Title (en)

FLOW CONTROL METHOD AND MEANS

Title (de

VERFAHREN UND MITTEL ZUR STRÖMUNGSKONTROLLE

Title (fr)

PROCEDE ET MOYENS DE REGULATION D'ECOULEMENT

Publication

EP 0543908 B1 19960918 (EN)

Application

EP 91915299 A 19910819

Priority

- GB 9018188 A 19900818
- GB 9101407 W 19910819

Abstract (en

[origin: WO9203661A1] The invention provides a method of controlling gas flow in an axial flow compressor (C) in which the flow at least at one chosen station in the direction of flow through the compressor the flow is sensed at a series of circumferentially spaced positions. Flow variations above a predetermined limit are evaluated to give an actuating response if a disturbance above a predetermined acceptable level is detected. When such a disturbance is detected, higher pressure gas bled from further downstream is injected at said station to supplement the main gas flow there. An incipient rotating stall cell will appear as a variation occurring sequentially at the circumferentially spaced positions. By responding to such a condition with a pressure injection flow, it is found possible to suppress both rotating stall and surge conditions in the compressor before the disturbance develops fully. The same means can be arranged to counter steady state distortion.

IPC 1-7

F04D 27/02

IPC 8 full level

F04D 27/02 (2006.01)

CPC (source: EP)

F04D 27/001 (2013.01); F04D 27/0215 (2013.01); F04D 27/0238 (2013.01)

Cited by

US9334869B2; WO2012091216A1

Designated contracting state (EPC)

DE FR GB

DOCDB simple family (publication)

WO 9203661 A1 19920305; DE 69122258 D1 19961024; DE 69122258 T2 19970130; EP 0543908 A1 19930602; EP 0543908 B1 19960918; GB 9018188 D0 19901003; JP H05509143 A 19931216

DOCDB simple family (application)

GB 9101407 W 19910819; DE 69122258 T 19910819; EP 91915299 A 19910819; GB 9018188 A 19900818; JP 51422291 A 19910819