

Title (en)

METHOD OF ANTI-SURGE PROTECTION FOR A DYNAMIC COMPRESSOR USING A SURGE PARAMETER

Title (de)

VERFAHREN ZUM SCHUTZ GEGEN VERDICHTERPUMPEN FÜR EINEN DYNAMISCHEN KOMPRESSOR UNTER VERWENDUNG EINES VERDICHTERPUMPEN-PARAMETERS

Title (fr)

PROCÉDÉ DE PROTECTION CONTRE LE POMPAGE POUR COMPRESSEUR DYNAMIQUE À L'AIDE D'UN PARAMÈTRE DE POMPAGE

Publication

EP 3406908 A1 20181128 (EN)

Application

EP 18178650 A 20110511

Priority

- EP 11165767 A 20110511
- US 77744510 A 20100511

Abstract (en)

A method of surge protection for a dynamic compressor (12) that has a corresponding compressor map (32). A control system continually calculates an equivalent polytropic head parameter heq in order to define a surge limit line (38). The system then calculates a control parameter and determines the distance of the control parameter from the surge limit line wherein the control parameter is dynamic to changes in compressor load and invariant to changes in suction conditions and gas compressibility. As a result of the distance of the control parameter to the surge limit line, a surge valve (20) of the dynamic compressor is actuated to prevent surge.

IPC 8 full level

F04D 27/02 (2006.01)

CPC (source: EP US)

F04D 27/0207 (2013.01 - EP US)

Citation (search report)

- [X1] US 4971516 A 19901120 - LAWLESS BRIAN S [US], et al
- [X1] US 5195875 A 19930323 - GASTON JOHN R [US]
- [X1] US 5908462 A 19990601 - BATSON BRETT W [US]
- [X1] US 4156578 A 19790529 - AGAR JORAM [US], et al

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)

EP 2386762 A1 20111116; EP 2386762 B1 20180620; EP 3406908 A1 20181128; EP 3406908 B1 20210714; US 2011280738 A1 20111117; US 2012100013 A9 20120426

DOCDB simple family (application)

EP 11165767 A 20110511; EP 18178650 A 20110511; US 77744510 A 20100511