

Pharmacology Application

A vitamin producer must have each of his pills inspected before they can be sold. There are thousands of pills being made daily. A system is required for inspection that will be cost effective, precise, and fast enough to keep up with production.



Solution:

A smart camera is connected to a computer equipped with a programmable logic control (PLC). The camera captures images of each pill as they move through the production line for blob analysis.

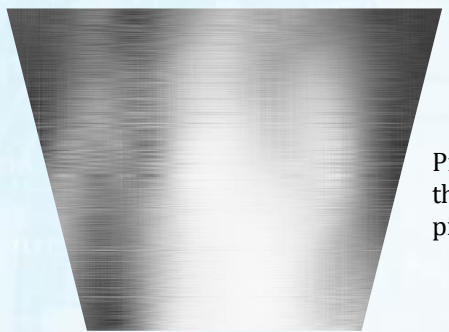
Each pill is inspected for size, shape, clarity, and any other specifications the producer needs for quality inspection.

The camera transmits the images to the computer which controls an air puffer. When a pill does not meet quality standards, a puff of air is released and diverts the defective pill to an alternative hopper for recycling.

This system is able to accurately inspect thousands of pills at a tremendous rate with little cost to the producer.



Computer with PLC processes images and communicates to air puffer. When a pill does not meet quality inspection standards, a puff of air is released.



Pill hopper containing thousands of vitamin pills



A pill is released one at a time at a high speed



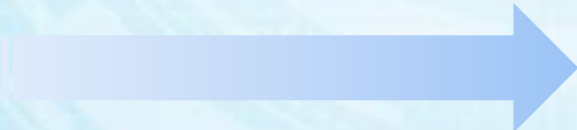
Smart camera relays images to computer



Smart Camera using blob analysis inspects pill for size, shape, clarity, and purity.



Air puffer

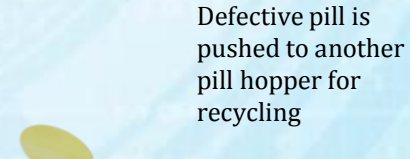


Puff of air

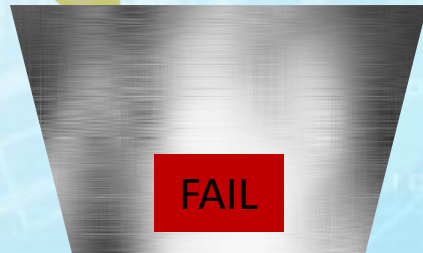


Pills passing quality inspection drop to packaging

PASS



Defective pill is pushed to another pill hopper for recycling



FAIL