NMP Computed Radiography Plate

Computed radiography plates are used in medical imaging and nondestructive testing of welds, fabricated pipes, and aging infrastructure where sampling is expensive or not possible. The layer that binds the phosphorous material to the substrate has its own luminescence and negatively impacts the signal to noise ratio of the image. This technology improves image clarity in high-energy radiographic images by applying a phosphorous material directly to the Tantalum plate without the use of a polymer binding agent, thereby reducing imaging interference.

DETECTOR / SENSOR / IMAGING

Features

- Provides improved resolution in high-energy radiographic images
- Allows for the removal of plastic polymer by utilizing a phosphorous material
- Reduced amount of radiation needed to perform radiography

Benefits

- Superior high-energy radiographic image clarity
- Reduces interference and internal scattering and allows for increased resolution
- Higher levels of repeatability

Applications

- Medical imaging
- Weld inspection
- Machine component inspection
- Fatigue life analysis
- Nondestructive testing of welds, fabricated pipes, and aging infrastructure where sampling is expensive or not possible

Patents & Awards

- U.S. Patent No. 9,110,175

Inventors

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Technology Readiness Level (1–9)

6

Model or prototype has been demonstrated in a relevant environment.

Partnering Opportunities

Y-12 is seeking an industry partner to fully commercialize this technology.

If you would like more information, please contact the Office of Technology Commercialization and Partnerships:
OTCP@y12.doe.gov
(865) 241-5981
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