

Inspection of machined parts and assembly steps

The vision system was developed for the final inspection of complex parts and components in the automotive industry. During the transport of the parts, the system checks whether the previous processing or assembly steps were successful.

For example, it checks the presence of bores, internal threads, chamfers and plugs on cylinder crankcases (CCC) of different types and sizes. Poorly executed work due to blunt tools, such as faulty chamfers and broken drill bits stuck in threaded holes, are detected.

Possible controls

- Presence of drill holes
- Presence of internal threads
- Presence of chamfers
- Presence of plugs, clamps etc.
- Presence of attachments
- Size of machining surfaces
- Quality of machining surfaces (detection of blowholes or break-offs)
- Presence of codes and labelling and much more

Thanks to its modular design, the OmniPro Vision System is also suitable for the inspection of

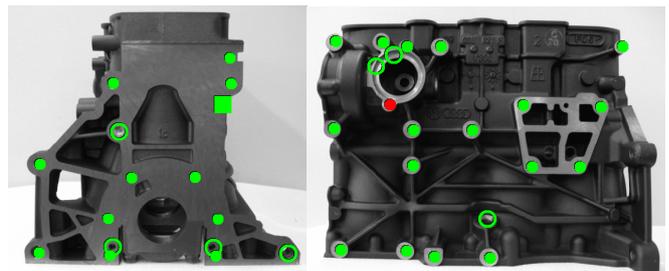
- cast or aluminium parts and
- other components and products.



Cycle-neutral CCG inspection of over 20 different types

Visualizing

The test results are displayed on a second monitor in a clear and easy-to-understand format for the inspector. The individual sides of the component with the respective test positions and colour-coded test results are displayed on a type-specific basis.



Beispiel: Teil der Visualisierung der Prüfpositionen von ZKGs: IO(grün)/NIO(rot)

Camera and lighting

The number, type and mounting positions of the cameras and lights can be adapted to a wide variety of production systems and test objects. Depending on the process requirements, both line scan cameras and area scan cameras can be integrated. This makes it possible to inspect components of different shapes and sizes.

The exact system requirements are determined in co-operation with the customer.

Features

- Cycle time-neutral, as inspection takes place during transport.
- Simple parameterisation of different products.
- System is independent of changes in transport speed.
- 100% online product inspection, no random sample inspection but every part is inspected.
- Complete system for integration into the production process

keeping an eye on quality