



# DR 1400PW panoramic pipe weld CR/PSP/DIP NDT digital radiography system

## Introduction

DR1400PW-Panoramic system provides an alternative NDT pipe weld radiographic inspection technology that replaces the conventional film with digital CR technology. The DR1400PW-DR has been developed for Oil & gas pipelines Pipework that is based upon SWSI (Single Wall Single Image) inspection method.

Pipe specifications that can be inspected are as follows:

- From 152.6 mm (6") OD to 1219 mm (48") OD pipe diameters
- Material Wall thickness from 6 mm (0.24") to 105 mm (4")
- Material type can be
  - Plastics, GRP, aluminum, titanium, steel and
  - Stainless steel type
- Different weld types can be inspected inclusive of inner duplex steel clad pipes

The technology lends itself to the various types of applications:

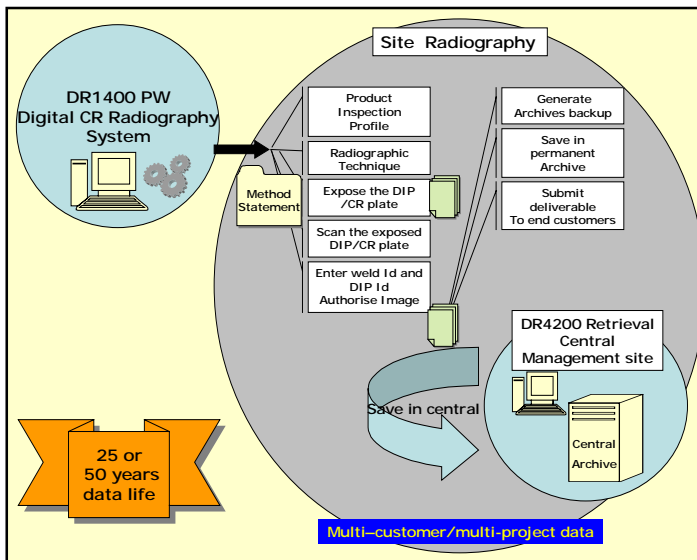
- Offshore lay barge type applications suitable for pipe lay inclusive 'J' pipe lay
- Onshore land pipelines
- Sub sea pipeline and pipe work as well.

The NDT radiography inspection technology provides a radiographic quality that replaces conventional methods with the major difference that in this case the deliverables are electronic digital radiography images and the reported results.

The main commercial benefits are the reduced cost of ownership of the entire operation, which can save up to 30 to 35% of existing resources.

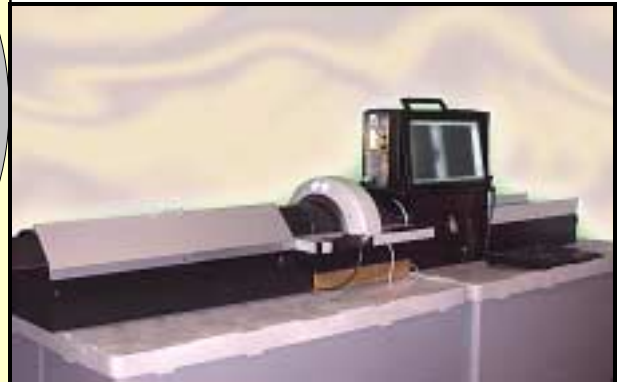


## Radiographic Process

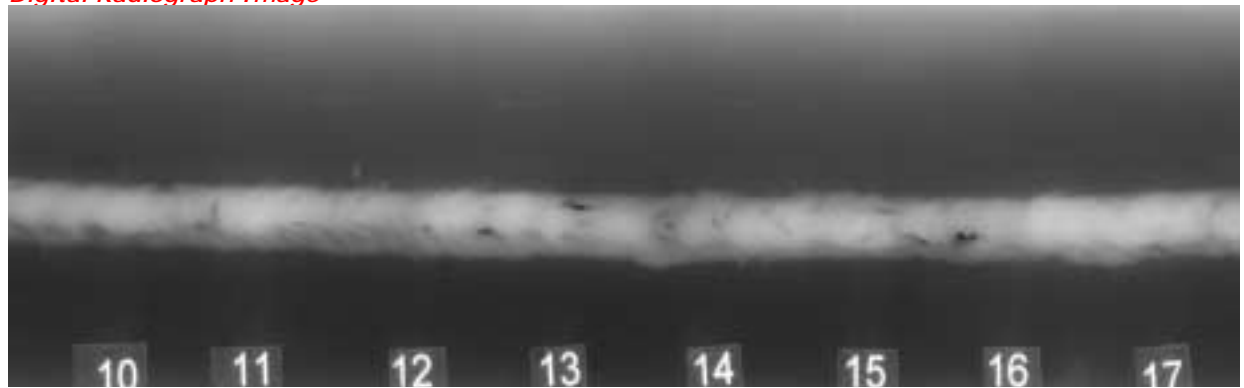


- Cost efficient management of electronic data
- Better practice and utilization of human resources
- Rapide & Active information retrieval

## DR1400 Digital Radiographic system Facility



## Digital Radiograph Image



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## Technical Specifications

1	<b>For whom</b> <ul style="list-style-type: none"> <li>• <b>Petrochemical Refineries</b> [NDT Inspection Departments]</li> <li>• <b>Oil Platforms</b> [Operations and Plant Maintenance]</li> <li>• <b>Nuclear Power plants</b> [Quality Assurance departments]</li> <li>• <b>Pipeline and Pipework Oil and Gas</b> [Pipeline Integrity Assessment]</li> <li>• <b>Pressure vessels applications</b> [Chemical process plants]</li> <li>• <b>Food and Chemical Industry</b> [Plant predictive maintenance]</li> <li>• <b>Cross country pipeline and Pipework</b></li> </ul>	6	<b>DR1400 PW Digital Radiography software</b> <ul style="list-style-type: none"> <li>• Security three level</li> <li>• Capture module for DIP/CR /PSP</li> <li>• Product profile management</li> <li>• Radiography Technique management</li> <li>• Digital radiograph ID management</li> <li>• Tamperproof mechanism of image archive</li> <li>• &lt;Search&gt; functions from permanent archive</li> <li>• 4 types of &lt;browser&gt; method of data retrieval</li> <li>• Advanced radiograph image analysis inspector tools for detailed investigations of digital radiographs</li> <li>• Built-in security access to the authorized persons only</li> <li>• &lt;Product reports&gt; create, review reports configurable by the end customers to suit their template</li> <li>• Managed system administration</li> <li>• Corrosion Assessment &amp; condition management [Optional]</li> <li>• Risk-based condition management and system utilization [Optional]</li> <li>• Automated report generations</li> <li>• Intelligent backup &amp; restore information management.</li> <li>• Remote connectivity.</li> <li>• Archive disk manager for storage on jukeboxes, offline storage media with 25 to 50 years of data life [optional]</li> <li>• Compatible with CIT/range digital radiography products, DICOM, DICONDE</li> <li>• Export/Import data to integrate with third party solutions</li> </ul>
2	<b>Radiography Applications for</b> <ul style="list-style-type: none"> <li>• DWSI/SWSI/DWDI methods</li> <li>• Thin/medium/Thick material wall pipe weld radiography</li> <li>• Inspect austenitic steel, mild steel, aluminium, alloys, magnesium, non-metallic carbon fibres etc</li> <li>• Works with Iridium, Se75, Ytb169, Co60, X-ray, pulse-CP-Linace, neutron radiography</li> </ul>		
3	<b>International Standards complied</b> <ol style="list-style-type: none"> <li>1. ASME V Article II on digitised radiograph films</li> <li>2. ASME V Article VIII on phosphor imaging retrieval of digital radiographs</li> <li>3. NUREG 1452 radiograph digitisation retrieval</li> <li>4. Nuclear NAS 160/AES 6001/BS2633, CEN 1435</li> <li>5. CEN 472/473 radiographic training system requirements</li> <li>6. API1104 ASNT and ASTM 7002, 2033, 7020 technical working and practice inspection data retrieval</li> </ol>		
4	<b>DR1400 PW Digital Radiography System</b> <p><i>Radiograph display monitor</i></p> <ul style="list-style-type: none"> <li>o Display type: 15.4" [approx]</li> <li>o Display resolution: 1600 (V) x 1200 (H) pixels</li> <li>o Pixel pitch : 170 micron (0.17 mm)</li> <li>o Feature: monochrome high bright</li> </ul> <p><i>Radiograph computer system</i></p> <ul style="list-style-type: none"> <li>o Pentium IV 3.2 GHz, M1GB, 80GBHD</li> <li>o Optical storage disk system</li> <li>o Optical jukebox [optional extra]</li> <li>o Fault tolerant computing [optional]</li> <li>o Hard copy radiograph paper printer 35 cm by 43 cm maximum size</li> <li>o Connectivity modem or ISDN or satellite [128 KB or 256KB or 2Mbits]</li> </ul> <p><i>DR Scanning unit</i></p> <ul style="list-style-type: none"> <li>o Spatial resolution: from 20, 30, 40, 50, 60, 70, 100 &amp; 150 microns</li> <li>o Handles various sizes of plates from 0.5" diameter to 52" OD</li> </ul>	7	<b>Training and certification</b> <ul style="list-style-type: none"> <li>• End user training for               <ol style="list-style-type: none"> <li>1. Operators, supervisors</li> <li>2. Inspectors</li> <li>3. Auditors</li> <li>4. System administrators</li> <li>5. System maintenance [1st line &amp; 2nd line]</li> </ol> </li> <li>• Training for end customers on data retrieval &amp; advanced radiograph image analysis &amp; report generation</li> <li>• Training &amp; certification (company certification offered)</li> <li>• Multi-project management</li> </ul>
		8	<b>Facility Parameter</b> <ol style="list-style-type: none"> <li>1. Mains supply           <ul style="list-style-type: none"> <li>o 110/240 Volts 50/60Hz mains</li> <li>o 1100 VA</li> <li>o Line stabilization recommended UPS with battery time of at least 60 minutes</li> </ul> </li> <li>2. Installation suitability Office environment with unimpaired light and air conditioner</li> </ol>
		9	<b>System Packaging Information</b> <ul style="list-style-type: none"> <li>• DR1400 is usually packaged and dispatched in Heavy Plastic pallet box unit suitable for air freight or land transport</li> <li>• Physical dimensions of pallets [Approx.] 3 off           <ul style="list-style-type: none"> <li>▪ Width: 800 mm</li> <li>▪ Height: 820 mm</li> <li>▪ Length: 1200 mm</li> <li>▪ Weight: 225Kg (approx.)</li> </ul> </li> </ul>
5	<b>System compatibility</b> <ul style="list-style-type: none"> <li>• DR3000 Radiograph film digitisation system</li> <li>• DR1400, DR1200, DR1000 digital radiography technology</li> </ul>		

For further details contact our sales department: