

# Process control by means of mass

Synergy supplies almond products to bakeries. Because of the strong hygienic requirements and the high price of the raw materials a careful production process is a must. For the control of these processes the company relies on PENKO weighing instruments.

Synergy Foods Ingredients & Processing BV in Rotterdam (NL) supplies fast and flexible almond products according to bakeries according to their specifications. The program exists of natural and blanched almonds, but also caramelized dices, flour, shavings, splits, oil, pasta and spikes. Because of the strong hygienic requirements and the high price of the raw materials a careful production process is a must. That's why SYNERGY possesses a quality system wherein each operation in the process is stored in conjunction with time, date, lot number and weight. The registration starts already with the incoming goods, when the lot number and weights are registered and processed. Next a weighing tilting device and an elevator transport the almonds into storage silo. These internal trans-

ports are, including the lot number and weights, registered in the system. Out of the silo the almonds are processed in different operations. During these handling they are continuously weighed and administered. The finished products find their way to the customer in big bags, octabins, boxes or sacks. Even during packaging there is a registration of lot numbers and weights. So the raw materials are via the semi-finished products reproducible to the finished product.

## Balance

The volumes of the different finished products vary strongly and can, when totalized, rather differ from the volume of the original raw material. In kilograms however the balance can simply be made. That's



Fig. 1 A FLEX2100 weighing instrument

why the weighing steps are essential for SYNERGY's control of the production process. The weight controls offer the possibility for an easy observation of losses. The weighing sensors are located outside the material flow, what benefits the hygiene. According to the standards in weighing the sensors are made out of stainless steel and are hermetically sealed.

## Combination

SYNERGY selected PENKO weighing instrumentation because of the combination of a high measuring speed and a high resolution. These characteristics provide a perfect control of the dynamic weighing processes and the fast filling machines. The user friendly FLEX range of instruments of PENKO (with touch screen) offers a direct overview of the process. By means of the communication portals, in fact an internal network, the mutual transfer of all process data takes place. This data transfer has been provided by PENKO as well. This way SYNERGY is sure of a reliable process control.



Fig. 2 A big bag is weighed filled



Fig. 3 A checkweigher with ejection system