TrueView Vision Guided Robots

Applications: Material Handling, Assembly, Body Location, Sealing

Industry: Automotive
Part: Rigid - dunnage, engine head

Description: TrueView™ is ABB’s Vision Guided Robotics (VGR) System. Trueview VGR systems locate, inspect, handle, transfer and assemble parts and dunnage.

Equipment:
- ABB industrial robots
- eVisionFactory VGR software platform
- Non-proprietary vision hardware
- Standard integration of hardware, software and communications

Customer Benefits:
- Improves ability to meet market demand by its flexibility to deliver to new markets
- Reduces capital expenditures eliminating the need for expensive precision dunnage, fixtures or positioners.
- Reduces labor costs by lowering the number of plant workers and injuries per cell.
- Improves quality control by reducing part contamination and damage with on-the-spot visual inspection for every part.
- Improves supply chain management with 100% visual inspection and real-time reporting.
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Design Parameters:

<table>
<thead>
<tr>
<th>Item Name</th>
<th>Value / Name</th>
<th>Operation / Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Robots</td>
<td>Line Load Robot</td>
<td>IRB 6600 Used for all jobs</td>
</tr>
<tr>
<td>Cameras</td>
<td></td>
<td>Mounted on line load robot Camera Field of View: 500x400mm Camera Working Distance: 1000mm Automatic calibration template mounted vertically on a stationary stand</td>
</tr>
<tr>
<td>Part</td>
<td>Cylinder Head</td>
<td>To be imaged and located by Camera Positional Accuracy (mm): +/-0.5 Rotational Accuracy (deg): +/-0.5 Part Position Variation (mm): +/-50mm Part Orientation Variation (deg): +/-5</td>
</tr>
<tr>
<td>Estimated vision processing cycle time for job:</td>
<td>0.5sec</td>
<td>This value excludes the time to communicate the vision results to the robot or other peripheral device; cycle time is directly dependent on the specific PC and peripherals used</td>
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<tr>
<td>Estimated communication cycle time</td>
<td>1sec</td>
<td></td>
</tr>
<tr>
<td>Estimated total cycle time (including re-orientation)</td>
<td>2-3sec</td>
<td>Please note that actual cycle time depends on several factors including robot movement complexity, tool size and weight, settling time, etc.</td>
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</tbody>
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