



## Digital Radiography for Field Pipe Non Destructive Testing

- Top Quality Images
- Fast and Safe Operation
- Outstanding Penetration
- High Energy Compatibility
- Easy Setup at Inspection Locations
- Compliant with Current Industry Standards



### Pipes NDT in the Petrochemical Industry and at Refineries

NDT inspections in the petrochemical industry and at oil refineries are required to detect tiny cracks, defects and corrosion even under insulation and coating. An ongoing maintenance routine must be ensured by conducting repeated pipeline inspections. Vidisco's portable DR systems were designed to instantly provide top-quality, precise images at an NDT site. Vidisco's advanced software allows the repetition of inspection procedures easily and precisely, on a routine basis.

Vidisco's fully battery operated, ruggedized X-ray systems can be carried to any location site. The systems' carrying cases or backpacks also serve as their operational platforms. Featuring a variety of thin digital imagers, all Vidisco systems are easily setup and enable penetration of a variety of different pipe wall thicknesses. The systems are designed for operation at high energy levels, and are also compatible for operating with Isotopes. Highest quality images are available immediately on your laptop screen, enabling delineation of hairline cracks on the spot. Dose level is decreased and exposure times are reduced to mere seconds. Vidisco's **XbitPro** comprehensive database enables grabbing, analysis and storage of X-ray images linked to their corresponding external images for future reference and easy sharing.

# Cut Exposure Time with Isotopes and Vidisco Portable DR Systems

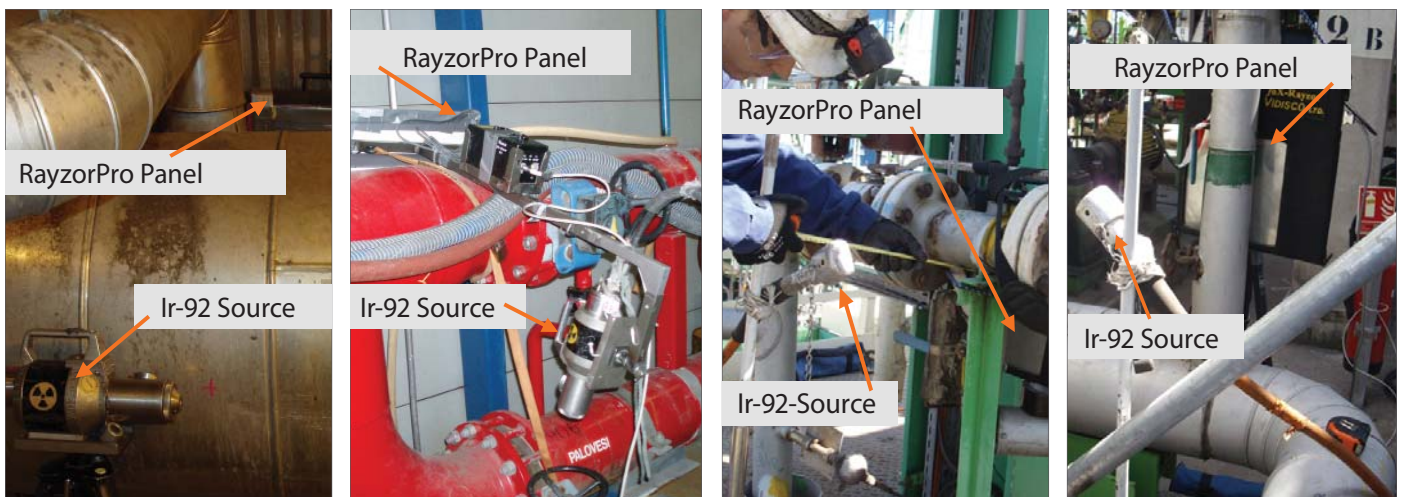
## Exposure Times Comparison Chart

Item Inspected	Pipe Diameter	Material	Wall Thickness	Liquid Content	Ci	Exposure Time	
						VIDISCO DR Solution (with Ir-192) Time to image	Film (with Ir-192) Excluding Development Time**
Fire Water Hose	208 mm	St 35	7,2 mm	None	20 Ci	30 Seconds	3 Minutes
Glass Fiber Profile	700 mm	Glass Fiber	approx. 25 mm	None	NA	70 pulses* (about 4.6 seconds)	30 Seconds
Process Water Pipe	150 mm	ss2343	Total One Wall 6 mm	Water	30 Ci	20 Seconds	15 Minutes
Steam Cooler	250mm+ insulation	10CrMo	Total One Wall 40 mm	None	70 Ci	50 Seconds	1 Hour
Low Pressure Steam Pipe	400 mm + insulation	St 35	12 mm	None	50 Ci	30 Seconds	20 Minutes
Fuel Lye Pipe	100/80 mm	ss2343	6 mm	Lye	20 Ci	15 Seconds	10 Minutes

\* Test conducted with pulsed XRS-3 source

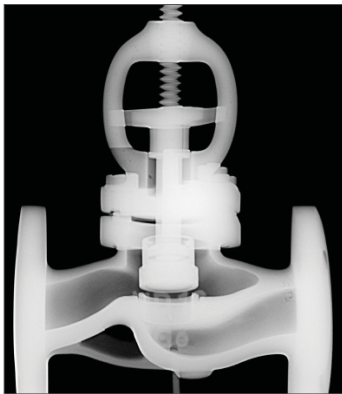
\*\* Exposure time only, not including film developing

## Vidisco Systems Reduce Exposure Time When Using Isotope Energy

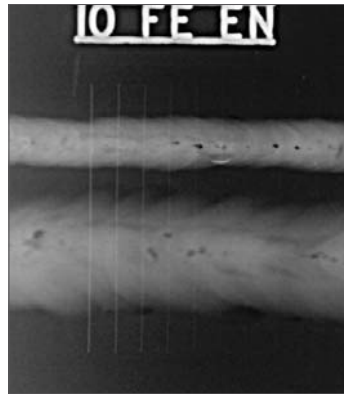


Setup of Vidisco's Portable Digital Radiography Systems for Pipes Inspections

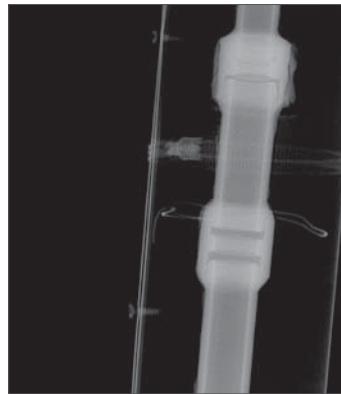
# Digital Radiography for NDT of Pipes in the Field



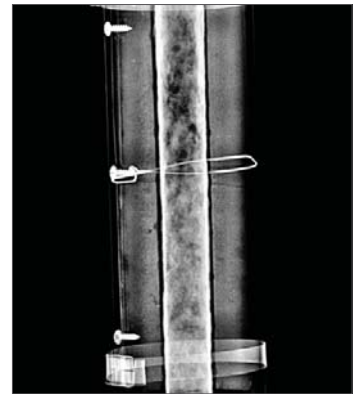
Valve



Pipe Welding Double Wall



Insulated Pipe



Corrosion Under Insulation



Glass Fibre Profile Inspection



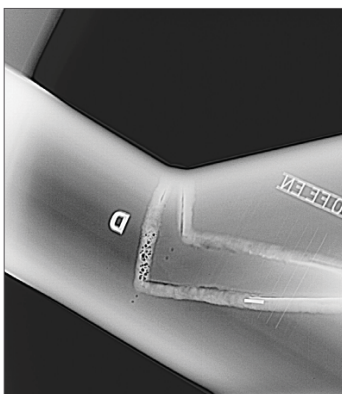
Case Serves as an  
Operational Platform



Setup with Ir 192



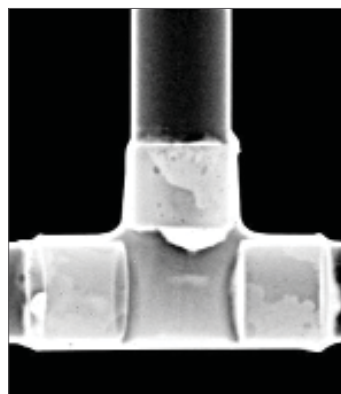
Setup with XRS-3



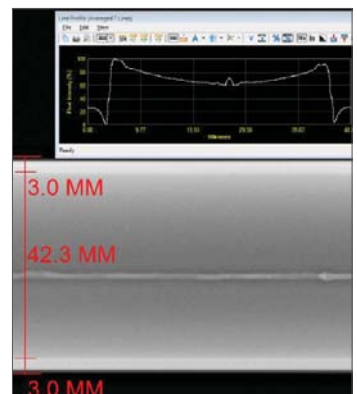
Steel Pipe Weld



Tube Pipe



Copper Pipe Brazing



Wall Thickness  
Measurement – Line Profile

- **Detection of:**

Corrosion/ Erosion/ Cracks/ Corrosion Under Insulation/ Wall Thickness Measurement

- **Field Locations:**

Refineries/ Oil & Gas Pipes/ Chemical or Pharmaceutical Factories

- **Industrial Standards:**

Vidisco's Portable Digital Radiography (DR) Systems support current industry standards. ASTM E2422-05, ASME Boiler and Pressure Vessel Code, Section V, Article II, ASTM E2736 (ASTM E2698, ASTM, E2737), BSS 7044, BSS 7075, ISO/DIS 17636-2, ISO/DIS 10893-6 and ASTM E2597-07.



# XbitPro For Field NDT

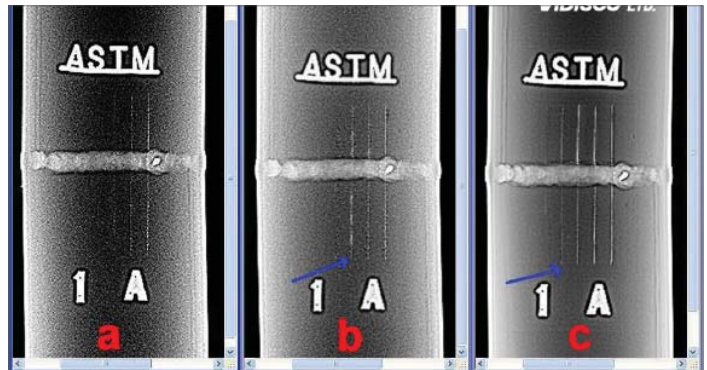
## All in One Professional Software

### XbitPro for Immediate Documentation, Analysis and Data Sharing

The Vidisco XbitPro proprietary software enables immediate image grabbing, top-quality radiology imaging analysis, documentation, data sharing and accurate results. Multi language GUI is available.

- **Automatic Calibration**

Vidisco XbitPro software enables automatic calibration procedures that can be executed at a click of a button. Multi point calibration is generated in a fast and efficient process and is then executed automatically. High end laboratory calibration is also available. (In image - a: no calibration, b: automatic calibration, c: high end lab calibration).



Automatic Calibration



Weld X-ray before High Pass Filter



After "Revelation" High Pass Filter (HPF)

- **Analysis Tools**

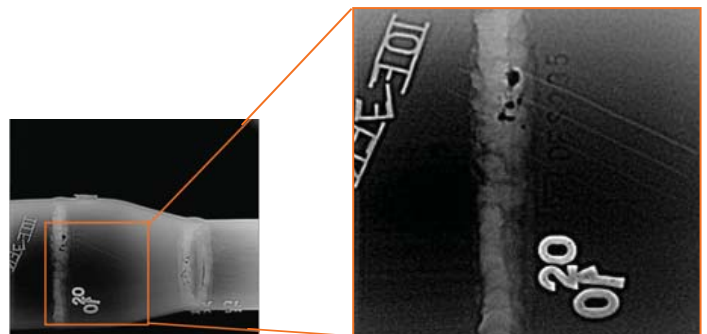
- Wall Thickness Measurement (auto detection)
- Line Profile
- Image statistics (SNR, standard deviation, etc.)

- **Image enhancing Tools**

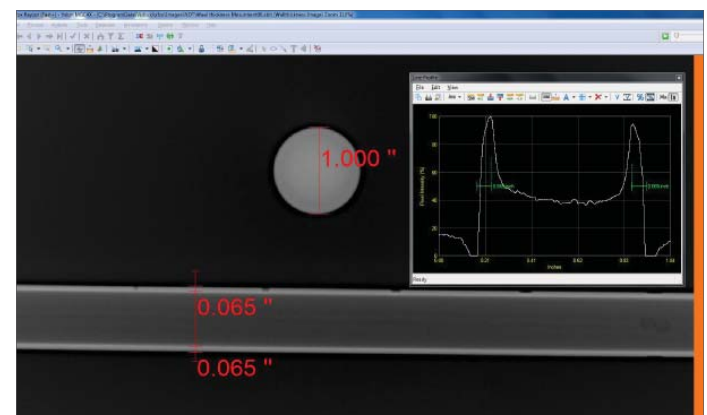
Auto Window (Grayscale) Leveling, Revelation HPF, Adaptive Histograms, SNR improvement tool (Averaging), Sharpening, 800% Zooming

- **Database Management**

Images and corresponding information are easily stored, retrieved and shared with others. External images are stored together with their corresponding X-ray images. Create annotations, documentation and reports with ease.



Zoom



Wall Thickness Measurement