

AI POWERED BISCUIT INSPECTION

Industry : FMCG

Summary: Biscuit manufacturers often face many customer complaints and compliance issues due to the product manufacturing issues. These unidentified defects can significantly impact their brand reputation, and attract fines. Additionally, any presence of foreign particles can compromise hygiene standards, leading to severe consequences like customer dissatisfaction, product returns, etc. ultimately affecting the bottom line. To address these challenges, leading manufacturers are now using **DeepInspect®**



CASE STUDY

The Challenge

Inconsistent logos can diminish brand recognition and customer trust, affecting brand loyalty and market positioning leading to **increased returns** and waste

Tampers Structural Integrity

Surface defects can compromise the structural integrity of biscuits, leading to **breakage during packaging** and shipping, resulting in customer dissatisfaction

Poises Health Risks

Contamination with **foreign particles** poses health risks for the consumers, leading to massive product recalls, legal issues, and damage to the brand's reputation

Lower Sales & Revenue

Outpack surface defects can cause visual unappeal, **reducing product attractiveness** on shelves, and leading to lower sales and revenue

Model Training & Validation

DeepInspect AI models can be trained in **under 45 minutes** using fewer than 200 good biscuit images for inpack inspection and 200 good package images for outpack inspection

The Solution





The inspection setup involves placing a camera from the top for each line, ensuring thorough monitoring at a line speed of **180 to 200 parts per minute**. When a surface defect is detected in a particular biscuit, the system triggers the rejection mechanism. The pusher mechanism then pushes the defective biscuit from the conveyor tray, maintaining a seamless production flow.

Analytics & Defect Classification

The defect classification feature in the DeepInspect software enables users to **pinpoint the specific defect** that caused a biscuit to be rejected. Downloadable quality reports for root cause analysis

The Setup

The setup consists of the listed items with **DeepInspect** software at the heart.

-  DeepInspect Pro
-  Industrial Controller with i5 and GPU
-  Industrial Camera & Lights
-  Mitsubishi PLC

The Impact

Following the **implementation** of DeepInspect, biscuit manufacturers can experience significant improvements in their operations

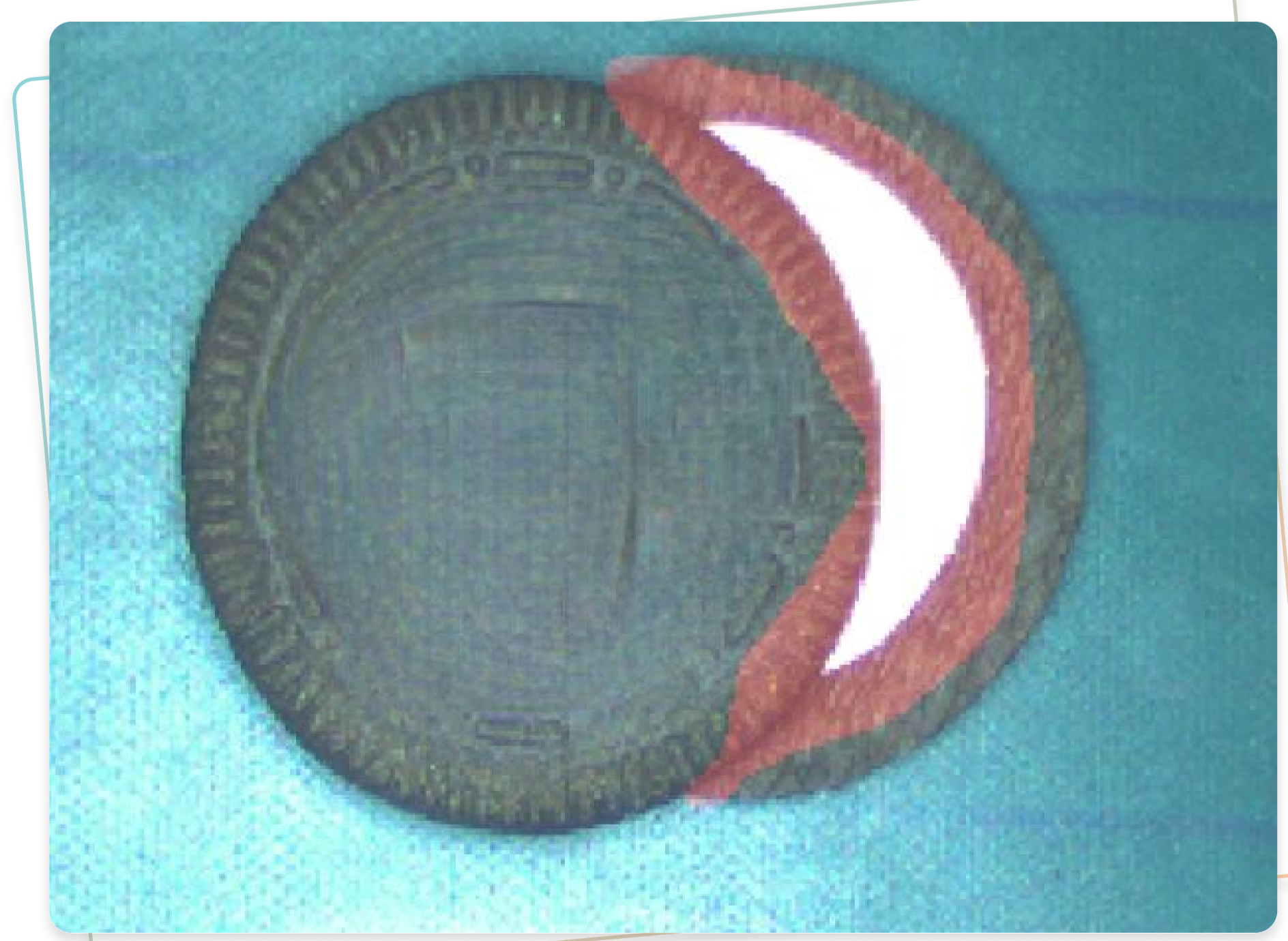
01
Biscuit manufacturers can **inspect biscuits and cookies of any size or shape**, with standard dimensions being 80 x 30 mm

02
Wastage caused by the system is limited to **less than 0.5%** which means adoption can be immediate, ensuring reliability and **99.5 % accuracy**.

03
Manufacturers can effectively run their production lines by **eliminating the requirement** for 3 personnel and optimizing labor costs.

Conclusion

With a packaging inspection speed of 600+ Ppm, **DeepInspect** guarantees that only the best quality biscuits reach the market. This not only enhances customer satisfaction but also strengthens brand reputation, ensuring that the products consistently meet and exceed export quality standards.



Tag: **Not Good** Score : **64**



Tag: **Good** Score : **100**



Tag: **Not Good** Score : **93**

Reach out to us