



## INTRODUCTION

The need for Quality Control is emphasised throughout any modern production system. Measurement and traceability of equipment performance, and assurance of repeatability and accuracy, are paramount in establishing correct working practices. Checking the performance of a Radiographic System for Quality Assurance purposes has historically been an arduous task, with differing standards and multiple test gauges and exposures.

CIT's CR Test Phantom incorporates the required test elements into a simple-to-use unit, allowing the radiographic performance of a system to be assessed with just three test shots, and producing results in accordance with ASTM and EN International Radiographic Testing standards.

## BASIC RADIOGRAPHIC MEASUREMENT PERFORMANCE

Basic sensitivity and limits of measurement performance of any radiographic system are essential items of knowledge—if the system cannot resolve defects below a certain size, they will go undetected. The CIT Test Phantom allows precise measurement of the limits of:-

- Line Pair per mm resolution down to 20 lp/mm
- Contrast sensitivity in Aluminium, Steel and Copper to 1%
- Evenness of Exposure
- Beam Alignment to 5° or better
- Radiographic Setup Unsharpness to 0.1mm

## DIGITAL COMPUTED RADIOGRAPHY PERFORMANCE

In addition, Digital Computed Radiography requires that extra information is recorded, to allow for additional information which may be required from the captured image. The CIT Test Phantom additionally allows measurement of:-

- Laser Operation and Scanning Artefacts
- Image linearity
- Scan 'Jitter'
- MTF

## SIZE MATTERS

The original ASTM E2445-05 Standard defined a 14" x 17" Test Phantom. As many NDT applications are related to smaller components, CIT has produced a compact version of the Phantom, measuring just 8" x 10". This carries the same precision test gauges as the standard Phantom, but moved closer together for use in compact beam situations.

## STANDARD REFERENCES

The CIT Test Phantom is designed to fully comply with the requirements of ASTM E2445-05 Appendix X1, and thus with EN 14784-1:2005.

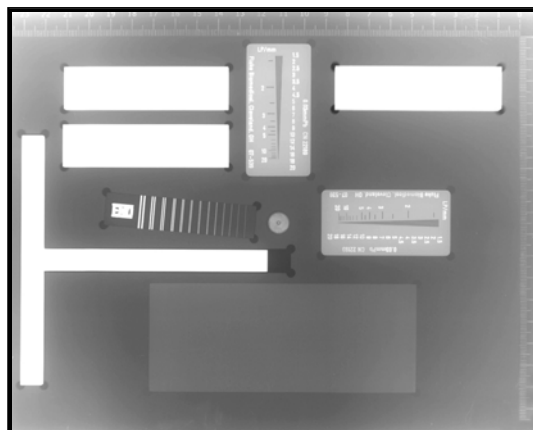
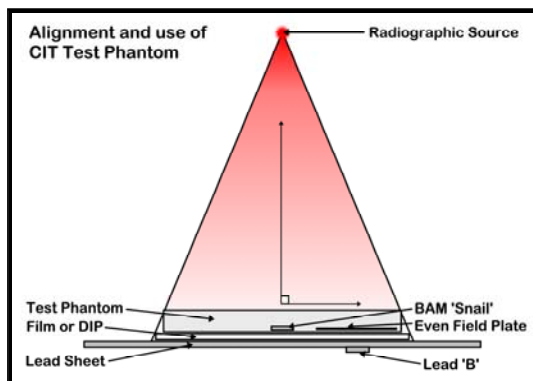
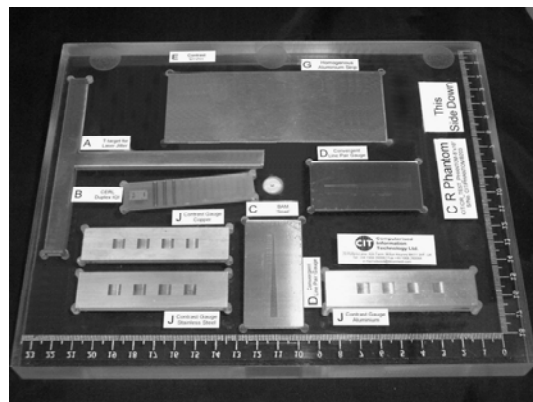
The individual gauges comply with the following Standards:-

- ASTM E2002 / EN462-5 • ASTM 1647-98a

## ORDERING INFORMATION

| Item                    | 8" x 10" (203 x 254mm) | 14" x 17" (356 x 432mm) |
|-------------------------|------------------------|-------------------------|
| <b>Phantom</b>          | CIT/CR-Phan 0810       | CIT/CR-Phan 1417        |
| <b>Aluminium Shield</b> | CIT/SHIELD-S-AL2       | CIT/SHIELD-L-AL2        |
| <b>Steel Shield</b>     | CIT/SHIELD-S-SS2       | CIT/SHIELD-L-SS2        |
| <b>Brass Shield</b>     | CIT/SHIELD-S-CU2       | CIT/SHIELD-L-CU2        |

For further details please contact CIT at the address below



**Manufacturer of the World's Most Advanced Imaging,  
Digital Radiography and Archive Systems**