

Application:

Detection of material flaws, metrology



- Inspection item:
Brake disks
- Material:
Gray cast iron/aluminum

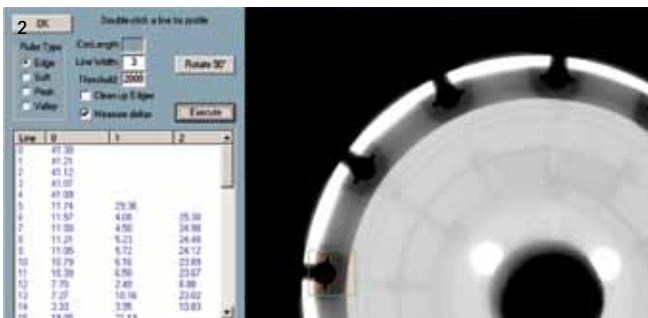
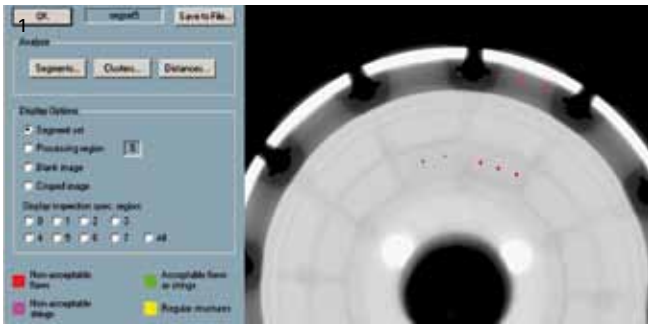
Inspection task

Brake disks, callipers, clasps and linings are manufactured using special combinations of materials to reduce their weight. Some of those combinations involve complex assembly structures. That places special demands on quality assurance. X-ray inspection represents an assured method for testing even complex structures, interfaces and components accurately during production.

Material alignments, casting quality and dimensional stability are determined precisely and analyzed as needed. That information can, in turn, be used toward optimizing the production process. YXLON offers inspection systems for both spot-check sample and fully automated systems that can be integrated trouble-free into the production process.

Flexible adaptation to the respective requirements means that the systems are suited just as well for X-raying thin-walled light metal alloy components as they are for inspecting gray cast iron parts several centimeters thick.

YXLON. X-ray technology at its best.



- 1 Radioscopic image with artificial flaws
- 2 Radioscopic image with wall thickness measurement
- 3 Image of a brake disk
- 4 Customized Solution

X-ray inspection

YXLON offers a solution that can be integrated directly into the production process. The parts to be inspected are conveyed through the radiation cabinet at precise, predefined positions thereby. The brake disk can be rotated during the X-raying process and traveled horizontally to the beam's direction in order to reach all areas. An X-raying position at an angle is achieved by tilting the irradiation axis, in other words the tube and detector, at +/- 30°. That way crossover residues within ventilated brake discs can be X-rayed optimally, too. All inspection positions can be

set manually by the operator. The inspection time for a typical brake disk amounts to approx. 20 seconds.

Examinations of inclusions, material weaknesses and the determination of wall thicknesses can be carried out directly on the X-ray image. The findings can be saved in the form of digital radioscopic images. As a result of the inspection decision made, the inspection items can be marked while still in the radiation cabinet in order to rule out mistakes later on.

Parameters

X-ray source	MG 226 with Y.TU 225-D04
Detector	Industrial image intensifier XRS232
Image processing system	Y.Image 2500i-R
System	Customized Solution

YXLON

Technology with Passion

YXLON International GmbH

Essener Bogen 15

22419 Hamburg

Germany

T: +49 40 527 29-101

sales@hbg.yxlon.com, www.yxlon.com