer to their clients and the storage process does not involve personnel, it is only putting in the pallet and receiving the pallet. from then on, everything is taken automatically into the system. It is chaotic storage, so the system knows where the next free position is and will put it there. Each pallet has a unique bar code, and this bar code is then married with the information, so the system will know where the pallet is stored and also know what is on top of the pallet.

Challenges

Normally a project like this takes one and a half to two years to complete. The challenge is to make sure that the machines used can operate at temperatures of -28 degrees, but the system is the same. And while it can be set up in completed warehouses, it is more economical if you design it up front.

Final advice

You need to have a client that wants to go a step ahead. If you have a good product that is one thing, but you have to have an entrepreneur on the other end who knows that this is what he wants to do, invest this money, and say it will pay off. At INL, this is what has happened. The CEO made this decision and it has been successful. He is also aware of the need to put the right person in the right place, that is, having a logistics specialist running the system. In this way he can ensure success.