



Radiography is a non-destructive method that is very useful for detecting hidden flaws in materials and fabrications. In particular, it is exceptionally good at detecting volumetric flaws such as voids, gas pores and solid inclusions. The nature and dimension (length and width) of flaws are also easily recognised although it cannot be used to measure the thickness of defects.

Another benefit of this technology is that it provides a permanent record of the flaw. This is done by putting the item that has been inspected onto a photographic film. In order to do this a source of ionising radiation is positioned at one side of the item that is to be inspected, and a photographic film is placed in close proximity to the other side. The radiation is then partly absorbed during transmission and differences in material thickness or absorption qualities are recorded on the film. This gives a full size image showing internal detail (shown right).

The two types of radiography available are X-ray and gamma. X-ray radiography is generated electrically by means of a high voltage X-ray tube and gamma rays are produced by the natural disintegration of nuclei in a radioactive isotope.

Services available from ITCL:

- 2 off Tech Ops 20 Curie Iridium 192 Isotope
- 1 off gama matt 30 Curie Selenium Isotope
- 1 off Rigaku Portable 300Kva Directional X-Ray Set
- 1 off Philips 160 Kva Directional X-Ray Set
- 2 off 12' Transportable darkroom
- Largest independently run bay in the region

We offer a fully equipped bay with operational lifting equipment including a forklift for loading and unloading.



Pictured above and below: examples of X-Ray and gamma radiography illustrated on photographic film.



This image shows clearly a <insert> on the tested weld

