Ensuring the Quality of Medical Device Packaging

SEAL INSPECTION OF VACUUM-FORMED TRAYS

SUMMARY

Ensuring the quality of packaging continues to be a serious challenge for the medical device industry. Foreign-body contaminants and poorly sealed vacuum-formed trays can severely impact a company's reputation and the customer's perception of the quality of medical device organizations worldwide.

CHALLENGE

The main challenges are ensuring the integrity of medical device packaging by detecting contaminants such as fibers, hairs and other foreign bodies, along with anomalies on the seal such as creases, poor sealing contact or width, as well as reducing head count while eliminating the risk of human error during visual inspections.

SOLUTION

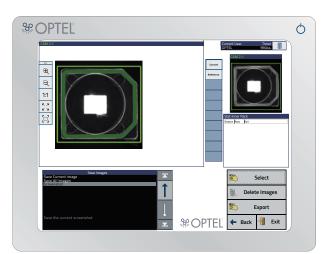
OPTEL's Seal Inspection Solution detects contaminants and other anomalies while verifying the integrity of the seal in a real-time, controlled environment. The solution eliminates the risk of human error inherent in manual inspection quality checks. It is designed for both manual and fully automated packaging lines but is particularly suited to cleanrooms, where it can be placed beside sealing machines for vacuum-formed trays with Tyvek, paper or foil lids.

The inspection takes milliseconds, minimizing impact on production and OEE figures. The operator removes the newly sealed tray from the sealing machine and places it in the drawer of the inspection system. Images are captured, and any quality-related issues are immediately identified. The algorithms are preconfigured to your company's specifications, meaning you set the parameters of the inspection depending on your requirements.

M-FORMED TRAYS

KEY BENEFITS:

- Ensures consistency of inspections
- The system generates references according to established criteria
- Helps identify areas needing improvement in packaging and sealing processes
- Connects to ERP systems
- Reduces the risk of rework
- Improves packaging quality, thereby reinforcing brand reputation







USE CASE

SOFTWARE

The system's software has been designed to integrate into ERP systems to allow for batch control and management on the line during inspections. Batches can be started and managed within the software, thereby linking the inspection with batch information.

Although not a requirement, the Seal Inspection Solution can also be integrated into OPTEL's label verification software, thereby eliminating the risk of incorrectly packaged products—the primary cause of product recalls, which costs the medical device industry millions in lost revenue. OPTEL can offer a single inspection station all the way to a complete turnkey product measurement, packaging integrity and label verification system incorporated into a connected solution, eliminating risk in a real-time environment at each step of the packaging process.



On-screen display of a defective seal

ISO 7 COMPLIANCE

OPTEL's Seal Inspection Solution complies with ISO 7 standards for cleanrooms. It is structurally designed with SAE 316L-grade stainless steel, and its camera, ventilation system and electrical installation are integrated to avoid contamination.

As with all of OPTEL's offerings, this solution can be customized to meet the specific needs of the client and their environment, taking into account local working and cleanroom requirements, lighting conditions and other factors.



CONTACT US

For more information about OPTEL's solutions for medical devices, visit: **optelgroup.com/medical-devices/**.



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