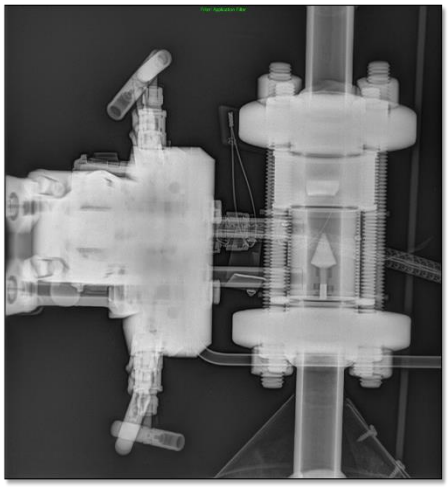
Digital Detector Array (DDA) Radiography – Clear Immediate Records

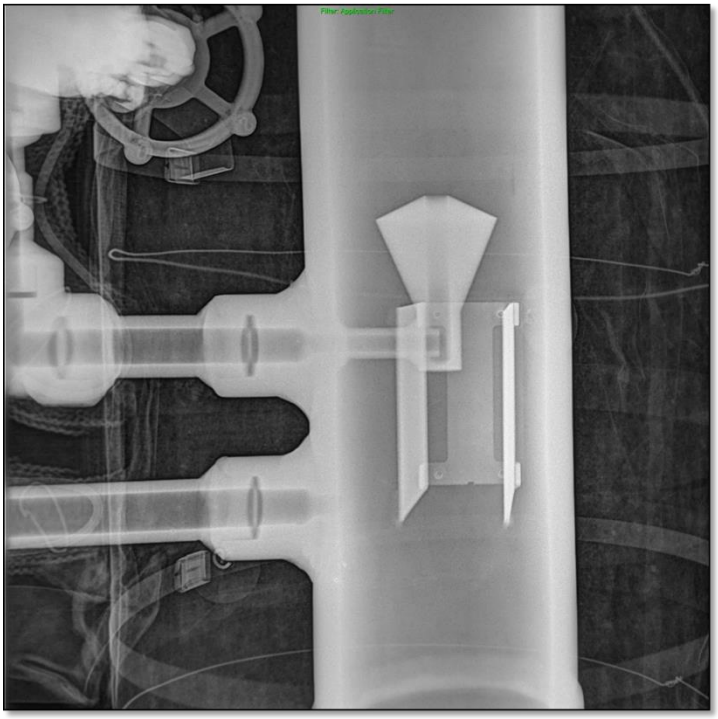
IRISNDT applies DDA radiography to obtain crystal clear images of the cross-sections of components (many operating and with insulation). Unlike Computed Radiography (CR), with DDA one can see an image immediately without processing through a computer. Different than traditional RT with film, an image develops without processing (and immediately). The digital image serves as a chronological record of the condition of the component; it can be stored, accessed and compared as easily as any other digital data.



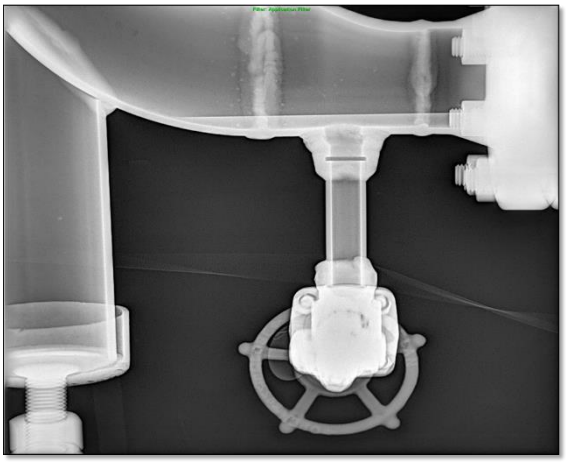
Assessing the operation and condition of the internal components of a 1.5 inch valve

IRISNDT personnel use DDA:

- To monitor pitting and overall losses of piping through profile images (shadow shots).
- To examine insulated and non-insulated piping components.
- To examine for corrosion under insulation.
- To monitor the erosion/corrosion losses of components within insulated piping.
- To allow personnel from multiple remote locations to view the data on FTP sites.
- To monitor the operating (open/close) condition of valves.
- To examine rubber components for fabrication flaws.
- To assess geophysical core samples.



NPS 4 Sch 120 pipe with flow nozzle, insulated and in service. The dimensions of the materials to RT through around the nozzle vary up to 3 inch.



Note Liquid Level in the Reducer

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Barrhead	(780) 674-3018	Red Deer	(403) 347-1742	Rope Access Services	(780) 437-2022
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www.irisndt.com

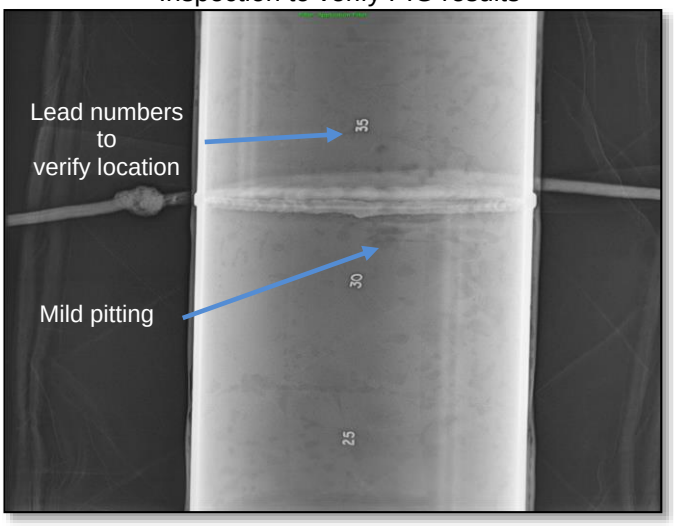
Offices also located in the USA and UK

Digital Detector Array (DDA) Radiography – Clear Immediate Records

With DDA radiography one:

- Saves time and improves productivity over conventional film applications. The exposure time is shorter than that needed for film.
- Views multiple components (valves, pipe, fittings and threaded parts) all in the same image.
- Reduces the number of shots (and radiation time) needed to assess piping conditions.
- Can adjust brightness and contrast.
- Can magnify and process images.
- Can measure dimensions and calculate remaining thickness values.
- Can improve image evaluation.
- Operates on 120volt or on battery power.
- Works with Ir-192, Co-60 and X-ray sources.

Inspection to verify PIG results

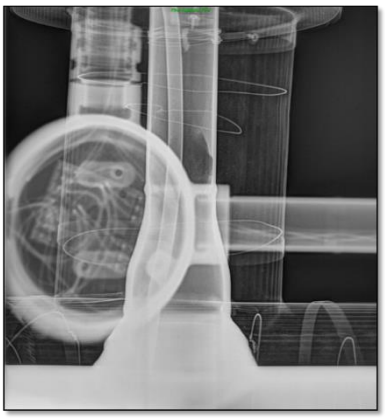


DDA Fundamentals

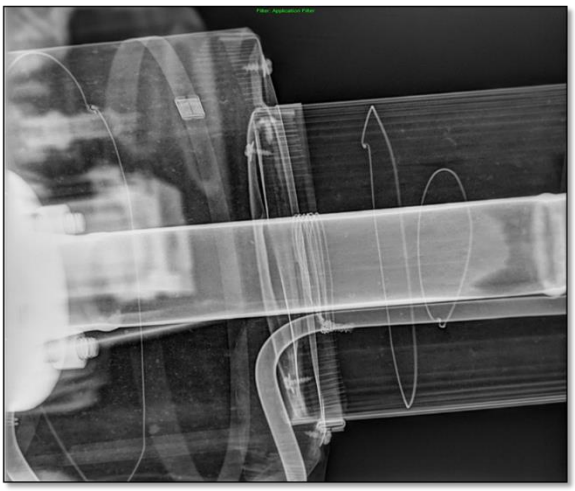
To obtain DDA radiographs, one follows a digital camera like work process. The DDA panels have scintillators that convert radiation to light; the panels further process the light to obtain digital radiographs.

On-Site Considerations

Safety is a fundamental consideration when using radiation. Clearance of areas adjacent to the component from persons or items that may be affected by radiation is required. A significant radiation dose can cause physical changes in the human body. Strict Federal and Provincial regulations, coupled with highly trained and qualified personnel ensure the safety of everyone.



2 inch std profile shot with internal corrosion. Immediate results allows RT personnel to take multiple shots of the area of interest.



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