

Title (en)

WIRELESS SENSOR AND DATA MANAGEMENT SYSTEM AND METHOD FOR MONITORING THE INTEGRITY OF MECHANICAL STRUCTURES

Title (de)

DRAHTLOSER SENSOR, DATENVERWALTUNGSSYSTEM SOWIE VERFAHREN ZUR ÜBERWACHUNG DER INTEGRITÄT MECHANISCHER STRUKTUREN

Title (fr)

CAPTEUR SANS FIL ET SYSTÈME DE GESTION DE DONNÉES ET PROCÉDÉ DE SURVEILLANCE DE L'INTÉGRITÉ DE STRUCTURES MÉCANIQUES

Publication

**EP 2406624 A1 20120118 (EN)**

Application

**EP 10753941 A 20100315**

Priority

- US 2010027357 W 20100315
- US 15995009 P 20090313

Abstract (en)

[origin: WO2010107712A1] A method and apparatus for inspecting a wall of a mechanical structure including obtaining an infinite response from a sample material having a front face, a thickness, and a back wall, by transmitting into a sample material an ultrasonic wave having a frequency and duration and being generated by one or more transducers, wherein the thickness of the sample material is sufficiently great that only a wave corresponding to the front face of the sample is received back; transmitting an ultrasonic wave generated by one or more transducers into the wall of a mechanical structure to be inspected at a time (T), wherein the ultrasonic wave has the same frequency and duration as the ultrasonic wave transmitted into the sample material; receiving a response signal back from the wall to be inspected; and correlating the response signal to the infinite response, thereby creating correlated data. The system can be operated remotely and wirelessly, and data can be transmitted and received via the Internet or local area network, either wireless or wired.

IPC 8 full level

**G01N 29/00** (2006.01)

CPC (source: EP)

**G01N 29/2481** (2013.01); **G01N 29/28** (2013.01); **G01N 29/348** (2013.01); **G01N 29/50** (2013.01); **G01N 2291/269** (2013.01)

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK SM TR

DOCDB simple family (publication)

**WO 2010107712 A1 20100923**; BR PI1006453 A2 20180227; CA 2755405 A1 20100923; EP 2406624 A1 20120118; EP 2406624 A4 20171206

DOCDB simple family (application)

**US 2010027357 W 20100315**; BR PI1006453 A 20100315; CA 2755405 A 20100315; EP 10753941 A 20100315