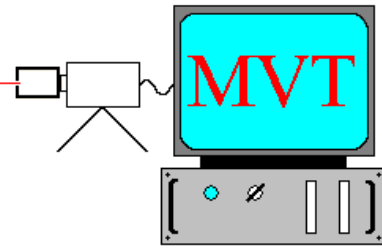


Machine Vision Technology Ltd.

Real Vision for the Real World



Retrofit of Inspection to Counting and Bottling Machine

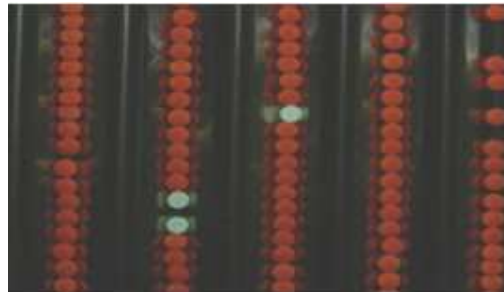


The integration of two proven technologies

- Cost effective and easily retrofitted
- Compatible with existing machines
- From 6 - 24 lane inspections
- Inspects tablets and capsules
- Inspects the colour, shape and size
- Inspects cracks and chips
- Prevents product mixing

Ability to be retrofitted to:

- Pharma Packaging Systems
- Swift Pack
- Cremer
- And others



The system comprises of an industrialised vision system, with a LCD Monitor either in the cabinet or swinging arm mounted to suit. A Stainless Steel electrical cabinet to IP65 as standard with the rack mounted 2U computer. Mega-pixel colour cameras with custom lighting designed for tablet/capsule inspection of SIX lanes per camera.

- Inspection system will detect surface and coating defects, scratches, cracks, chips
- Inspection of size of capsules, length and diameter
- Product separation not required
- Provision of signal to tablet counter controls where defect is detected

- Menu selection for up to 400 products, expandable
- Constant analysis of the product

The menu allows selection of product and recall of pre-saved product parameters, and live image display provides production information and last failed image with product count and reject percentages.

The system is integrated with counter software so that where a defective tablet is identified the counter could force the product into a known bottle and reject that bottle on discharge from the counting machine.

Product images before and after analysis with the MVT software

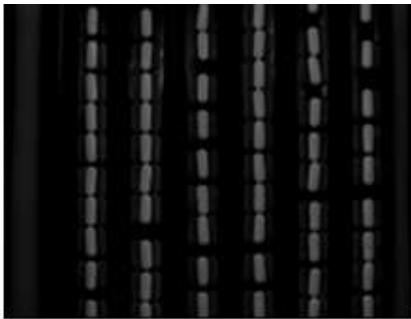


figure 1.1

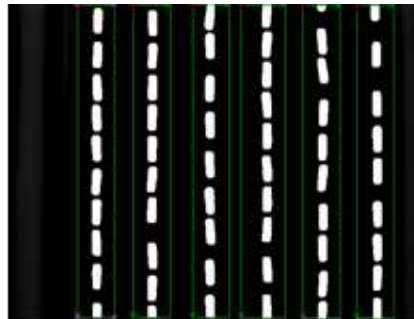


figure 1.2

The Analysis: The MVT image processing, with one camera, can monitor products for rejects on any of the six lanes across the image. These lanes are typically a 35mm pitch on a vibrating stainless steel service.

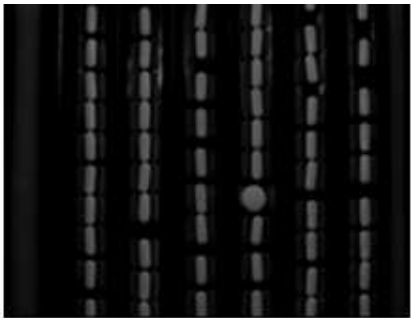


figure 2.1

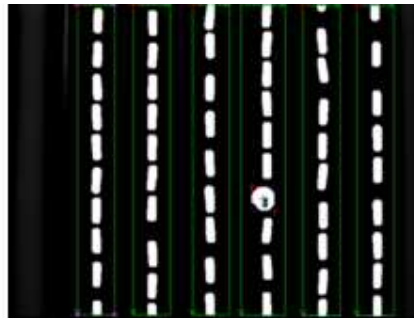


figure 2.2

The product can touch one another. Our software separates the tablets by using special pre processing techniques. The software will then highlight reject product as shown in figure 2.2.

We use two colour spaces, HSI and RGB, to determine the correct colour of the product. Various parameters are used such as length, width, diameter, surface area and texture for cracks, chips and deformed tablets. Our software provides not a minimum counted analysis, but a continual tracking and analysis throughout the field of view of the camera. An analysis can be made every 50ms.

MVT-Unbeatable benefit / cost ratio from a company with a proven track record