

Title (en)
Diagnostic method and apparatus for vacuum pumps

Title (de)
Diagnoseverfahren und -Gerät für Vakuumpumpen

Title (fr)
Procédé et dispositif de diagnostic pour pompes à vide

Publication
EP 0851127 B1 20030205 (EN)

Application
EP 97202185 A 19970712

Priority
IT TO961091 A 19961227

Abstract (en)
[origin: EP0851127A2] The invention relates to a diagnostic method and apparatus for detecting in advance the wear of rotatable components in vacuum pumps, said pumps comprising gas pumping stages formed by rotor disks (113, 114) secured to a rotatable shaft (123) driven by an electric motor, wherein a warning signal for either a pre-alarm or an alarm wear condition is generated when predetermined wear conditions are reached, by expanding the signal from an accelerometer in contact with the vacuum pump into a Fourier spectrum. <IMAGE>

IPC 1-7
F04D 27/02; F04D 19/04; F04D 27/00

IPC 8 full level
F04D 19/04 (2006.01); **F04D 27/02** (2006.01)

CPC (source: EP)
F04D 19/04 (2013.01); **F04D 27/001** (2013.01); **F04D 27/0292** (2013.01)

Cited by
WO2008012150A1; CN104781558A; US2010054957A1; GB2507500A; GB2507500B; CN106321464A; GB2551337A; CN109563840A; JP2019214993A; EP3557072A1; US9828992B2; US11359636B2; US9822788B2; WO2017216514A1; WO2014068277A1; WO2014068276A1; KR20170005226A; US9689773B2; EP3933355A1; WO2022002548A1; TWI751170B; US10024328B2; FR3117435A1; WO2022129711A1; EP2314877B1

Designated contracting state (EPC)
DE FR GB IT

DOCDB simple family (publication)
EP 0851127 A2 19980701; EP 0851127 A3 19990616; EP 0851127 B1 20030205; DE 69718889 D1 20030313; DE 69718889 T2 20031030;
IT 1289811 B1 19981016; IT TO961091 A1 19980627

DOCDB simple family (application)
EP 97202185 A 19970712; DE 69718889 T 19970712; IT TO961091 A 19961227