

Let there be light...



And there is CIT

Manufacturer's of World's Most Advanced Digital Computed Radiography Imaging Technology



PRODUCT SHEET

DR1200-HR NDT Digital Computed Radiography System

Industrial radiography NDT inspection is now changing from traditional film radiography and is being replaced with digital computed radiography computing based technology. To inspect corrosion and condition of plants, welds, weld joints, castings, pressure vessels, pipe work, turbine blades and aerospace components inspection require a **high definition** radiograph image quality system. A low cost entry level DR1200 technology (21 micron scanning resolution) delivers an industry standard high quality radiographic image quality at affordable prices, which can save up to 30-35% of existing resources. Reusable flexible imaging plates save cost of consumables and improve productivity.

Products Inspected

- Petrochemical refineries, valves, flanges, pipe welds under insulation
- Pipe welds lines & pipe works
- Turbine blades INCONEL materials
- Carbon composite low density inspection
- Aircraft / aerospace components inspection
- Rail track weld inspection,
- Automobile,
- NDT radiographic quality control inspection within Manufacturing
- EOC & Nuclear Power Plants

Performance

- Supports radiographic resolution better than 21, 42, 84, 168 micron
- Contrast sensitivity better than < 2%
- 13th line pair of EN-462-5 / ASTM E 2002-98 duplex IQI
- Measurements accurate to +20 Microns
- Fast scanning robust mechanism
- Largest plate 20 cm x 43cm or smaller
- Works with radiation isotopes, such as Ir-192, Se-75 and Yb-169
- X-ray generators such as micro focus, mini-focus up to 450kV, Pulsed X-ray 300kV, Betatron (2.5MeV / 7.5MeV)



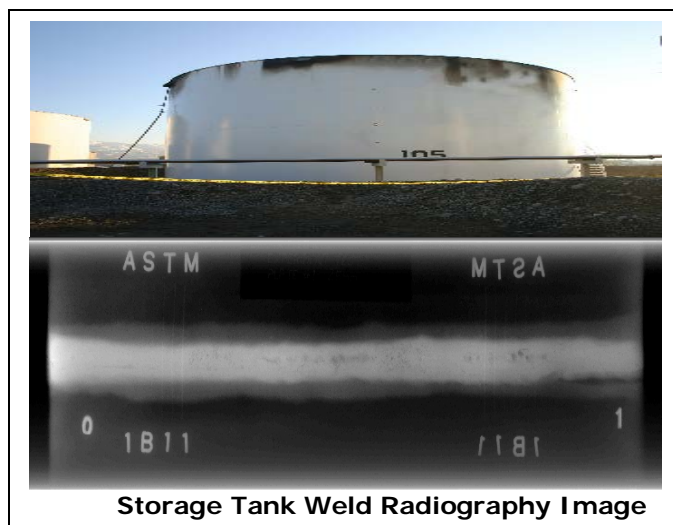
DR1200-HR NDT (Portable) Digital Radiography System



DR1200-HR NDT Digital Radiography System

Benefits

- Reduced exposure time
- Reduced radiation source activity
- Eliminates chemical processing, films and dark rooms, physical storage
- Minimises the Storage Space
- Enables Plant Integrity assessment
- Sharing same information at same time by different people anywhere in the world
- Adaptable to future upgrades and advance application
- Hardware and Software can be customised



Storage Tank Weld Radiography Image



Technical Specifications

Radiography Applications For

Radiographic Techniques

- DWSI/SWSI/DWDI methods
- Thin/medium/thick material wall pipe weld radiography
- Inspect austenitic steel, mild steel, aluminium, alloys, magnesium, non-metallic carbon fibres etc
- Works with Iridium, Se75, Ytb169, Co60, X-ray, pulse-CP, Linear accelerators , neutron radiography

System Performance

Scanning Resolution & Scanning Time:

- 150 DPI (168 Micron).....50 seconds
- 300 DPI (84.6 Micron).....1 min. 40 seconds
- 600 DPI (42.3 Micron).....3 min. 20 seconds
- 1200 DPI (21.3 Micron).....4 minutes

Scan times as on 20cm x 43cm plate (maximum)

CR Phantom – ASTM 2445

- CIT/SHR plate/1200DPI – Duplex IQI – 13th pair
- CIT/STD plate/1200 DPI - Duplex IQI – 12th pair

DR1200 Digital Radiography System

Radiograph Image Display (Black and white) high brightness screen

	Offered in basic proposal	Optional upgrade	Optional upgrade
Monitor TFT type	2 Megapixel	3 Megapixel	5 Megapixel
Resolution	1600 X1200	2048X1536	2560X1536
Screen brightness	>700 cd/m ²	>700 cd/m ²	>700 cd/m ²
Diagonal Size	18"	20.8"	21"
Pixel pitch	0.26mm	0.20mm	0.165mm
Availability	Mono or Color or dual	Mono or color	Black and white

DR Scanning Unit

- DIP does not have contact with scanner read and write mechanism, hence prolongs life of DIP by preventing damage.
- 16 bit (65523 True gray scale resolution)
- Handles: 20cm x 43 c m, 20cm x 30cm; 20cm x 25cm; 10 cm x 40 cm, 10cm x 24 cm or smaller
- Temperature 30° to104° F
- Relative Humidity - 30% to 80% RH, Non-conducting
- Dimensions: 15.5" x 19.4" x 1.8" ; Weight: 16 KG
- Requires External erasure

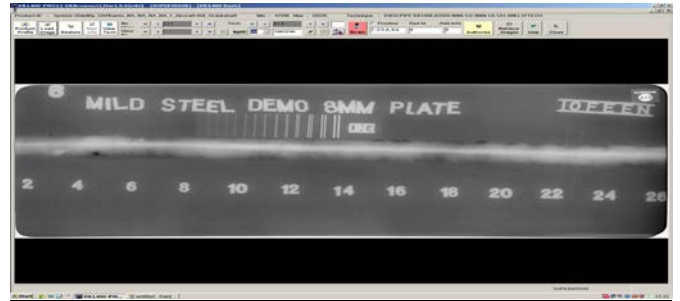
Digital Computed Radiographic Application Software

- Basic DR1200 digital computed radiography ver 1.6.7.
- **Optional extra of software**
 - CIT/DR Basic viewer software
 - CIT/DR Basic viewer/Analysis
 - CIT/DR corrosion and condition

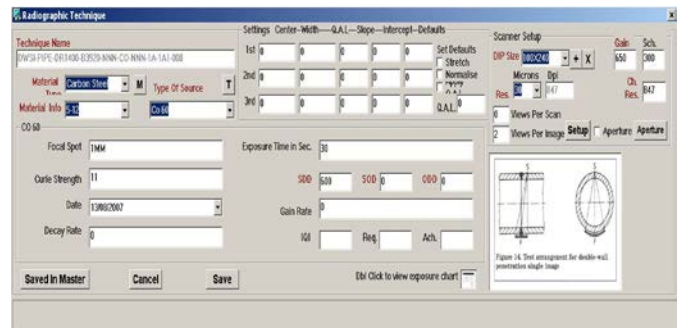
Facility Parameter

- Operation
 - Mains power supplies 110/240 Volts 50/60Hz mains 100 VA max.
 - Battery operated via UPS with battery time of at least 60 minutes

Radiographic Image (with electronic ID + Technique)



Radiography Technique Set-up (typical example)



Operators /Inspectors Radiographic Image Authorisation



System Packaging Details

DR1200-HR is available in three kinds of packaging, keeping in mind the different usage environments:

- **Field Radiography** – Complete system is packed in a ruggedized container keeping it mobile and portable for inspection applications such as EOD, oil platforms, petrochemical site operations etc.
- **Factory Environment** – The system is packaged in an industrial enclosure unit to suit dusty environment
- **Office/Porta cabin Environment** – The system is packaged in a version such that it can be installed in an office environment