

Application:

Detection of material flaws



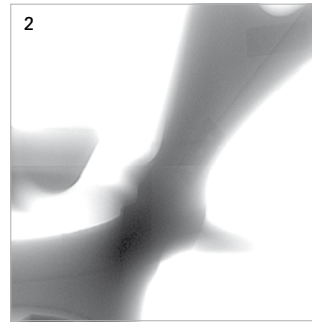
- Inspection Item:
Wheel mounts
- Material:
Steel

Inspection task

Quality assurance represents an important element of the production process in the manufacturing of chassis parts. This is especially true since, as a rule, these components belong to the parts that are crucial for safety, parts which are subject to special mandatory obligations regarding inspection and documentation.

X-ray inspection helps to achieve the high quality standards that have been set for wheel mounts. Inner structures and the composition of materials are tested with certainty using X-ray inspection in the course of initial prototyping, as well as during continuous ongoing production control. Up to 100% of production and up to 100% of the component parts can be tested thereby. For the inspection of gray cast-iron parts, the German image quality class B is typically fulfilled in compliance with the standard «EN 462 part 3».

YXLON. X-ray technology at its best.



- 1 Detailed photo of single-robot system Y.MU56/320 kV
- 2 Radioscopic image of steel chassis part
- 3 Customized Solution

X-ray inspection

A Y.MU56/320 kV was utilized to X-ray the steel wheel mounts. It can be integrated directly into the production process as an inline solution. The retention segment of the conveyor route enables the inspector to concentrate even more closely on the actual inspection task itself. The steel mounts are gripped automatically by an industrial robot for inspection and X-rayed in various predefined positions. To generate additional viewing perspectives, deviations from the defined inspection sequence can be made by moving the robot via joystick operation. The

inspection time for a typical component including approx. 10 different inspection positions amounts to 30–40 seconds. Once the inspection item has been X-rayed, the radioscopic images are optimized in a corresponding (VS10) module and depicted to the inspector on an high-contrast video monitor for analysis. The findings of the analysis are saved electronically and can be analyzed further in the form of statistics. The inspection item is automatically marked or sorted out for rejection as a result of the inspection decision made.

Parameters

X-ray source	MG 325 with Y.TU 320-D05
Detector	Industrial image intensifier XRS232
Image processing system	Y.PXV5000
System	Customized Solution

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