

# Digital Radiography

Non-intrusive method for flaw detection using computed or digital detector array

Radiography using digitally captured media is a powerful Non-Destructive Testing (NDT) technique that allows clients to identify and investigate a large number of asset integrity concerns efficiently and non-intrusively.



## FEATURES

**DDA provides instant radiographic images**

**Enhanced contrast and magnification capabilities**

**Exposure latitude over 1,000 times more than film**

# Digital Radiography

## Non-intrusive method for flaw detection using computed or digital detector array

The emphasis for radiography has changed from detecting welding flaws in the construction phase to detecting process induced flaws through coatings, wrapped repairs, and insulation while the assets remain in service.

Digital Radiography can be completed by computed or digital detector array systems, each of which is used for specific applications.

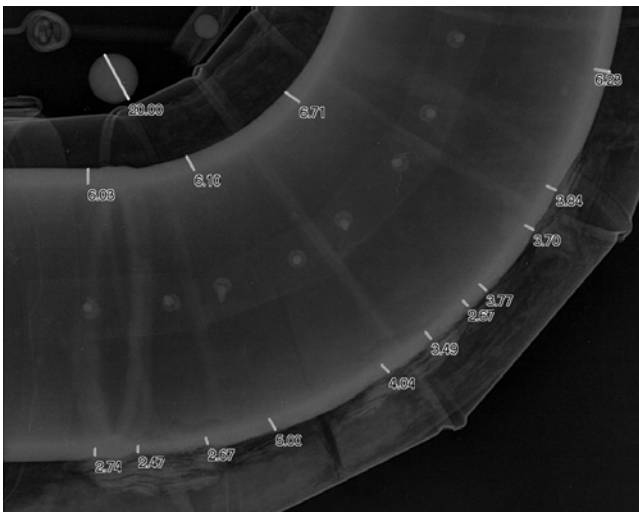
Digital Detector Array (DDA) produces a radiographic image relayed rapidly to a monitoring and data collection system using highly-efficient GOS (Gadolinium oxysulfide [Gd<sub>2</sub>O<sub>2</sub>S]) scintillator-

### Applications

Digital Radiography is used for many industrial applications and provides a safe, rapid, and environmentally-friendly inspection technique.

Applications include:

- » Weld inspection
- » Confirmation of wall thickness
- » Identification of corrosion and erosion
- » Detection and measurement of corrosion scabs
- » Detection and assessment of blockages in pipes
- » Corrosion Under Insulation (CUI)
- » Valve operational issues
- » Blockages in pipes
- » Liquid – vapor interfaces



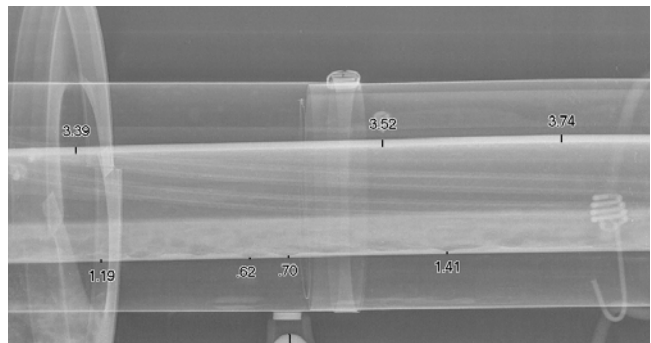
based detectors and the GE Rhythm™ software package. Rapid provision of images supports timely interpretation and decision making capability before leaving the worksite. The system has an optional wireless mode for transmission of images.

Computed Radiography (CR) provides a reliable, cost-effective alternative to conventional film and employs flexible, reusable phosphor plates (screens) to capture images. The exposed phosphor plates are digitally scanned, creating a saved digital image which can be displayed for interpretation. Images can be manipulated and filtered to improve visual representation and highlight areas of concern.

### Detection Media

The use of digital technology enables shorter exposure times and instant image review and analysis using the GE Rhythm™ and Flash!Filter™ software, which allows flexibility for instant re-shooting of images, resulting in increased productivity and clear images for easier interpretation:

- » Accurate wall thickness measurements provided through proper radiation dose and calibration strategies
- » Computed Radiography utilizes flexible imaging plates with the following size range:
  - » 4.5 in x 10 in
  - » 8 in x 10 in
  - » 10 in x 12 in
  - » 4.5 in x 17 in
  - » 7 in x 17 in
  - » 14 in x 17 in
- » Oceaneering X-ray technicians are required to fulfill additional training requirements complying with ASNT-SNT-TC-1A to perform Digital Radiography



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