

Title (en)

METHOD FOR EARLY DETECTION OF DAMAGE TO VALVES IN OSCILLATING DISPLACEMENT PUMPS AND OSCILLATING DISPLACEMENT PUMPS COMPRISING A BUILT-IN SENSOR SYSTEM FOR USING IN SAID METHOD

Title (de)

VERFAHREN ZUR FRÜHERKENNUNG VON VENTILSCHÄDEN IN OSZILLIERENDEN VERDRÄNGERPUMPEN UND OSZILLIERENDE VERDRÄNGERPUMPEN MIT INTEGRIERTER SENSORIK ZUR VERWENDUNG IN DIESEN VERFAHREN

Title (fr)

PROCÉDÉ DE DÉTECTION PRÉCOCE DE DÉGÂTS DE SOUPAPE DANS DES POMPES VOLUMÉTRIQUES OSCILLANTES ET POMPES VOLUMÉTRIQUES OSCILLANTES COMPORTANT UN SYSTÈME DE DÉTECTION DESTINÉES À ÊTRE EMPLOYÉES DANS CE PROCÉDÉ

Publication

EP 2326842 A1 20110601 (DE)

Application

EP 09743879 A 20090914

Priority

- EP 2009061831 W 20090914
- DE 102008037393 A 20080925

Abstract (en)

[origin: WO2010034632A1] The invention relates to a method for the early detection of damage to valves in oscillating displacement pumps comprising at least three cylinders with or without a common pump head, by signal-based evaluation of measured pressure and structure-borne noise signals, digitalisation of the pressure signals, calculation of correlation coefficients by means of covariance analysis using the distribution of the structure-borne noise on each cylinder in the absence of a common pump head, or using fictive oscillation acceleration signals for each cylinder and associating valve damage to a cylinder in the presence of a common pump head, and triggering an alarm if pre-defined threshold values for the correlation coefficients are exceeded or not reached. The invention also relates to oscillating displacement pumps with integrated sensors for use in said method.

IPC 8 full level

F04B 51/00 (2006.01)

CPC (source: EP)

F04B 51/00 (2013.01); **F04B 2201/0603** (2013.01); **F04B 2201/0604** (2013.01); **F04B 2201/0802** (2013.01)

Citation (search report)

See references of WO 2010034632A1

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

Designated extension state (EPC)

AL BA RS

DOCDB simple family (publication)

WO 2010034632 A1 20100401; DE 102008037393 A1 20100401; DE 102008037393 B4 20150122; EP 2326842 A1 20110601; EP 2326842 B1 20141022

DOCDB simple family (application)

EP 2009061831 W 20090914; DE 102008037393 A 20080925; EP 09743879 A 20090914