



Radiography

Have you tested your material for possible internal defects? Is safety during the use of specific materials extremely important to you? Our specialists carry out the necessary tests using X-ray or gammagraphic radiations.

Your tailor-made solution

X-ray radiation is produced in an X-ray tube. An X-ray tube is an electric device that generates X-rays by means of high voltage.

Gamma rays are produced by radioactive elements (isotopes). The most commonly used isotopes are cobalt-60, iridium-192 and selenium-75. The isotopes are stored in a container that provides protection against the radiation. A radioactive source can be removed from the container by remote control for the purpose of conducting radiographic tests on a workpiece. Defects in an irradiated workpiece are recorded on film.

Extensive experience is required, particularly for the interpretation of the images.

A layman would find it difficult to interpret the X-ray films obtained. For this reason, this should be done by experienced operators. Additional precautions and personal qualifications are required for the transportation and use of radioactive material. One also has to maintain a safe distance when the film is being exposed.

Limitations

- Flat defects are more difficult to detect than volumetric errors.
- The thickness that can be irradiated is limited to ± 200 mm.
- The results cannot be provided immediately in view of the time required for development and interpretation.
- This inspection method requires operators with special training in X-ray techniques, film development, and in safety aspects - such as those of Vinçotte.
- They also need to have the necessary experience to properly interpret the films.

Vinçotte has the required expertise that enables it to provide you with numerous benefits:

- It is possible to “see through” a material.
- One can test different types of materials and product forms.
- The surface condition only has a limited effect on the testing sensitivity.
- One can obtain a tangible, objective result in the form of clearly identifiable films.

Your result

Please note

ASME, EN and ISO standards. Other national standards.

In which situation?

This service is intended for all kinds of companies for the purpose of checking the quality of materials.

Some applications:

- Testing welding joints: detecting all volumetric defects such as gas and slag inclusions, surface defects, and alignment errors, deficient penetration or fusion and, provided that a suitable radiation direction is selected, cracks and bonding errors as well
- Detecting cavities and shrinkage cracks in cast pieces
- Determining the nature and location of encapsulated elements
- Detecting internal corrosion

- Detecting corrosion under insulation