Title (en)

ANTISURGE PROTECTION METHOD FOR CENTRIFUGAL COMPRESSORS

Title (de)

ÜBERLASTSCHUTZVERFAHREN FÜR ZENTRIFUGALVERDICHTER

Title (fr)

MÉTHODE DE PROTECTION ANTISURPRESSION POUR COMPRESSEURS CENTRIFUGES

Publication

EP 2734737 A2 20140528 (EN)

Application

EP 12748533 A 20120625

Priority

- IT BA20110037 A 20110707
- IB 2012053187 W 20120625

Abstract (en)

[origin: WO2013005129A2] Method for individuating the pumping conditions of the centrifugal blowers according to thermo-dynamic conditions (pressure and temperature) and to the gas composition in inlet, comprising the steps of: acquisition of the suction pressure, the suction temperature, the delivery pressure, the delivery temperature, the flow rate, the revolution number and the chemical composition of the gas mixture; calculation of the reduced conditions of the processed gaseous mixture by means of mixing equations; solution of the state equation of the real gases for the calculation of the thermo¬ dynamic properties of the gas mixture in the current conditions; acquisition of the performance non-dimensional curves of the blower, which express the value of the working coefficient of the blower and of the plytropic yield of the blower; calculation of the blower performance curves on the basis of the non-dimensional curves and according to the blower inlet parameters; determination of the pumping points, individuated as maximum points of the blower performance curves which express the value of the pressure in outlet according to the sucked flow rate.

IPC 8 full level

F04D 27/02 (2006.01)

CPC (source: EP US)

F04D 27/001 (2013.01 - EP); **F04D 27/009** (2013.01 - US); **F04D 27/02** (2013.01 - US)

Citation (search report)

See references of WO 2013005129A2

Designated contracting state (EPC)

AL 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 RS SE SI SK SM TR

DOCDB simple family (publication)

WO 2013005129 A2 20130110; **WO 2013005129 A3 20130627**; EP 2734737 A2 20140528; IT BA20110037 A1 20130108; US 2014154051 A1 20140605

DOCDB simple family (application)

IB 2012053187 W 20120625; EP 12748533 A 20120625; IT BA20110037 A 20110707; US 201214232896 A 20120625