

COUNTING OF MINIMAL OBJECTS BY USING A LINE-SCAN CAMERA

The use of line-scan cameras provides detailed information regarding the counting object.

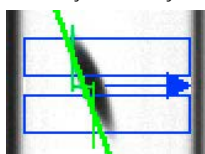
Definition of a project

In an application round objects with a diameter of $400\mu\text{m}$ should be counted. The objects vertically fall through a glass tube at a speed of approx. $2,5\text{m/s}$ and land in a product there.

An already existing system has counted the objects by means of photo sensors. Here inaccuracies occur the objects isolated jump back into the glass tube. The cause for that is disadvantageous striking in the product. In that case the existing photo sensor system counts the object several times.

Method of resolution of image processing

An image processing system with a line-scan camera should solve the problem. By the special adjustment of the camera the image processing system makes it possible to determine the fall direction of the objects only with one camera.



By that the real round object is registered as inclined oval object. On the basis of the inclination of the object it becomes possible to determine the fall direction. In that case jum-

ping objects are realized as such and are not counted.

Additional advantages

Besides the considerably increased measurement accuracy the image processing system offers further interesting advantages compared with a „blind“ system. The registered objects are already displayed visually during the process for the operating staff. By that the response time for failures is considerably shortened. Furthermore additional monitoring is possible. For example the size of the objects could be measured in order to recognize deviations in speed.

Possible upgrading variants

By that system also smaller and faster objects can be recognized. The communication with other control systems is possible via TCP/IP or digital IOs.

Flexible configuration based on experience

The team of Quality Automation GmbH resorts to great experience in the field of image processing. This enables a comprehensive advisory service and a flexible integration of the systems at the customer.

QUALITY AUTOMATION GMBH

Our Philosophy

Only if our systems are integrated at the customer completely they develop their entire performance potential. Therefore it is important for us that our customers are integrated in the process from the very first day of the project carry out. Communication is about it the most important connecting part between us and our customers.

Customer targets

- Maximum production efficiency and quality
- Stable industrial processes
- Well trained personal
- Low service costs
- Most favourable conditions

ABOUT THE AUTHOR



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