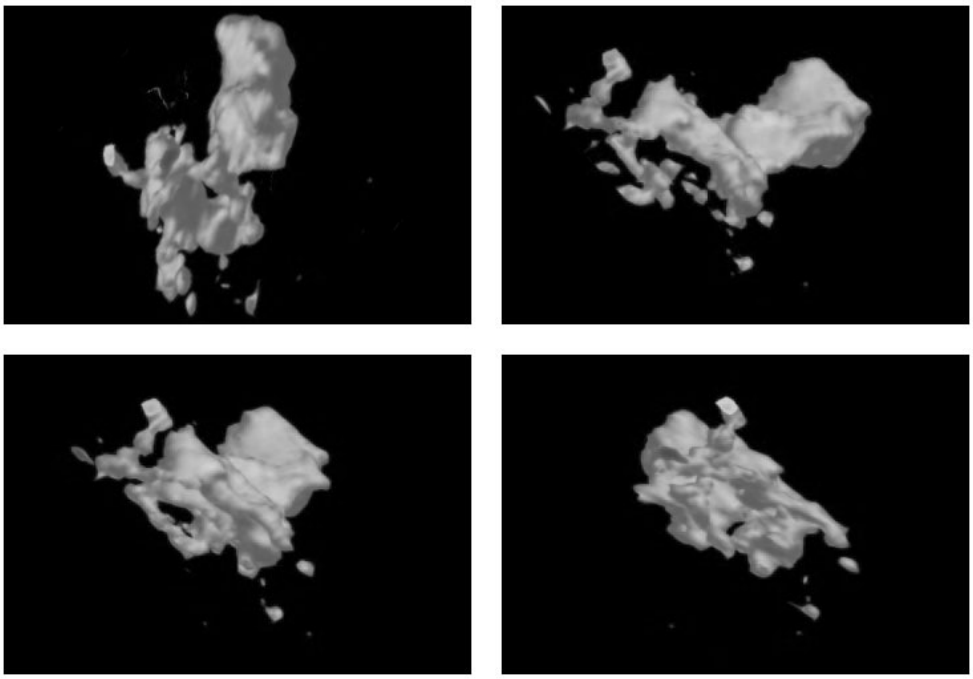
Jacobsen Real-Time X-Ray Machinery Inc.

Company Profile

Increasing numbers of automobiles are equipped with cast aluminum wheels that are required by the automakers to be inspected for safety defects such as cracks, blowholes, and shrinkage that weaken the structure of the wheel. This is particularly important since wheels are becoming lighter, while exposed to higher stress due to increasing performance in automobiles.

Problem definition

Defects that wheel manufactures encounter develop during the casting of the wheel and are of various shapes and sizes. These nonconformities weaken the structure of cast aluminum wheels.



These radioscopic images show 2 D projections of the same defect in a cast aluminum wheel.

The image shows a defect in a radioscopic x-ray image in the hub area of a cast aluminum wheel, as a human operator would see it on a monitor. Obviously, the disadvantage of evaluation by a human operator is misinterpretation by eye fatigue, and subjectivity of the operator.

Problem solution

To develop an automatic defect recognition system that finds defects without human intervention—100% of the time.

This image shows the detected and classified defect in a radioscopic image. Higher decision certainty is only achieved through objective fully automated inspection.

High demands placed on fully automatic defect recognition systems (ADR) in serial radioscopic inspection of light alloy wheels call for a reliable economic solution. Jacobsen Real-Time X-Ray Machinery Inc. designs and manufactures fully automatic (ADR) radioscopic wheel inspection systems for the safety inspection of cast aluminum wheels. Our product is MAXIwheel™ *Xtreme*. Manufactured in North America and sold worldwide, Jacobsen sells and supports its products directly. Characterized by its extreme durability, reliability, flexibility, efficiency and speed, MAXIwheel™ Xtreme is the first truly modular x-ray inspection system. Each module has its own control unit that is connected to the control cabinet by only four connections: Ethernet, power supply, safety, and pneumatic. This modular design makes MAXIwheel™ Xtreme upgradeable. It can be operated in manual and semi automatic mode (human operator for evaluation is required) or in fully automatic ADR mode.

Prevention of defects is better than detection of defects. MAXIwheel™ *Xtreme ADR* can help to prevent defects by closing the casting process loop. If MAXIwheel™ *Xtreme* detects a defect in three consecutive wheels it alerts the casting operator, which can then initiate corrective actions.

Jacobsen Real-Time X-ray Machinery Inc. Canada was founded by Ashley Stone (majority owner) in 1989 as a proprietorship and incorporated in Ontario on October 16, 1992.

For detailed information on Jacobsen's real time radioscopic x-ray inspection systems please contact Ashley Stone or Volker Hasch toll free at 1-877- GOXRAY-1 (www.1877goxray1.com).