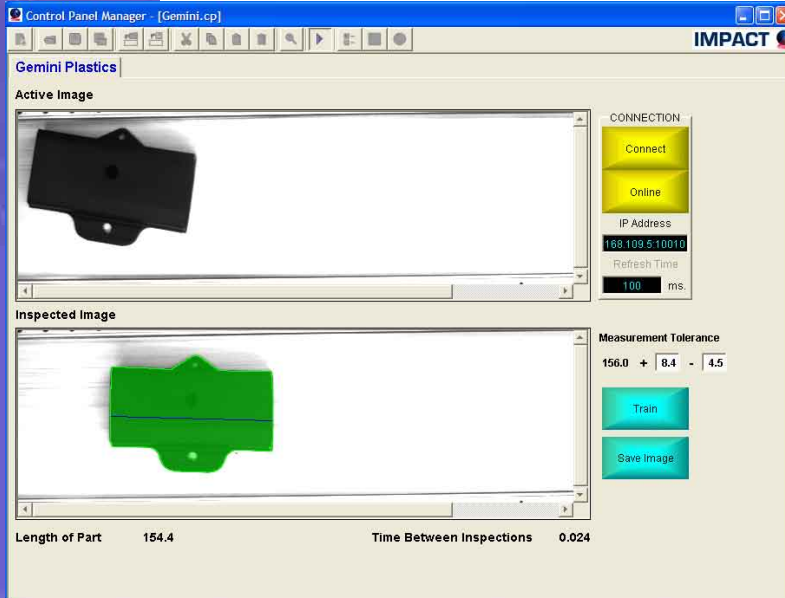


APPLICATION NOTES

IMPACT Solutions for Plastic Industry Plastic Extrusion Inspection

IMPACT Camera Identifies and Tracks the Center of the Part



A custom operator interface panel displays the measurement of every part. It also allows the operator to set the min / max measurement value in calibrated units. If the measured value is between the min and max value set by the operator, the vision system locks an image on the control panel while the part continues to move on the conveyor before it is placed in the shipping container. If the part fails, the camera turns on air blower and blows the failed part into the reject bin. Using a "TRAIN" button integrated on the custom panel, an operator can setup a new part by simply placing a test part on the moving belt.

Application Description

An IMPACT 7200 high resolution camera (1024 X 768 pixels) is used to measure the dimensions of extruded plastic parts. The vision system is required to inspect over 100 different part types coming off the extrusion line. The parts can be either black or white in color, and can be any where from 2 to 18 inches in length. The IMPACT camera is mounted on a conveyer station that can be moved among different extrusion lines. Due to the difference in part size, the vision system cannot utilize a sensor to trigger the camera because the sensor would have to be moved to accommodate different part lengths. The flexibility of the IMPACT software allow us to design a solution where the camera is continuously triggered at an interval of 20 milliseconds. As a part sits on the moving conveyor, the vision program tracks the position of parts center to determine if a new part is in the FOV. When a new part is detected, it measures the maximum length, even if the part is rotated.

Application Highlights

- One vision program accommodating 100+ part types in different colors and dimensions
- Auto-triggering at 20 milliseconds intervals
- Vision system automatically tracks the part as it enters and exits the camera FOV
- Integrated TRAIN button allows operator to configure inspection settings for new part types easily
- A composite tool is used to control the timing of the reject mechanism

