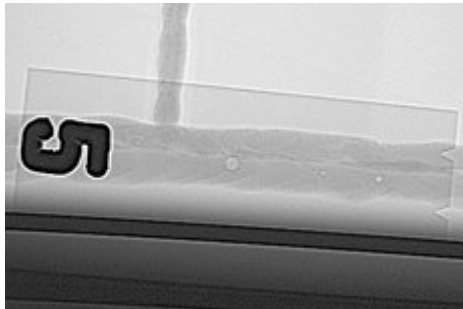


## X-ray

# Inspection of welds for bleed air ducts, climate-control and anti-icing systems, as well as for hydraulic conduits

A large number of air ducts and conduit systems are built into aircraft. Due to their contouring, some of which is very complex, these ducts and conduits are often characterized by a great many welds that occur because of the production processes involved complex shape.



- Pore verification
- Crack verification

Hydraulic conduit and bleed air duct

Welds are subjected to very high mechanical and thermal stress loads, which is why these connections must exhibit a very high quality. Since X-ray inspection enables the detection of welding defects with process assurance, it has been deployed for quality control successfully for years. Until then X-ray film had been predominantly used as the imaging medium.

The use of modern digital flat-panel detectors in X-ray systems can increase inspection certainty with regard to defect recognition even more. For example, while using YXLON software a leading aircraft manufacturer empirically proved that defects in circumferential welds are detected with greater probability using a digital flat-panel detector than with conventional film technology. This already occurs without any post-editing of the digital image. Additional improvements can be attained by adding the functions offered by YXLON image processing software, especially using YXLON Y.HDR-Inspect technology. The added advantages when using digital technology include shorter inspection times, easier archiving, and the omission of pollutant waste disposal for chemicals that arise in the course of developing films.

Yxlon offers you a wide range of X-ray techniques. Yxlon designs solutions that replace X-ray films, provide radioscopy and fully automatic defect recognition in X-ray images, as well as computed tomography services for scanning inspection items ranging from micro-CT to CT using a linear accelerator.