



VISIOCRATES

Inspector of empty bottles cases



ORIENTING | INSPECTING | REJECTING

ANY KIND OF EMPTY OR FULL BOTTLES AND CONTAINERS

VISIOCRATES : Inspector of empty bottles cases

Introduction:

VISIOCRATES is an inspector of empty bottles cases before disbursement, ideal for controlling the logo printed on the case and contents.

Scopes:

- Determines if the bottles must be disbursed or not, the type of bottles and the distribution of funds by type.
- Distinguishes the bottles by their height, size and colour.
- Distinguishes glass bottles and PET
- Detects bottles fell or turned
- Distinguishes foreign bodies inside the boxes
- Allows to control the presence of the bottle cap
- Match the colour and logo of the case
- Is also applicable to the control cases of bottles after filling, capping and nesting.

Techniques used – Strategy

The equipment is able to inspect the presence of all bottles in cases. The camera is placed perpendicular to direction of the case, it can analyse the captured picture of the entire box on the package. The options can be controlled by the cap.

Parts of the Inspector-Site Inspection

It consists of a camera with its own lighting system and related support. The examination room where you place the camera, lighting and connections, is held by four columns attached to the floor. Since we do not provide large differences in size between the sizes of boxes, the site inspection will be fixed and the height does. With a TFT colour 17 "we can plan and set the precision with which it wishes to inspect the various aspects.

Switchgear cubicle/control cabinet

It will place a stainless steel case fastened to the top of a mast where the electrical panel shall be connected, the PC and electronics control and trigger catch sync flash, and alarm rejection. The monitor and the keyboard are placed in front of the box so the user can adjust the inspector.

The keyboard can be hidden under the box when not in use. Beside the TFT flat screen buttons will stop and start for the inspector and the progress of the inspection program by type of case and another for storing the box-model considered the right and the drivers of the state the inspector. This box can be opened easily to access the control electronics through the hinges allow the cabinet total opening. The box is placed on top of a turntable that can be oriented in any direction to be able to see from anywhere.

Electronics elements

- PC computer compatible with Pentium IV with a special ATX motherboard for industrial environments
- Display 17 "colour TFT
- Keyboard with mouse
- 1 Card to capture images for analysis in real time.
- E-Rack microprocessor to control illuminated the rejection system and alarm.
- 1 Megapixel camera B / W and a resolution of 1,024 x 768 pixels.
- Lighting system consists of an electronic flash unlimited life.

Although based on a PC, no problem for the operator, since, as in every machine has a start button and a stop, this will install an electrical box inside the closet.

With this manoeuvre, the operator only needs to access the computer for the change in format, or sporadically for changing parameters and tolerances.

Control and inspection software

The application of inspection "Visiocrates" based on image analysis libraries EasyImage of Euresys and runs on Windows 7. Since the application of control can adjust the lighting, control and configure the ejector inspection process (filter the image to analyze, locate transitions, lines, areas, measure distances, etc). For facilitate the control of production line equipment, there is programmable alarms consecutive defects and abnormally high percentage of defects in recent inspections. Each of these alarms is associated with a relay output.

There will be random sampling basis for rejection of boxes. Once a particular configuration for a box model, this can be copied and used as a basis for other models, thus simplifying the process of setting up new models. We can store and / or retrieve the computer hard drive captured images, so it is easier to adjust and configure the inspector. We can also save or restore the configuration disk around the inspector. In the computer monitor counters will correct units, counter units wrong, speed of production.

Maintenance and Cleaning

The camera is set for the first and only time when operating the inspector. The only maintenance needed periodic cleaning of the glass surface of the enclosure containing the camera and lighting system.



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