

Plastic Bottle Process

Plastic Bottle Verification

The plastic bottle forming process is becoming increasingly competitive and production errors can be costly. To improve efficiency and productivity, while remaining competitive, many companies now rely on the power of machine vision. For these demanding applications, multi-camera vision systems are used to inspect multiple areas of the bottles simultaneously to ensure neck, side-walls and base all meet quality requirements.

Could you use Machine Vision?

Here are some of the inspections a Teledyne DALSA vision system could perform for this application:

- Verify label presence, correctness and registration
- Ensure sidewalls are free from contamination, blisters, air-bubbles and other foreign matter
- Verify neck threads are present and completely formed
- Determine if neck opening is chipped, choked, elongated or bent
- Measure bottle height, diameter and ovality of the neck and bottom
- Check sealing surface for planarity and detect molding flash
- Ensure bottle color is within acceptable tolerances
- Verify fill level and cap presence
- Verify label presence, correctness and registration

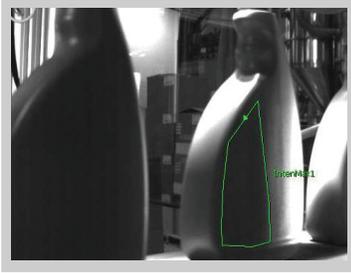
Applicable Machine Vision Tools

- Surface flaw tools to detect cracks, scratches and imperfections
- Edge tools for detecting the presence, absence or position of features
- Shape tools for checking uniformity
- Measurement tools for checking dimensional accuracy
- Color tools to verify color consistency and correctness
- Laser line tools to measure product height profiles
- 1D barcode and 2D matrix readers for traceability, sorting and process control

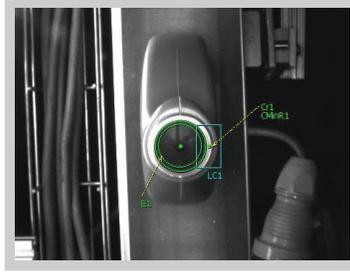


Teledyne DALSA-authorized distributors can show you how to start saving time and money with our industrial vision solutions.

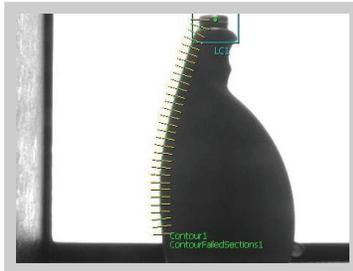
Typical Plastic Bottle Process Applications



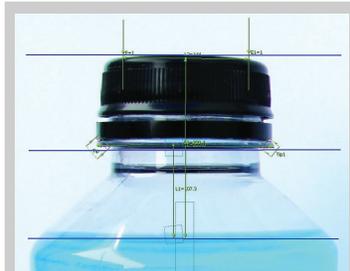
Verify bottle sidewall is free from contamination



Determining bottle ovality



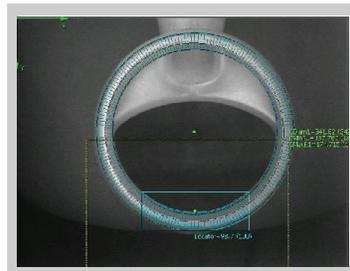
Checking sealing surface for molding flash



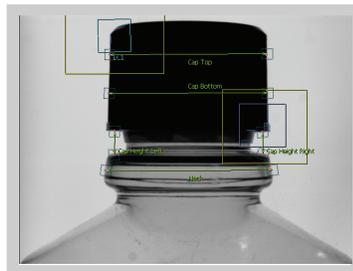
Verifying fill level



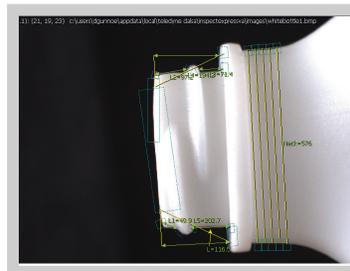
Verifying 1D barcode and 2D matrix



Determining diameter of lid sealing surface



Verifying cap height and presence



Verify neck threads are present and completely formed

Get more VISION

Teledyne DALSA offers the latest in machine vision technology for plastic bottle process applications.

Designed specifically for industrial environments, the BOA2 smart camera is an all-in-one vision system that integrates easily into existing production lines, machinery or moving equipment. BOA2 cameras come fully loaded with a software user interface complete with extensive vision capabilities and standard factory communication protocols.

For high speed, multi-camera inspection, Teledyne DALSA offers a family of cost-effective vision systems that support a variety of camera configurations. These fanless systems are built for industrial applications using state of the art processing and high-reliability components. Our vision systems support GigE camera technology to support low-cost camera expansion and an operator interface that can be customized to suit customer defined standards.

Teledyne DALSA vision systems are available with choice of application software to accommodate the differing needs and experience of users. Our iNspec Express software combines ease-of-use with a common suite of vision tools and capabilities that can be quickly applied across many applications. Our Sherlock software provides advanced functionality and design flexibility that allows vision integrators to tackle the most challenging inspection tasks.

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