

LabVIEW and IMAQ Control Production of Solder Spheres

Customer

A manufacturer of solder spheres – measuring 80 to 800 microns in diameter – used in ball grid array (BGA) electronic packaging

Challenge

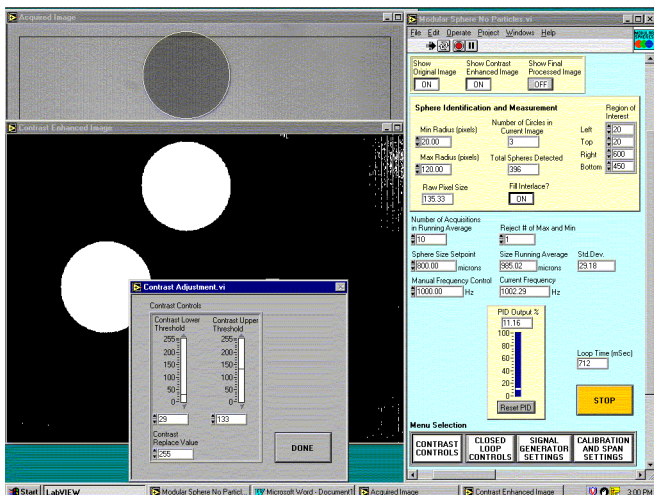
Increase the yield of high-quality solder spheres manufactured.

Solution

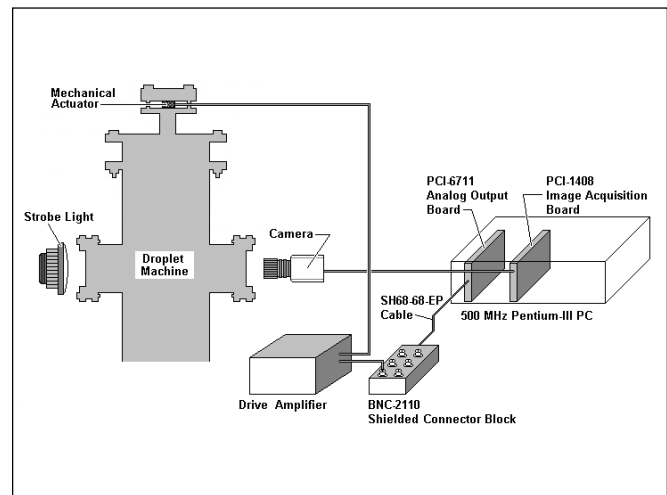
Improve the speed and effectiveness of the image acquisition and processing system used to inspect the solder spheres and provide the controls necessary to adjust and optimize the system over a variety of operating conditions.

Key products used:

- National Instruments (NI) LabVIEW
- NI IMAQ vision development module
- NI PID toolkit for LabVIEW
- NI PCI-6711 data acquisition board
- NI PCI-1408 image acquisition board



Main control screen shows selectable display images and pop-up control palette



Block diagram of machine vision control system

Benefits

The new system captures up to 15X more solder spheres in a given production run, increasing the in-tolerance process yield by more than 250 percent.

To achieve similar results, contact our office nearest you or visit www.bloomy.com.

Headquarters:

839 Marshall Phelps Rd.
Windsor, CT 06095-2170
(860) 298-9925

Field Offices:

Milford, MA (508) 902-0054
Upper Saddle River, NJ (201) 818-0117