Computerisation brings processing quality benefits

Today, new poultry plants are a rarity in Western Europe because that market is relatively mature. So, when one does open it has to be something special, because it will be marketing its products into a demanding marketplace for fresh poultry products whose customers are among the most discerning in the world.

A new 200,000 bird a day chicken processing plant opened at Haren in north west Germany last year and recently International Poultry Production took the time to visit it.

The face of modern poultry processing with Stork's PDS-NT integrated logistics system.

Quickly into production

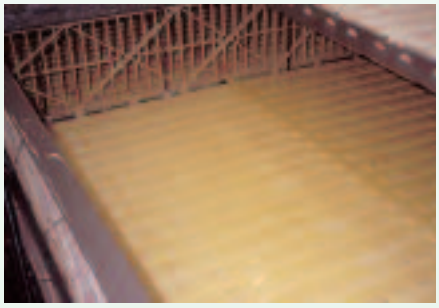
The Emsland Frischgeflugel plant works in alliance with Heidermark who are responsible for marketing the product.

Building on this new plant started in June 2003 and on 15th December 2003 the first birds were processed and four weeks later the plant was operating at is maximum throughput rate of some 10,500 birds per hour.

Currently, one and a half shifts are operating and very soon two shifts per day will be operating.

On this visit we wanted to see how production technology could help improve the hygienic status and quality of the end product. In essence this has been achieved by minimising human intervention.

Typically, stunned birds are hung on the line at one end and several hours later, having gone through the air chiller on line, the birds leave the plant as an assortment of packed and boxed product.



Time to plan

The period in the air chiller gives the planners, or more specifically their computers, time to convert the birds that have just been killed into the products that their customers actually want to see on their shelves tomorrow. Throughout the system the progress of all the birds is monitored and at key points every bird is video scanned.

This data is coupled to other known data about that bird, such as its weight, to decide that bird's destiny (or more precisely the products that are going to be derived from it).

The main poultry processing equipment has been supplied from the Dutch manufacturer Stork and this includes their PDS-NT integrated logistics, control and information system.

The product handling and management system for the portions and other products produced has been supplied by Marel.

Continued on page 8

High hygiene standards in the live bird handling area. Note, left, the high cleanliness standards and, right, in the staff entrance.

Whole bird inspection in EV.

Breast processing.

Continued from page 7

Many of the products are marketed as fixed weight or fixed price packs.

The birds come to the plant from farms in the neighbouring area on Stork's GP live bird supply system and, as can be seen in the photographs, hygiene starts in the transport modules and live bird handling area where standards are high.

This is very important because effective cleaning of the modules is a key control point in the prevention of the movement of salmonella from broiler farm to broiler farm.

Automation to the fore

Chickens are killed in the 1.8 to 2.7kg weight range and much of the product is exported to countries such as Holland and the United Kingdom.

Multiphase CAS (controlled atmosphere stunning) is used before killing, defeathering and evisceration.

Wherever possible automation is to the fore. Examples of this include automatic venting and opening, evisceration and automatic giblet harvesting and automatic bird transfers between lines.

Improved eating quality

Electro-stimulation of the carcases and a pre-chill spraying of carcases combined with the time in the air chiller are the cornerstones of a high maturation chill which improves the eating quality of the product.

Throughout these early stages carcase cleanliness is excellent and the cleanliness of birds entering the air chiller is as good as that seen anywhere.

Depending on the information available on a particular bird that bird is retained whole to be sold as a whole bird or is sent for portioning.

When it comes to portioning the key word is flexibility because each and every part of the bird is going to be tar-

Stork's PDS-NT integrated logistics system.

Quality floors throughout the plant.

geted for the end product that will give the company the best return at that point in time.

Precision portioning

Needless to say, in Western Europe the breast is the prime meat and this can be presented to the customer with or without the bone still in place. Breasts can be trimmed so that they are a specific weight.

The back half of the bird then proceeds down an automatic cutting line that can do virtually anything, including tail removal, rump recovery, section splitting and, even, deboning of leg meat.

Each item can then go for packing either into trays for supermarket sales or into bulk packs.

In addition, all the byproducts (such as giblets etc) are recovered and handled to the same hygienic standards as prime products, with the exception that most of these are bulk packed.

On many of the lines CIPs (cleaning in place systems) are in place and thorough cleaning occurs in break times and at the end of each shift. When it comes to people management controls are just as tight. Staff entering and leaving the work area are segregated and everyone entering the plant has to be properly dressed, including the wearing of a hairnet, and must wash their hands and boots in the facilities provided.

Attention to detail pays dividends

German attention to detail, coupled to Stork and Marel's logistics and engineering skills must surely make this one of the leading, fully integrated poultry processing plants in Europe.

The coming months will hopefully show that the company's marketing skills will enable them to capitalise on the cost and quality benefits that have been accrued. ■