Application Note: Stamped Pins

IMPACT Software Suite Information:

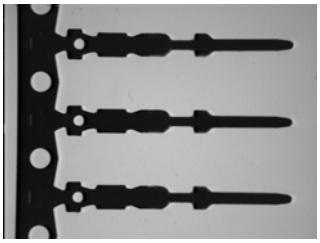
Software Version: 8.1

Files Included: ☒ Images ☒ VPM Program ☐ CP Program

☐ Others:

Application:
Inspection of Stamped Connector Pins to ensure that their size, shape and position on the bandolier are within specification.

Image Example(s):



Lighting Used:
A LED backlight, diffused and collimated, typically red or IR.

Lensing Used:
A Telecentric lens is typically used to hold tight calibration.

Tools Used:
1. Origin Tool; used to find the part to be inspected. The part's X, Y and Angle location information is then shared with all tools below it that may need this location information.
2. Line Gauge Tools; used to check dimension on various edges of the part. These tools report distances to sub-pixel values.
3. Grayscale Template Tool; used to monitor the part's perimeter for defects.
4. Pass Fail Tool; used to make a global decision whether the part has passed or failed, based on the current state of checked Tools.
5. Discrete Output Tools; used to toggle the various Outputs On / Off to allow the machine to reject failing parts accordingly.

Other Notes:
1. These high-speed stamping lines generally run several thousands of parts per minute, so in many cases, these tool are positioned strategically and optimized to execute very quickly.

2. In many cases, these cameras are mounted on the output side of the press, just outside of the machine. They are typically mounted to independent fixturing to protect it from the press’ vibration.
3. Often oil baths and/or air blasts are used to remove extra oil from pins prior to inspection.
4. Once a defect is detected, defective pins are advanced to an area where an operator or an automated splicer can remove them, and reconnect the bandolier.