

Rayscan / Tankscan - Real Time Digital Radiography

RTD Rayscan and Tankscan are Applus+ solutions for real-time digital radiographic (RTR) inspection used in radiography NDT, which uses advanced technology in direct radiography (DR) techniques. Real time digital radiography involves the filmless conversion of data into a high-resolution digital image of the entire weld and can be performed within a single scan. Rayscan is a RTR inspection that can be used as either double-wall single image (DWSI) or single-wall single image (SWSI) and can inspect pipes with a diameter range from 5cm to 142cm (2' to 56'), as well as horizontal and vertical tank weld seams.



THE Applus+ SOLUTION

Applus+ leads the field in advanced technology for RTR inspection, with its own RandD laboratories, worldwide resources and geographical coverage. The radiography NDT technicians at Applus+ work closely with industry leaders and subject experts.

The Rayscan and Tankscan RTR inspection technologies comply with the requirements of various industry standards (ASME, API, DNV, EN-ISO). Rayscan/Tankscan can minimise downtime and increase production, while providing higher sensitivity and better overall definition to identify and evaluate indications.

Target customers

The real-time digital radiography developed by Applus+ for Rayscan and Tankscan has been employed mainly in the new-construction industry, for example in:

- Spool bases
- Lay-down barges

- Pipeline construction
- LNG tank construction

Real time digital radiography provides significant advantages over conventional radiography, such as:

- Rapid assessment of weld quality with no chemical processing
- Smaller exclusion zones
- Lower source-strength requirements
- Remote viewing capabilities
- Advanced software capabilities, such as measuring tools, zoom, window levelling, etc.

Key customer benefits

The Rayscan/Tankscan Real Time Digital Radiography developed for RTR inspections has a number of benefits over conventional film radiography:

- Cost efficient; no consumables
- Quick cycle time
 - High scan speed
 - No development time
 - Direct interpretation and feedback
- Quality equal to/better than film
- Increased safety
 - Reduced radiation required
 - Collimated X-ray beam
 - Shielded scanner design
- Environmentally friendly; no chemical waste management required
- High suitability for:
 - Pipes with diameters of 5cm to 142cm (2" to 56")
 - Thin walls
 - Austenitic materials
 - Dissimilar welds
 - CRA pipelines
 - Root and hot-pass inspections