(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) EP 1 627 815 A2

(12) EUROPEAN PATENT APPLICATION

(43) Date of publication:
22.02.2006 Bulletin 2006/08

(51) Int Cl.:
B65B 61/02 *(2006.01)* ***B65B 61/26*** *(2006.01)*

(21) Application number: **05076896.9**

(22) Date of filing: **16.08.2005**

(84) Designated Contracting States:
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR
Designated Extension States:
AL BA HR MK YU

(30) Priority: **18.08.2004 EP 04077336**

(71) Applicant: **FPS Food Processing Systems B.V.**
2631 RE Nootdorp (NL)

(72) Inventors:
- **Van den Bosch, Hendrik**
  6714 LS Lunteren (NL)
- **Neumann, Peter**
  3794 MK De Glind (NL)

(74) Representative: **Winckels, Johannes Hubertus F. et al**
Vereenigde,
Johan de Wittlaan 7
2517 JR Den Haag (NL)

(54) Method for packaging

(57) A method and sorting system for packaging products, wherein the products have been sorted in advance, in particular wherein the sorting is based on detecting and classifying at least one single characteristic, such as for instance weighing, wherein the method and the apparatus further provide that at least one single derived characteristic of the said at least one single characteristic is reproduced on the package, for instance with a printer.

In a suitable manner, in packaging, a characteristic is reproduced on the package in real time which is applicable and usable for buyers or customers, or also for further operations.

EP 1 627 815 A2

Description

[0001] The present invention relates to a method as described in the preamble of claim 1.

[0002] Such a method is generally used in the technology of sorting and packaging, for instance sorting food products, more in particular sorting fruit, vegetables or eggs. Descriptions can be found in, for instance, EP 540126 in which the weight of each fruit product is determined and is subsequently used to sort the flow of supplied products according to weight.

[0003] There is an increasing demand, not only for sorted products, but more particularly for packaged products. In general, only products from a particular sorting will end up together in such a package, but other conceivable combinations are possible as well. Many examples thereof are also known from the technology of packaging products, such as food products, where the sorting can involve not only the weight but also the color. Reproducing general indications of such a packaging characteristic on the package is either not necessary, like with colors, or difficult to indicate on the package, particularly because the indication can only be provided afterwards and there is a cut-off between filling the package and only after this, albeit in a continuous smooth operation, being able to provide the indication, for instance in the case of indicating a total weight after filling a box.

[0004] In order to remedy this shortcoming, the method according to the present invention is characterized in that the method further comprises that, in packaging, at least one single derived characteristic of the at least one single characteristic is reproduced on the package.

[0005] With great advantage, the method according to the invention has made it possible to improve information to the customer or buyer about the body of packaged products. It is further possible to carry out further operations such as calculation of prices or other information relevant to the products or the set of these products. It is particularly advantageous to reproduce characteristics during packaging in real time so that no separate treatment is required afterwards, for instance for applying labels on a separate conveyor belt.

[0006] The method is further characterized in that, for each product, the at least one single characteristic is stored in a processor, while, during sorting, the processor determines the at least one derived characteristic for each set of products which end up together in a packaging unit, more in particular that the at least one single derived characteristic is reproduced on the packaging unit.

[0007] Sorting systems controlled by computers with which large data files can be managed are generally known. An example thereof is described in EP 1359530, more in particular to realize so-called tracking and tracing in the sorting of large batches of eggs. In general, these are data files which are available as such and with which, if necessary, operations can be carried for administrative purposes in particular. It is further known to mark the products individually as for instance described in US 20020011311 A1.

[0008] The invention further provides a sorting system for carrying out the above-described method in which the above-mentioned derived characteristic is determined directly during sorting, in real time, and according to the invention particularly at least one single derived characteristic, such as for instance the total filling weight for a particular packaging unit, or also an average sugar content, is determined, which derived characteristic is passed on as a signal to an indicator, such as a printer, or labeling device, for instance for placing labels with barcodes or the like. The introduction of products into a packaging unit and the provision of the characteristic take place virtually simultaneously so that separate treatments and operations can be avoided.

[0009] It will be clear to any skilled person that further applications are possible without extending beyond the protective scope of the appended claims.

Claims

1. A method for packaging products, wherein the products have been sorted in advance, in particular wherein the sorting is based on detecting and classifying at least one single characteristic, such as for instance weighing, **characterized in that**
the method further comprises that, during packaging, at least one single derived characteristic of the said at least one single characteristic is reproduced on the package.

2. A method according to claim 1, **characterized in that**
for each product the said at least one single characteristic is stored in a processor, wherein, during sorting, the processor determines the said at least one single derived characteristic for each set of products which end up together in a packaging unit.

3. A method according to claim 1, **characterized in that**
the at least one single derived characteristic is reproduced on the packaging unit.

4. A sorting system for successively sorting and packaging products, comprising a processor, detectors for detection of at least one single characteristic, such as for instance weighing, and a system for sorting and packaging according to the said characteristic, for instance in groups of products in packaging units, **characterized in that**
the sorting system further comprises an indicator for reproducing at least one single derived characteristic of the said at least one single characteristic on the packaging units during packaging.