REA VERIFIER

VERIFICATION SYSTEMS FOR
MATRIX AND BARCODES

STRELEN
Control Systems GmbH

REA LabelTower

Avoid incorrect labeling
Label content: Verify text, language and code quality

Strelen & REA VERIFIER - complete solution for the code and layout verification of labeled packages

Automatic verification

For many kinds of packaging, quality control checks are absolutely necessary. Every manufacturer has had nightmares about labels getting mixed up.

A visual inspection of products is time-consuming and personnel-intensive and, despite the dual control principle, still contains the risk of numerical errors, incorrect language selection and careless mistakes. Such an error can result in expensive complaints or even a recall.

To ensure that the correct codes, graphics and fonts are applied to food packaging labels, Strelen Control Systems GmbH and REA Elektronik GmbH offer a complete solution for code and layout verification as a cooperative project.

As an expert in image processing and automation, Strelen developed the Safe-Ident Label font recognition software.

The layout control is based on the latest techniques for artificial intelligence and machine learning for verifying date specifications, product numbers, texts and graphics on various kinds of packaging.

Safe-Ident Label – label verification with digital image processing

The Safe-Ident Label software quickly and reliably checks label data to make sure it is present, correct, legible and complete.

With this process, products do not have to be verified inline. Instead, the complete packaging of a product is inserted into the REA LabelTower for inspection before production starts. For the initial sample release, the label content is compared with the taught-in product from the database.

Safe-Ident Label enables the capture and processing of complex data. In advance, the software is taught a product range of any size. In the process, the user can specify various features such as fonts, barcodes or Data Matrix codes.

In the inspection process, all types of labels, including outer packaging labels, are recognized and all identification numbers, codes, lot numbers and best-before dates are compared with the stored data set. Even the most subtle errors, such as 200 g instead of 100 g, are detected.

If the system determines that all data is correct, production can start.

Two strong solutions merge into one complete solution

Errors are prevented and the user has an overall result consisting of layout control and metrological code verification in accordance with ISO standards.

The Strelen layout verification includes a plain text check, a control of the graphic elements as well as the variable data. The code verification checks the code properties, contrasts and print precision.

The meat processing industries were the first to recognize the benefits. Nevertheless, the solution is interesting for all companies that provide packaging with labels.

Setting up a new product

Error registration after label inspection

Correct and approved label

REA VERIFIER - integrated optical measuring device to ensure code quality and legibility

Due to errors, lack of contrast or poor quality, codes on labeled products are often unreadable and cause enormous costs (recalls e.g.).

The REA LabelTower incorporates REA's latest verifier technology, which enables verification that codes are correct and error-free - in terms of quality, international standards, e.g. ISO/IEC standards 15415 and 15416 or GS1 specifications and all requirements.

The user quickly finds out whether codes need to be optimized to achieve a high first read rate with automatic identification. The detailed measurement results can also be used to verify the print quality of the codes.

Final test result of the REA LabelTower

Sophisticated technology and measurement task easy to use for everyone

The procedure

1. Preparation:

The REA LabelTower is taught with the target labels (master label).

2. Production:

The first labeled products are placed in the REA LabelTower and checked by camera and verifier.

3. The inspection result:

- correct language
- correct best before date
- text contents
- weight information etc.
- code quality

is displayed immediately and easily understandable.

4. The measurement result is logged.

5. Production decision yes/no can be made immediately

The final test result consists of the metrological code verification in accordance with ISO/IEC standards and the layout control based on the label that was taught in before the start of production.

Approval for production is not granted until the codes and layout have passed the test.

Advantages of the complete solution:

- Incorrect labels are detected at an early stage by an overall system that thinks for itself - incorrect labeling is successfully avoided
- Verifies that the variable label data is present, correct, legible and complete
- Prevents defective production
- Extensive database, including fonts that have been taught in – neural network for character recognition
- User-friendly plug-and-play technology
- The LabelTower complements inline monitoring systems
- Code and font verification with CMOS camera system
- Interchangeable optics modules for optimal adaptation to different sizes of codes, labels, folding boxes, etc.
- Verification in accordance with ISO/IEC 15415, the test standard for printed matrix codes
- Barcode verification system in accordance with ISO/IEC 15416 or ANSI X3.182
- ISO/IEC 15418 / ANS MH10.8.2 data structure analysis
- Consultation on improving print quality from REA specialists

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