This method is based on the same principle as medical radiography in a hospital. A piece of radiographic film is placed on the remote side of the material under inspection and radiation is then transmitted through from one side of the material to the remote side where the radiographic film is placed.

The radiographic film detects the radiation and measures the various quantities of radiation received over the entire surface of the film. This film is then processed under dark room conditions and the various degrees of radiation received by the film are imaged by the display of different degrees of black and white, this is termed the film density and is viewed on a special light emitting device.

Discontinuities in the material affect the amount of radiation being received by the film through that particular plane of the material. Qualified inspectors can interpret the resultant images and record the location and type of defect present in the material. Radiography can be used on most materials and product forms, e.g. welds, castings, composites etc.

Radiographic testing provides a permanent record in the form of a radiograph and provides a highly sensitive image of the internal structure of the material.

Radiography is split into two main categories:
- Radiographic Testing
- Radiographic Interpretation

The radiographic testing course is for NDT personnel who execute the practical inspection using radioactive material or radiation emitting devices. The radiographic interpretation course is designed purely for the interpretation of the resultant radiographic image. However, to understand the principles of image formation, sensitivity and correct techniques the general theory syllabus is the same for both courses.

The two sectors of the Radiographic Testing examination that are NOT required for the Radiographic Interpretation examination are:
- Basic Radiation Safety (BRS)
- Practical Examination of the Specimens
**RADIOGRAPHIC TESTING (RT)**

**PCN MINIMUM WORK EXPERIENCE AND TRAINING HOURS’ REQUIREMENTS FOR RT EXAMINATIONS**

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<td>Application of the Method and use of Codes, Specifications and Procedures, applicable to the company, including the relevant control checks.</td>
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**PRACTICAL EXAMINATION**

Follow written instructions and process the inspection test pieces, record and report defects from known datum markers, carry out pre-test calibration checks and post-test procedures.

If a candidate wishes to go direct to Level 2 without first taking the Level 1 route, the minimum requirements are the total accumulative requirements of both Level 1 and 2.

We can provide Radiographic Testing and Interpretation training courses and examinations suitable for any of the following certification schemes:

- PCN / EN 473 / ISO 9712 Level 1, 2, and 3
- SNT-TC-1A in accordance with your company written practice

We can also provide:
- Preparation training for ASNT Level 3

An example of the syllabus that is used for Radiographic training courses is shown below for Level 1 and 2. SGS can tailor the syllabus to satisfy the requirements of an individual's company specific written practice if requested.

**Radiographic Testing**

Radiographic Testing is split into specific product sectors for certification at Level 1 and 2, this is:

- Welds
- Castings

Each of these categories is further split into sub groups:

- Light Metal X-ray
- Dense Metal X-ray (and/or Gamma ray)
- Light and Dense Metal, both X-ray and Gamma ray

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**WHEN YOU NEED TO BE SURE**