

Customer

A component supplier to Automobile industry

Customer Requirement

Reliable Solution for inspecting the proper Orientation of Crank Pins

Epsilon Solution

PresencePLUS P4 OMNI (Combines all P4 Vision inspection tools including Blob, Gray Scale, GEO, Edge and Object)

Why Epsilon?

- Standard OMNI model (640 x 480 pixels) provides accurate analysis at high speeds
- Customer felt comfortable since Epsilon understood their requirement and provided one-stop solution

Customer Benefits

Reliability:- Reliable Solution with easy to use Visual interface

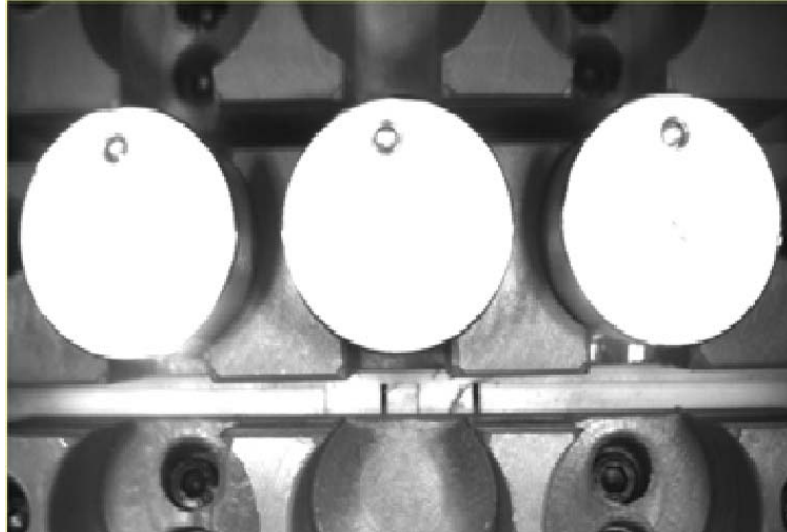
PresencePLUS P4 Omni Features

- Uses one or multiple sensing tools for expanded application flexibility and extended sensor usability
- Features compact, self-contained P4 housing
- Includes remote TEACH, configurable I/Os, live video and communications standard to all PresencePLUS sensors

Learn More

Visit www.epsilonfiberoptics.com for more Application solution

Crank Pin Orientation Detection



Deployed 200mm from its target and parallel to the surface of target with 8mm lens

Background

A Crank Pin manufacturer manufactures various types of crank pins. For identification of various pins, part number punching is done on each part. For punching the part should be in proper orientation with pin holes aligned in one orientation. Three components to be inspected at a time.

Challenge

When a particular part is running other part should not mix with that part but the Dimensions of most of the Parts (ID,OD) were similar so identifying the Part was a challenge

Solution

The machine consists of a conveyor on which the holding brackets of parts are fixed, single bracket can carry three parts. There is one Punching station on the conveyor where the punching is carried out on the parts. While punching all the three parts should be in proper orientation. For verifying that the correct part is present and also the orientation of part is correct we have used Geometric find, Geometric count and measure tool and some mathematics. The conveyor will move further only when all the parts are correct and the orientation is proper. We have also provided the visual indication on the HMI graphics (Delta DOP-B03E211 65536 colors) for which particular part out of three is not proper.