

Batch tracing with Kastor

Traceability concept for raw materials and products

identifying

weighing

mixing

filling

packing

order execution

The customer

The company operates as a supplier of semi-finished goods for the food industry. Among other things, it manufactures raw materials for the production of milk drinks, sauces, puddings or confectionary. The products are individually adapted to the requirements of the respective customer, so that the company processes about 600 different recipes consisting of altogether approx. 300 different raw materials.

The requirements

Food manufacturers are subject to high requirements concerning safe and documented production. Guaranteeing food safety on all production levels is not only legally enshrined in the EU Regulations No. 178/2002 and No. 1935/2004 but also an economic and corporate policy requirement. Certifications in the context of the IFS or HACCP audit are further important

tracing concept plays a major role. For these reasons, the customer has focused on an integrated tracing concept when modernising his production plants.

THE SOLUTION



The solution

In the following, the customer has decided on the Kastor process control system, because it meets all requirements. It offers complete identification and documentation from the receipt of goods, weighing, dosing and mixing of all raw materials up to filling, packaging and order execution of the final product. The components of the Kastor

process control system allow consistent shop floor monitoring.

The realisation

The introduced Kastor process control system supports the operators during the production process. This can be sub-divided into five manufacturing processes:

1. Recording of raw materials (Small components: unit packs, sacks, cans. Large components: big bags, tank vehicles)
2. Manual weighing of tiny quantities, synchronously and asynchronously to the production process
3. Mixing of the product components (components, flavours, artificial colours)

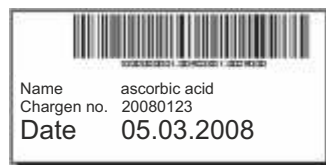
4. Filling the mixtures into big bags or sacks
5. Order execution of the finished goods units

All raw materials including raw material batch information are precisely recorded by the inventory control system, can be viewed quickly and are documented in detail.

The raw materials are identified by bar codes throughout the entire production run and traced through the plant. All weighing procedures are documented and allocated to the final product. Kastor permits a complete listing of the production steps and each raw material can be traced right back to the customer, if a quality problem occurs with a raw material.

Product identification

The raw material data relevant for production and batch tracing are recorded in the IT system by means of the incoming goods. The incoming goods are allotted an internal incoming goods number generated by the process control system after posting; this allows ambiguous tracing back to goods received. Big bags e.g. are registered at delivery and an appropriate bar code label is applied. A bar code reader scans this label when placed on the removal station, which is thus registered as a posting for the storage location.



incoming goods label

Pre-weighing

The ManDos manual weighing system, which AZO CONTROLS has been using successfully for many years, pre-weighs small components. A touch screen installed directly at the weighing station supports the operators. The operator is guided through the process and requested to identify the raw materials. The data relevant for batch tracing are documented here. Pre-weighing is carried out in advance. This necessitates marking the produced small unit pack containers with a bar code label. This information is called up during the further production process.

Mixing process

Large components are automatically withdrawn from the silo and/or big bag removal station, conveyed to the scale and weighed. The used raw material batches are debited and documented according to the FIFO principle. Another ManDos station weighs further components directly at the feeding hopper synchronously to the mixing process and adds these to the mixer. Kastor initiates scanning of the containers produced during pre-weighing, in order to add small components. A plausibility check is carried out simultaneously and the production process is stopped in the case of incorrect inputs. A batch protocol is created for each mixture, documenting the goods receipt numbers of the raw materials and the accurate weights of the weighed raw materials. A bar code label is additionally created for this mixer batch, in order to be able to

identify the mixture during the following production process.

Packaging

The bar code label created in the mixing area is scanned again, in order to integrate the data administration of the finished goods store into the traceability concept. The system registers, which mixer batches are packed on which finished good units (pallets).

The batch numbers and weight of the products on the finished good unit are registered and stored.

Order execution and dispatch

An order execution document is drawn up and a working document is printed out after the sales department has received an order. This document lists the to be shipped products with the appropriate quantities. The working document additionally contains the appropriate bar codes. Scanning the bar codes allocates the appertaining products in the finished goods store to the order execution document. The goods are despatched after all finished goods have been registered. The order execution protocol accurately documents the dispatched batch numbers and quantities.

Result

The Kastor process management system places an efficient tool at the customer's disposal. The requirements concerning traceability are fulfilled. The system was successfully introduced parallel to production.

