

Let there be light...



And there is CIT

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



**Computerised  
Information  
Technology Ltd.**

**PRODUCT SHEET**

## DR1100 – High Definition Digital Computed Radiography System

**CIT Part Code: CIT-DR1100-HDCR**

Nondestructive Examination (NDE/NDT), of products can be inspected by using Digital Radiography Technology. CIT's DR1100 System is based upon using **Computed Radiography Flexible Imaging Plate, Portable X-Ray Generator Unit (160kV or 225kV) and High Performance NDT Workstation with dedicated NDT software with electronic measurement tools.**

The DR1100 Digital Radiography system **Replaces Conventional Film Radiography** The system generates results within minutes and **eliminates** any chemicals, chemical disposable, films, film wrapper and storage requirements. It uses the existing radiographic set up but with reduced radiation strength value and reduced exposure time to generate Digital Radiography Image thus making it very environmental friendly.

The CIT/DR1100 Digital Radiography Software Package is a Powerful Product Inspection Tool that manages Image Capturing, Storage, Retrieval, Report Generation and Advanced Radiograph Analysis. The application also includes high security at all levels - operator, supervisor, interpreter and auditors. The system can be upgraded to include a global positioning system to point the location of the item being inspected or linked to the satellite communication for transmission of the images to the central location.

The economic benefits result in **Reduced Cost of Ownership** with faster access to information for maintenance, predictive planning to meet the regulatory requirements and the safety of the plants.

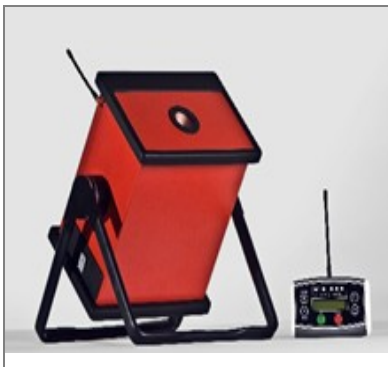


Figure1 – X-Ray Generator



Figure2 – Computed Radiography Scanner



Figure3 – HD TouchSmart System

### Salient Features

#### Radiation Sources

- YTB Gamma Source
- Se75 Gamma Source
- Up to 225kV X-Ray Source
- Pulse / CP / Half wave sets

#### Digital Radiography Detector

- 25, 50 & 100 microns
- 12<sup>th</sup> Line Pair on Duplex IQI
- Reusable Digital Imaging Plate
- Reduced Exposure Time

#### Radiography NDT Hardware

**Software and reports can be customized to meet the organizational needs and projects**

#### Applications

- Carbon Composite Inspection
- Inspection of Foils
- Casting Inspection
- Weld Inspection

#### Market Sectors

- Petrochemical Refinery
- Power stations
- Aerospace Industry
- Automotive Industry
- PCB / Electronics
- Foreign Bodies
- Forensic
- EOD / EID



## Technical Specifications For DR1100 Computed Radiography

### Inspection Capability

- Volumetric defects in welds and casting of different material
- Magnesium, Aluminum, Steel, Inconel, Plastics, Composites, GRP
- Material Characterization, Density Analysis
- Material Calibration

### Digital Radiography Detector

- Scanning Resolution – 25, 50 & 100 microns
- Image Plate sizes – 200mm x 300mm, 100mm x 240mm
- Embedded Laser Specifications – Visible Light Output – 635-650 nm (class 3b) Output Power – up to 15 mW
- Linear Response
- Front loading Imaging Plate System
- Energy Range – 50kV – 225kV
- Integrated Erasure Unit
- Power Consumption – 100-240 VAC / 50/60 Hz 2 A

### Regulatory

- IEC 601-1                      EN60601 – 1 – 2                      IEC 60285-1

### Radiograph Computer Processor/Laptop (can be customised)

- Industrial Standard High Performance Computer System
- Intel Core 2 Duo Processor, 4GB DDR3 RAM, 1T HD, BluRay Drive
- Ethernet, Satellite and Modem Connectivity
- Windows 7 Home Premium 64bit Edition

### Radiograph Display Options

- 23" Full HD Diagonal Wide Screen
- 1920 x 1080 Resolution
- Touch Screen
- 300 nits Brightness

### Or with calibration software as per standard

- 20.8" 2 MP High Bright ; Black& white – 1920 x 1080 resolution
- 20.8" 3 MP High Bright ; Black& white – 1536 x 2048 resolution
- 21" 5 MP High Bright ; Black& white – 2048x 2560 resolution

### CIT DR1100 – NDT Industrial Digital Radiography Application

- DR1100 Basic NDT Software Application
- DR1100 Advance NDT Software Application

### Other Optional Software Modules

- Corrosion and Condition Management
- Flaw Depth Measurement
- Schema based Inspection
- MISDR (Linking with Excel / SQL Server – Production Data)

### aRTist or Moderato

To simulate the radiographic process and generate the radiographic technique or use for the radiographic training

### Environmental Operating Conditions

- Temperature: 18 – 30°C; 64 – 86°F
- Relative Humidity: 80% (max) non-condensing

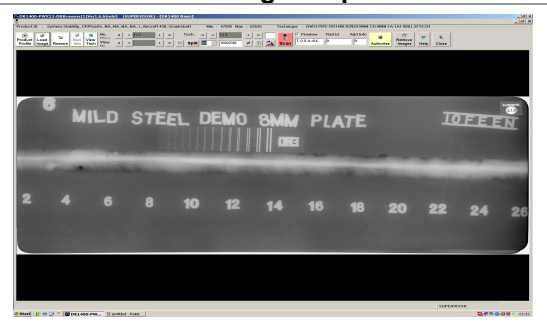
### Storage Conditions

- Temperature: -15 – 60°C; 5 – 140°F
- Relative Humidity: 80% (max) non-condensing

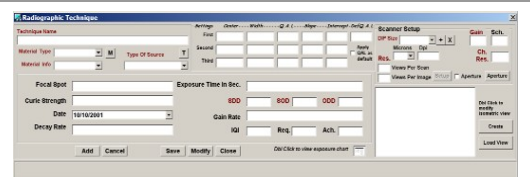
### Physical Dimensions

- Digital Radiography Detector – 48(w) x 24(h) x 38(d) cm - 18 kg (weight)
- Radiography NDT Workstation – 583 x 126 x 451 mm - 11 kg (weight)

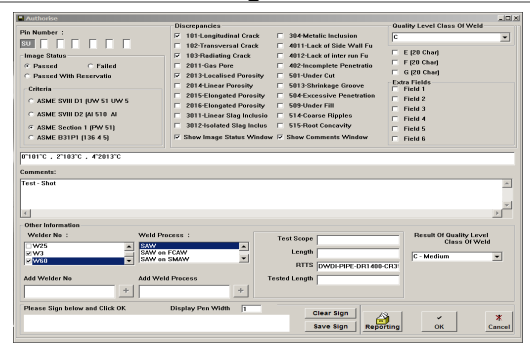
### Image Acquisition



### Technique Setup



### Image Authorisation



### Digital Radiography Detector (View of Drum)

