



Digital X-Ray NDT Inspection

Maintaining a cutting edge advantage, Powertech's Non-Destructive Testing (NDT) department has introduced Digital Radiography (DR) to their portfolio of inspection methods. DR instantly delivers high quality digital radiographs to help understand what is happening inside your components to make informed service and quality assurance decisions.

DR Inspection

DR employs a portable X-ray generator and flat panel detector for volumetric inspection. Following exposure, a digital image file is produced instantly for viewing on a remotely located screen, allowing quick interpretation or adjustments of parameters for additional imagery.

Digital Enhancement & Storage

An advantage of digitization is image enhancement for brightness, contrast, application of filters, and overlay of radiographs taken with different exposure parameters. This enables detailed representation of parts having multiple materials and/or complex geometries. The DICOM code compliant digital image also provides a means for rapid distribution, duplication, and storage of critical inspection results that will not decay over time.

Safety and Environmentally Conscious

DR offers many safety and environmental improvements over conventional film radiography. There is no longer a need to develop and store film, thus eliminating hazardous processing chemicals and disposal of waste products. Transporting and handling of radioactive isotopes are usually not required, as the X-rays are electrically generated. Lower radiation doses and shorter exposure times reduce health and safety risk to personnel.

Improved Efficiency

With DR methods, much less time will be required for taking each exposure. Processing conventional film can take hours for each radiograph, whereas images are instantly available with DR. More efficient inspections, in addition to a smaller required "controlled area", will reduce the interruption to an operational facility, allowing nearby work to resume as soon as possible.

Providing inspection for:

- Forgings and castings
- Welded components or repairs
- Pipe wall thickness measurement
- Piping under insulation
- Corrosion monitoring
- Underground distribution switchgear
- Conductor cable splices
- Other electrical components
- Presence of foreign objects
- Steel, aluminum, lead, alloys, or other material tested with conventional x-ray radiography

Materials Solutions

If our NDT support reveals issues that require further analysis, our team of engineers are happy to support with weld procedures, fatigue analysis, fitness-for-service, failure analysis, corrosion mitigation, or other materials solutions for making critical operating decisions.

ABOUT POWERTECH LABS:

Powertech Labs Inc. is one of the largest testing and research laboratories in North America, situated in beautiful British Columbia, Canada. Our 11-acre facility offers 15 different testing labs for a one-stop-shop approach to managing electrical utilities, and testing gas components, pressure vessels and systems.

Outside of the utilities industry, Powertech provides routine testing capabilities, product development, research and consulting services to support an array of industrial-type operations, electrical equipment manufacturers and automotive original equipment manufacturers.

www.powertechlabs.com



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