Radiographic Testing

Course Information

Radiographic Testing (RT) harnesses the power of electromagnetic waves, specifically X-rays within the 0.01 to 10 nanometre range or Gamma-rays with wavelengths below 0.01 nanometres. Within these ranges, electromagnetic waves can proficiently penetrate solid materials, enabling the creation of detailed images either on film or by using electromagnetic sensors, providing valuable insights into the material's composition and integrity.

RT excels as a volumetric testing method, capable of identifying discontinuities exceeding a 2% cross-sectional void or material change in relation to the actual beam orientation. The energy levels associated with these extremely short waves exceed 100 electron volts (eV), but they pose a potential risk due to ionising radiation. It's crucial for operators to undergo radiation safety training, as this form of radiation is imperceptible to the senses – unseen, unheard, unfelt, untasted, and unscented. The aim is to maintain ALARA (As Low As Reasonably Achievable) exposure levels to minimise potential harm.

If you have an affinity for photography and hold Superman as your favourite DC character, Radiographic Testing offers a unique opportunity to explore your interests while making a substantial contribution to industry safety. However, it's essential to note that a solid foundation in exponents and logarithms is essential for mastering the intricacies of this NDT method.

Radiographic techniques within RT are diverse, contingent upon the type of electromagnetic wave employed, the configuration of exposure, and the image formation. By delving into RT, you not only combine the art of imaging with the pursuit of safety but also play a pivotal role in ensuring the structural soundness of critical components across various industries.

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Please refer to contacts on page 16

Scan to download the SAIW Course Prospectus App onto your cellular phone.

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The training course is based on general theory as well as sector specific applications relating, but not limited to, the following standards and specifications:

- ASME Boiler & Pressure Vessel Code - Section V - Subsection A - Article 1 & 2
- ASME Boiler & Pressure Vessel Code - Section V - Subsection B - Article 22
- ISO 10675 Part 1 & 2 RT - Acceptance levels
- ISO 17636-1 RT - X and gamma ray techniques
- ISO 19232 Parts 1 to 5 RT – Image quality of radiographs
- ISO 11699 Parts 1 & 2 RT – Industrial radiographic films
- ISO 5580 RT – Metallic materials using X- or gamma rays Basic rules
- ISO 5576 RT – Vocabulary

Details of specific codes utilised in the limited (RT 2.Int) as well as derived or advanced techniques courses (RT 2.9) can be found in the relevant training documents.

RADIOGRAPHIC TESTING - SAIW CERTIFICATION NDT SCHEME (ISO 9712) | NON-DESTRUCTIVE TESTING - VOLUMETRIC METHODS								
NDT Method and Level	**Industrial Sector**	**Product Sector / Category**	**Duration 1 day = 8 hours**	**Prices (Inclusive of VAT)**			**Course & Initial Exam Dates**	
				Training & Initial Examination Non-Corporate Members	**Training & Initial Examination Corporate Members**	**Initial Certification**		
Radiographic Testing Level 1 + RT Safety	Pre- and in-service	RT 1.5 X-Ray of Dense Alloy Welds RT 1.6 Gamma-Ray of Dense Alloy Welds	Training 15 days Exam 3 days	**R 49 078**	**R 45 368**	**R 2 650**	**Course Code**	**RT 1 A JHB 01**
							Training	22 Jun - 10 Jul
							Exam	13-15 Jul
LIMITED Radiographic Interpreters Level 2	Pre- and in-service	Film Interpretation of Dense Alloy Welds Only (No operational RT)	Training 9 days Exam 1 day	**R 30 316**	**R 28 090**	**R 2 650**	**Course Code**	**RT 2 INT JHB 01**
							Training	04-14 May
							Exam	15 May
Radiographic Testing Level 2	Pre- and in-service	RT 2.5 X-Ray of Dense Alloy Welds RT 2.6 Gamma-Ray of dense Alloy Welds	Training 10 days Exam 3 days	**R 40 704**	**R 37 630**	**R 2 650**	**Course Code**	**RT 2 A JHB 01**
							Training	20 -31 Jul
							Exam	03-07 Aug
*** other categories available on request and subject to demand. [1] RT 2 A CERTIFICATION IS REQUIRED AS PREREQUISITE**								

*Prices subject to change