



Код: 10342

L. Yu, Y.-J. Shin, J. Wang, Y. Shen

# An Ultrasonic Guided Wave Sensor for Gas Accumulation Detection in Nuclear Emergency Core Cooling Systems

Издательство DEStech Publications, Lancaster, 2011 год

9 стр; формат: 23,5 x 16 см; библиографический список: 6 единиц  
ISBN: 978-1-60595-053-2

This paper presents an ultrasonic guided wave based inspection methodology for detecting gas accumulation in the subject nuclear cooling pipe system to (1) perform in-situ measurement of the gas accumulation in order to determine if regulatory action is needed, and (2) permit verification that the subject systems are in compliance with the regulatory requirements. This approach is highlighted by a novel sensing technique using ultrasonic guided waves to perform long range long term in-situ inspection in combination with an advanced cross time-frequency analysis technique for an intelligent processing of the sensory data. Keywords: embedded piezoelectric wafer sensors, ultrasonic wave, gas accumulation, cross time-frequency analysis, nuclear cooling pipe.

**Ключевые слова:**

**Содержание.**

An Ultrasonic Guided Wave Sensor for Gas Accumulation Detection in Nuclear Emergency Core Cooling Systems