

Profile View

Details

Title: Innovative camera system for foreign object detection in food and frozen packaging

POD Reference: TODE20211020001

Summary: A German SME has developed a camera system for the reliable foreign object detection in multihead weighers that detects bodies independent of material. As the system can be used at sub-zero temperatures, it is also suitable for frozen food production. License agreements and commercial agreements with technical assistance are sought.

Description:

In particular in food production, foreign object detection is of great importance in order to ensure a high level of product safety and thus to avoid product recalls.

In this context, the German SME has developed a camera system for reliable foreign object detection in multi-head weighers that is based on color recognition.

The company is a specialist in the development and production of non-contact quality control and positioning systems since 1996.

By using four cameras and a powerful LED lighting unit, the foreign objects are reliably detected when the product stream falls down. This also applies to foreign bodies located in the middle of the product stream without having to expand the product stream. The system can be integrated into common multihead weighers and is fully functional with minimal operator intervention. The application areas of the system are multifaced. The system can be used at temperatures down to -20 degrees and is therefore also suitable for the frozen food production/packaging.

Users of the camera system are so far producers of ready meals, vegetable mixtures or muesli.

This system

- is suitable at sub-zero temperatures,
- detects foreign bodies without limitation to materials,
- needs no extra separation of the product stream,
- offers a complete documentation of foreign bodies found (with pictures and statistics),
- offers a simple operation system,
- is ideal in addition to existing systems for the best product safety,
- has an integrated system for self-diagnosis.

The company is looking for industrial partners that are specialized in the development and/or production of multi-head weighers and for those who would like to retrofit the multi-head weighers for their own use. Moreover the company seeks commercial partners who are well versed in the distribution of packaging equipment such as in the food industry. The German company would provide technical assistance on site. Hence, the company offers license agreements and commercial agreements with technical assistance.

Advantages and Innovations:

In contrast to other conventional body detection camera systems, this system offers the following advantages:

- Detects foreign bodies independent of material from a size of 2mm x 2mm
- Excellent detection rate: occlusions are largely avoided by recording the products in free fall. (360-round view without blind spots)
- Foreign object detection in the product stream without the need to additionally spread the stream out
- Retrofittable in different multihead weighers
- Housing materials are suitable for food industry and frozen production
- Statistical long-term evaluation for long-term quality assurance are possible (display of results of detection sensitivity on the touch screen)

Stage of Development:

Already on the market

Comments Regarding Stage of Development:

The system was initially developed for a large producer of convenience food. After the trial the customer implemented the system in all of their production lines.

Now the German SME has an international patent for the system and other customers integrating the system into their production.

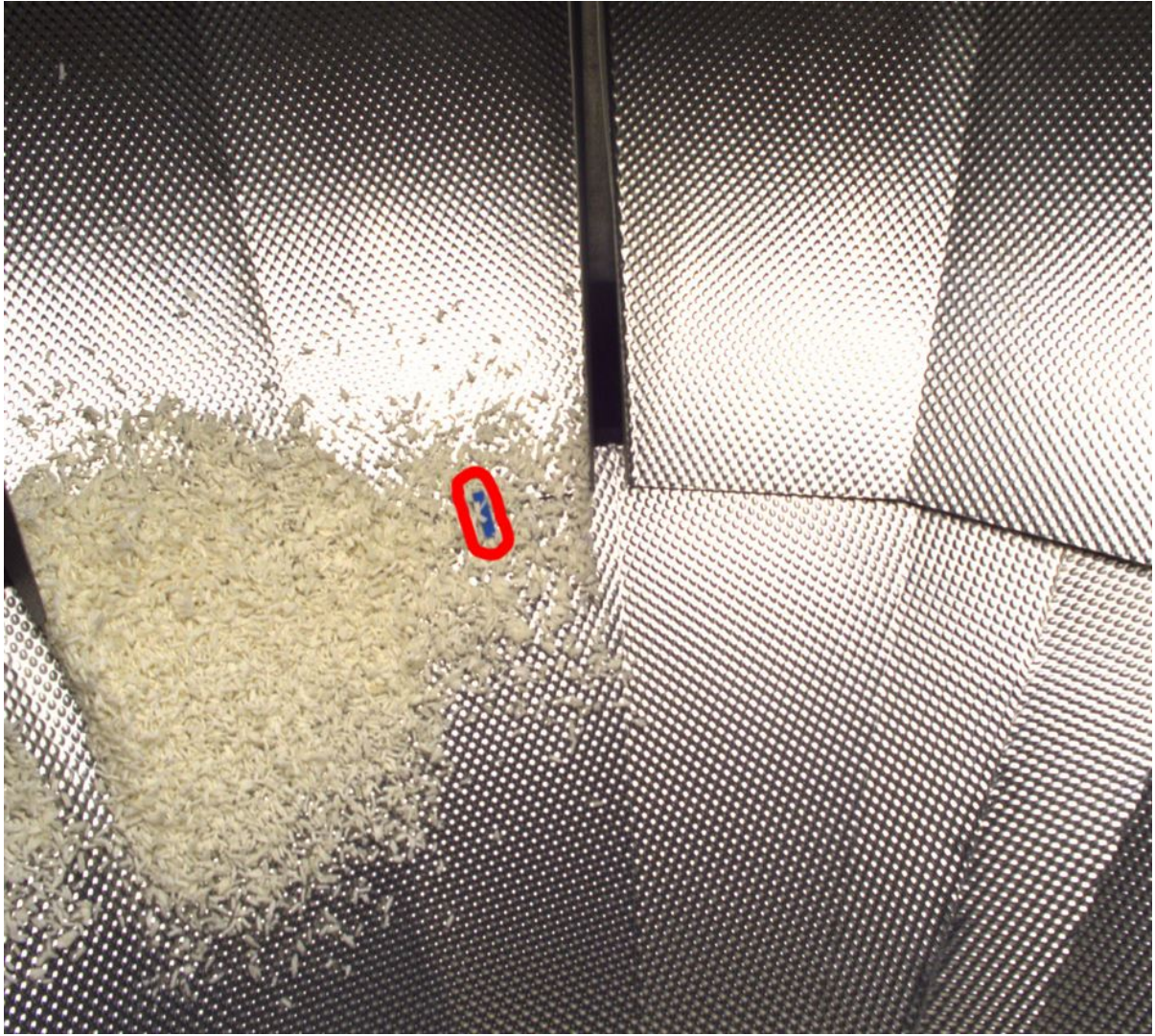
IPR status::

Patents granted

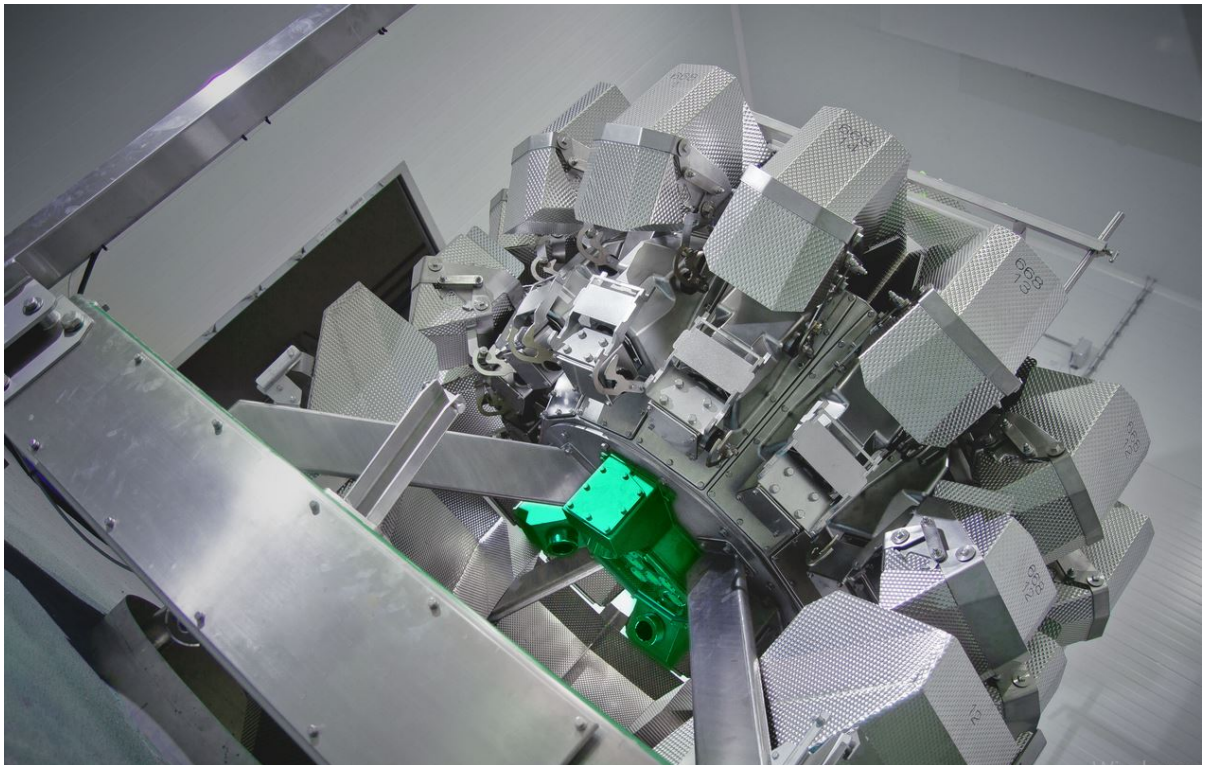
Profile Origin:

Other

Attachments



picture 1



picture 2

Keywords

Technology 01003008 Data Processing / Data Interchange, Middleware
 Keywords: 02003003 Component integration
 08002001 Detection and Analysis methods
 08002003 Safe production methods
 Market Keywords: 09004006 Packing products and systems
 NACE Keywords: C.28.9.3 Manufacture of machinery for food, beverage and tobacco processing
 C.28.9.9 Manufacture of other special-purpose machinery n.e.c.

Partner Sought

Type and Role of Partner Sought: The company seeks industrial partners for license agreements who are developing and/or manufacturing multihead weighers for different application areas and are willing to install the camera system into their product lines. Also partners who like to retrofit the system for the own use are sought. Furthermore, the company is looking for commercial partners with technical assistance that are, for example, well connected in the packaging, food and/or frozen food production industry. The company would provide technical assistance on site.

Type and Size of Partner Sought: >500
 SME <10
 SME 11-50
 SME 51-250

Type of Partnership Considered: Commercial agreement with technical assistance
 License agreement

Client

Type and Size of Client: Industry SME 11-49
 Year Established: 1996
 Already Engaged in Trans-National Cooperation: Yes

Languages English
Spoken: German
Polish
Client Country: Germany

Dissemination

Relevant Sector Agrofood
Groups: ICT Industry and Services

