Reliable Identification of Multiple Codes in Transport Systems

Vision Camera for Control and Traceability of Vehicles and Materials

At a Glance

- Monitoring and control of raw material flow at each manufacturing stage

- Simultaneous identification of several codes and information, regardless of their position

- Code quality verification and programming logic capability

- Easy configuration via free and user-friendly programming software

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The Application

In material transport systems for large-scale operations, in storage systems, or in production processes, it is of great importance to monitor and control the flow of raw materials and products which occurs at each stage of manufacturing. Sugar and fuel ethanol are produced from sugar cane. The monitoring of this process is generally carried out from the harvest to the arrival at the refinery, where the processing of raw materials takes place to obtain by-products that are extremely important for society.

The Goal

These processes must be conducted reliably, which requires monitoring the load and the particular batch of sugar cane. The system operates with guides for the entry of the material into the refinery, using numerous labels with barcodes and QR codes that must be registered for the release of the material.

The Solution

Pepperl+Fuchs VOS series vision sensors are ideal for reliably reading multiple codes, including different types, patterns and sizes, completely meeting the requirements.
The sensor based on a vision camera is added to the set of access control and release of raw materials, and is responsible for simultaneous identification of several codes and information. All data is sent to the customer's internal system via PC communication, which can be connected to industrial protocols such as EtherNet/IP and PROFINET, as required.
The solution also features free and user-friendly programming software for easy configuration, optimizing commissioning time at the station.

The Benefits

For this application, the Pepperl+Fuchs vision sensor ensures that all codes are read automatically, regardless of their position, without the need for manual readers, which typically lengthen the process due to the individual and non-simultaneous reading.
In addition, VOS offers a number of features relevant to the process, such as code quality verification and the ability of implementing programming logic, making the client's management system more flexible and less complex.

Technical Features

- Identification of multiple 1-D and 2-D codes
- Resolution up to 5 mega pixels
- Communication via RS232, Ethernet TCP/IP, EtherNet/IP, and PROFINET
- Vision sensor versions for part inspection
- Programmable I/Os

For more information, visit: **www.pepperl-fuchs.com/vision**