

# Compression of radiographic images of weld defects based on fractal and wavelet techniques

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**Abstract :** The necessity in image compression continuously grows during the last decade. One of the most powerful and perspective approaches in this area is image compression using transform coding. Fractal image compression is based on the representation of an image by a contractive transform for which the fixed point is close to the original image. Wavelet transforms perform multi-resolution decomposition of images. Discrete wavelet Transform (DWT) retains frequency as well as spatial information of the signal. These structural advantages of the DWT schemes can lead to better visual quality for compression at low bitrate. In this work we evaluate the fractal coder in spatial and wavelet domain, and we investigate its ability to compress radiographic images of weld defects.

**Keywords :** Fractal Compression, Wavelet-Fractal coder, Radiographic Image of Weld Defects