

Title (en)

DEVICE FOR EXTENDING THE SURGE MARGIN OF A RADIAL COMPRESSOR

Publication

**EP 0348674 B1 19921216 (DE)**

Application

**EP 89109560 A 19890526**

Priority

- CH 247888 A 19880629
- IN 485MA1989 A 19890620

Abstract (en)

[origin: JPH0242199A] PURPOSE: To stabilize impeller flow in the inlet region by forming an annular notch on a circumferential wall of an inlet duct in front of an impeller of a radial compressor, and arranging a plurality of blades in the notch via a stabilization ring. CONSTITUTION: In a radial compressor comprising a casing 1 and an impeller 2, a device for extending the operational performances of the compressor is arranged in front of the impeller 2. The device comprises a stabilizer opening 5, a stabilization ring 3 and a plurality of stabilizer blades 4. The stabilizer opening 5 extends in the radial direction with a given depth from the surface of an inlet duct 6 into the casing 1, and is formed in the axial direction in the form of an internal groove extending with a given length. The stabilization ring 3 is integrated into the stabilizer opening 5 so that the inner circumferential surface thereof is identical with the surface of the inlet duct 6. The blades 4 are placed on the outer circumference of the ring.

IPC 1-7

**F04D 27/02**

IPC 8 full level

**F04D 29/44** (2006.01); **F04D 27/02** (2006.01)

CPC (source: EP US)

**F04D 29/4213** (2013.01 - EP US); **F04D 29/685** (2013.01 - EP US); **Y10S 415/914** (2013.01 - EP US)

Cited by

CN102927053A; DE102006007347A1; EP1980754A3; US5304033A; DE102015111462B3; US5762470A; DE4027174A1; DE4212653B4; US5466118A; EP1721062A4; EP0684386A1; US5545008A; DE19920524A1; DE19920524C2; DE10029808C1; FR2988146A1; CN104169589A; EP0737814A1; US5246335A; EP0526965A3; US7942625B2; EP0605184A1; EP1404975A4; EP3139045A1; WO2013135561A1; WO9402742A1; FR2794817A1; US6394751B1; US6554568B2; US9651060B2; WO9420759A1; WO9203660A1

Designated contracting state (EPC)

CH DE FR GB LI

DOCDB simple family (publication)

**EP 0348674 A1 19900103**; **EP 0348674 B1 19921216**; CH 675279 A5 19900914; IN 172509 B 19930904; JP H0242199 A 19900213; RU 1831590 C 19930730; US 4990053 A 19910205

DOCDB simple family (application)

**EP 89109560 A 19890526**; CH 247888 A 19880629; IN 485MA1989 A 19890620; JP 16549889 A 19890629; SU 4614322 A 19890621; US 36933189 A 19890621