

Pouch Seal Inspection System



Introduction



The pouch seal inspection system is developed by Hawkvis by adopting advanced IR thermal imager and our industry leading inspection algorithms. It is typically installed at the **"heat sealing and shaping"** station inside the pouch packing machine, to monitor the sealing quality in real time.

The solution suits most typical rotary pouch packing machines, and is compatible with all colors, sizes, materials, and pattern contents of the packaging pouches. The system can be quickly set up, without special debugging and commissioning.

■ System features:

- The system can be easily installed on most typical rotary pouch packing machines.
- 100% inspection on every single product, without slowing production speed.
- Automatically reject any defective sealed product to recycle bin.
- Identify the type of defect and display it by category;
- Online monitoring seal quality conditions and shows real time quality statistics.
- The inspection results and pictures are automatically archived and stored to the database.
- Inspection report available.

■ Advantages of Technology

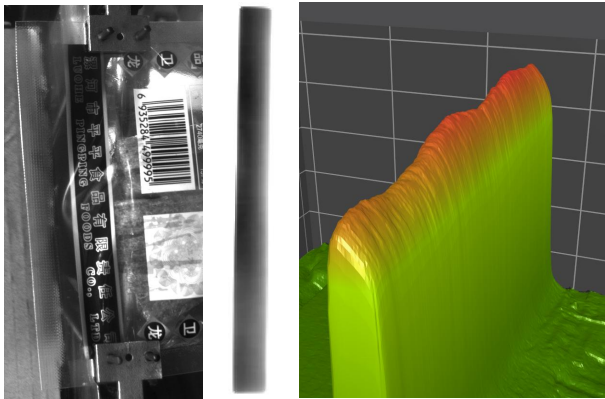
- Compatible with all kinds of pouches without any manual adjustment.
- Fast change-over of inspection recipe between different bags/pouches.
- Inspection accuracy not affected by environmental factors, like lighting angles, reflections, etc.
- Precise inspection, unaffected by physical factors of pouches, like misalignment, shape, or designed wrinkles at the seal area.

Inspection Capability

By adopting multi-spectral infrared imaging technology and smart algorithm processing, the system can detect all typical and minor seal issues.

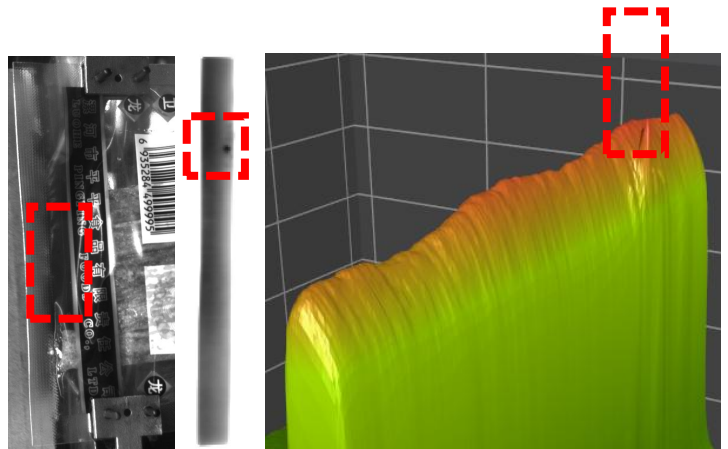
OK Seal –

It shows smooth and even heat profile, there are no anomalies in the 3D model.

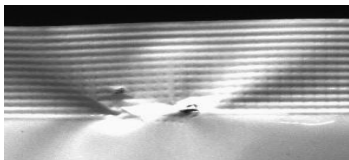


Seal Defect – Material Inclusion

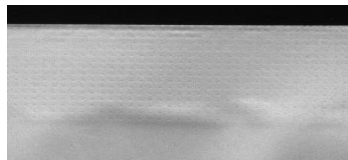
A food particle is included into the sealing area, and the 3D model shows a noticeable bulge.



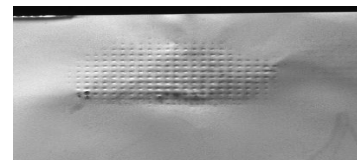
Typical Seal Defects



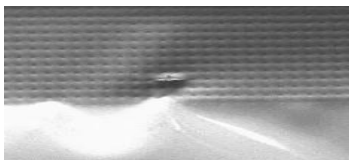
Food Particles



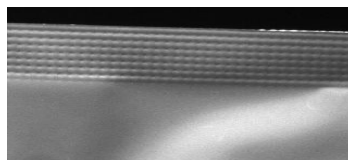
Weak Seal



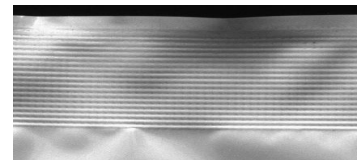
Partial Seal



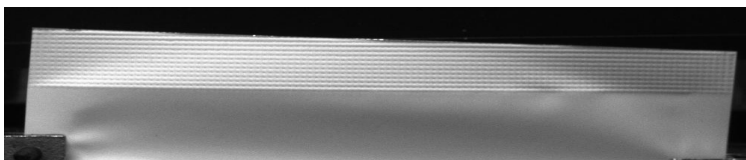
Damaged Seal



Narrow Seal



Wide Seal



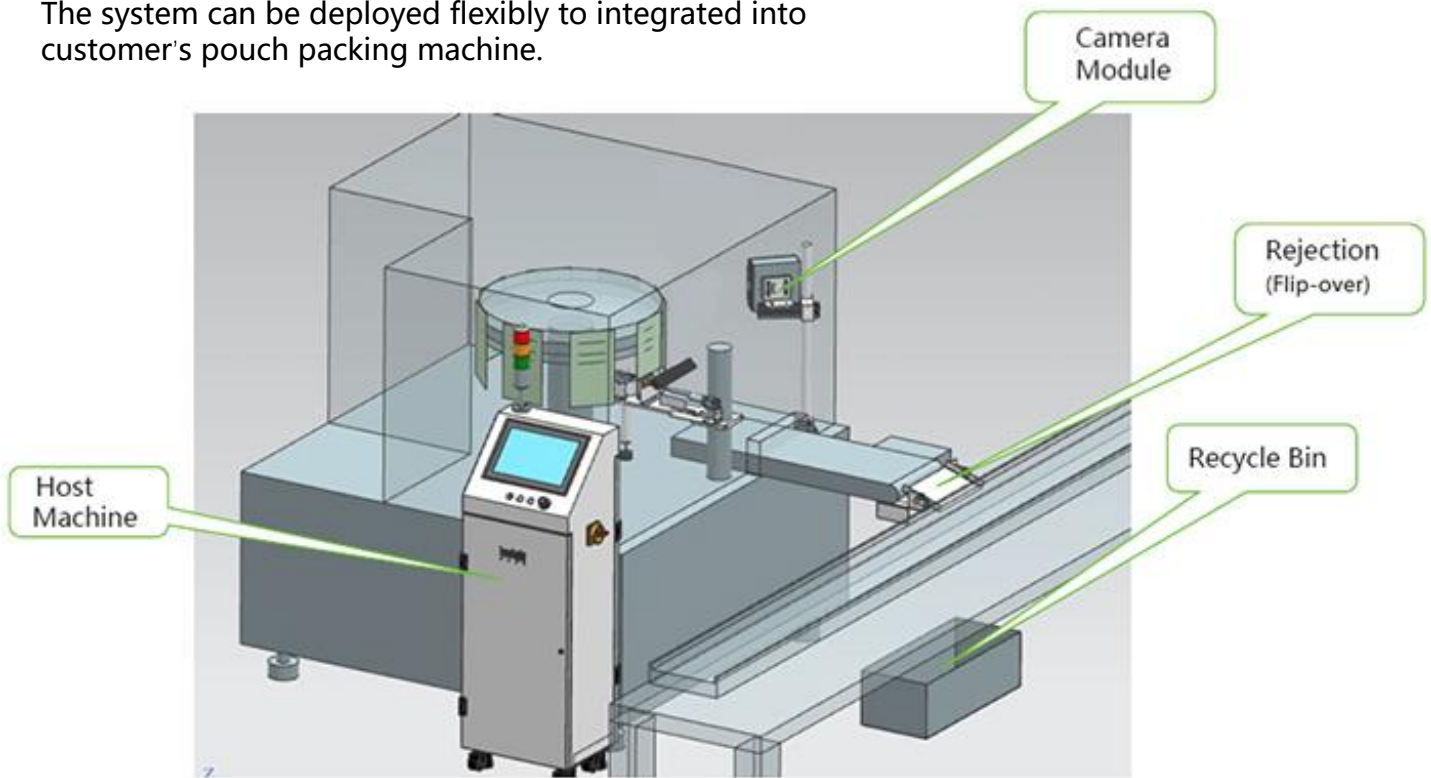
Slanting Seal



Seal Missing

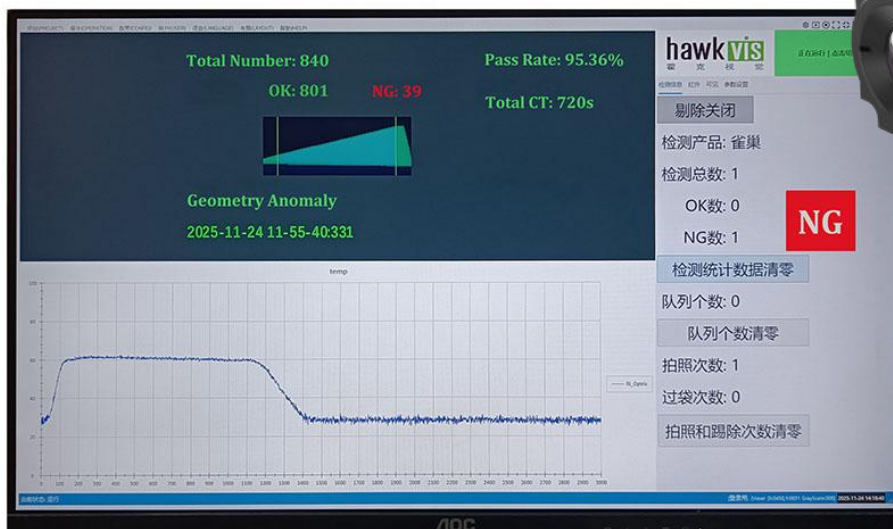
System Layout

The system can be deployed flexibly to integrated into customer's pouch packing machine.



Advanced Camera Module and Algorithms

Over a decade of continuous improvement, our advanced camera module and system has been widely proven effectiveness and reliability across China and overseas contries.



Main Spec

- Inspection cycle time: <0.5 s/bag
- Inspection speed: up to 200 bags/min (depending on situation)
- Over-kill rate: <0.5%
- Under-kill rate: 0%
- Types of products can be inspected: sauces, snacks, pasta, soup, powder, coffee, pet food, cream, shampoo, etc.

Applications

Suitable for All scenarios with pouch-feeding packaging machines.

■ Food

- Food and beverages, condiments, health products, pet food, etc

■ Pharmaceuticals

- Granules, granules, plasters, Chinese medicine decoction pieces, etc

■ Daily chemicals

- Cosmetics, masks, detergents, etc

■ Agrochemicals

- pesticides, fertilizers, etc

