

Title (en)

Early detection of failures in pump valves

Title (de)

Störungsfrüherkennung an Pumpenventilen

Title (fr)

Détection anticipée de pannes dans les soupapes de pompes

Publication

**EP 1477678 B1 20070221 (DE)**

Application

**EP 04011109 A 20040510**

Priority

DE 10322220 A 20030516

Abstract (en)

[origin: EP1477678A2] Monitoring method in which the increased operating noise caused by back flow of the transport fluid in a leaky valve in the closed state is taken as a measure for the size of the leak. The effective signal is monitored over time and compared with a reference signal for a pump with intact valves. When there is a predetermined noise level difference or change in difference due to increased operating noise, an early fault detection indicator is triggered. The invention also relates to a corresponding device for method implementation.

IPC 8 full level

**F04B 51/00** (2006.01); **F16K 37/00** (2006.01)

CPC (source: EP US)

**F04B 51/00** (2013.01 - EP US)

Cited by

EP4311937A1; CN105822537A; CN104895714A; DE102006055747A1; CN108661891A; DE102010034798A1; DE102010034800A1; WO2007099057A3; US8122905B2; DE102006055747B4

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DOCDB simple family (publication)

**EP 1477678 A2 20041117; EP 1477678 A3 20050629; EP 1477678 B1 20070221; EP 1477678 B2 20170419**; AT E354730 T1 20070315; DE 10322220 B3 20041007; DE 10322220 C5 20101014; DE 502004002932 D1 20070405; US 2004226346 A1 20041118; US 7069183 B2 20060627

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