

Rayscan/Tankscan Real Time Digital Radiography

The RTD Rayscan and Tankscan are real-time digital radiographic (RTR) inspection systems. RTR is an advanced technology utilising direct radiography (DR) techniques. It 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 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 with its own RandD laboratories, worldwide resources and geographical coverage. We work closely with industry leaders and subject experts.

This technology complies with the requirements of various industry standards (ASME, API, DNV, EN-ISO). Rayscan/Tankscan (RTR) can minimise downtime and increase production at the same time as providing higher sensitivity and better overall definition to identify and evaluate indications.

Target customers

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

- Spool bases
- Lay-down barges
- Pipeline construction
- LNG tank construction

This technique 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

There are several key advantages to Rayscan/Tankscan Real Time Digital Radiography 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