

Title (en)
METHOD AND APPARATUS FOR AUTOMATICALLY BALANCING ROTATING MACHINERY

Title (de)
VERFAHREN UND GERÄT ZUR AUTOMATISCHEN BALANCIERUNG ROTIERENDER MASCHINEN

Title (fr)
PROCEDE ET DISPOSITIF D'EQUILIBRAGE AUTOMATIQUE DE MACHINES ROTATIVES

Publication
EP 0771446 A4 19970827 (EN)

Application
EP 95923701 A 19950613

Priority
• US 9507054 W 19950613
• US 26021694 A 19940614

Abstract (en)
[origin: WO9534871A1] A method of and apparatus for balancing rotating machinery (20) involves the transient acquisition of transient data (100) over the operational speed range of the engine being analyzed. A spectrum of the transient data is acquired using a real time spectrum analyzer (7) capturing an RPM triggered waterfall (34, 38). Further, a computer calculates a one shot balance solution. The balance solution (44) is shown on a video display screen (850) and includes the suggested solution to the balance problem based on the acquired data and generic sensitivity coefficients (46) and the predicted vibrational behavior of the proposed solution. By acquiring a second set of data, it can be verified whether the one shot balance solution remedied the balance problem. If a problem remains, the operator may calculate engine specific sensitivity coefficients based on at least two previous data acquisition runs. A new trim balance solution is then calculated based on the immediately previous run and the calculated engine specific sensitivity coefficients.

IPC 1-7
G06F 19/00; **G06F 7/70**; **G06G 7/70**; **G06G 7/48**; **G01M 1/16**; **G01M 1/00**

IPC 8 full level
F01D 25/00 (2006.01); **G01M 1/22** (2006.01)

CPC (source: EP)
G01M 1/22 (2013.01)

Citation (search report)
• [YA] US 4485678 A 19841204 - FANUELE FRANK [US]
• [A] GB 2174513 A 19861105 - HOOVER PLC
• [AP] US 5396413 A 19950307 - KANEKO HISAO [JP], et al
• [Y] PATENT ABSTRACTS OF JAPAN vol. 014, no. 001 (P - 985) 8 January 1990 (1990-01-08)
• [Y] PATENT ABSTRACTS OF JAPAN vol. 012, no. 278 (P - 738) 1 August 1988 (1988-08-01)
• See references of WO 9534871A1

Designated contracting state (EPC)
AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)
WO 9534871 A1 19951221; CN 1158173 A 19970827; EP 0771446 A1 19970507; EP 0771446 A4 19970827; JP H10508354 A 19980818

DOCDB simple family (application)
US 9507054 W 19950613; CN 95194517 A 19950613; EP 95923701 A 19950613; JP 50226996 A 19950613