

Title (en)

Vibration damping elements for an axial holding ring of turbomachine fan blades

Title (de)

Vibrationsdämpfungselemente für einen axialen Haltering von Bläuserschaufeln einer Turbomaschine

Title (fr)

Dispositif d'amortissement des vibrations d'un anneau de rétention axiale des aubes de soufflante d'une turbomachine

Publication

EP 1746250 B1 20080910 (FR)

Application

EP 06117009 A 20060712

Priority

FR 0507753 A 20050721

Abstract (en)

[origin: EP1746250A1] A vibration damper for an axial retaining ring (30) for turbine blower vanes (16), mounted on a rotating disk (10) with an annular collar (18) having radial teeth (20) to be contacted with complementary teeth (32) on the ring, consists of elastomeric stoppers (38) to be lodged axially between adjacent teeth and radially between the collar and the ring. A vibration damper is claimed for an axial retaining ring (30) for turbine blower vanes (16), which are mounted by the base (14) on a rotating disk (10) with an axially extending annular collar (18) having radial teeth (20) to be contacted with complementary radial teeth (32) on the retaining ring, which is mounted around the collar. The vibration damper consists of elastomeric stoppers (38) to be lodged axially between two adjacent teeth of the collar and two adjacent teeth of the retaining ring and radially between the collar and the ring. The stoppers have contact surfaces designed to contact the adjacent teeth, the ring and the collar. Independent claims are included for (1) a rotating disk (10) as described above, provided with at least two of the vibration dampers (38) (preferably spaced equidistantly); (2) a retaining ring (30) as described above, provided with at least two of the vibration dampers (38); and (3) a turbine having at least one of the claimed rotating disks with vibration dampers.

IPC 8 full level

F01D 5/30 (2006.01)

CPC (source: EP US)

F01D 5/26 (2013.01 - EP US); **F01D 5/3007** (2013.01 - EP US); **F01D 5/326** (2013.01 - EP US); **F01D 25/04** (2013.01 - EP US); **F04D 29/322** (2013.01 - EP US); **F04D 29/668** (2013.01 - EP US); **F05D 2250/182** (2013.01 - EP US); **F05D 2260/30** (2013.01 - EP US); **F05D 2300/431** (2013.01 - EP US)

Cited by

FR2967721A1; FR2948725A1; EP3473810A1; FR2971822A1; FR3029962A1; EP2503098A3; US10458244B2; US9540935B2; US8573944B2; WO2012114032A1

Designated contracting state (EPC)

DE FR GB NL

DOCDB simple family (publication)

EP 1746250 A1 20070124; **EP 1746250 B1 20080910**; CA 2552287 A1 20070121; CA 2552287 C 20130219; CN 1900533 A 20070124; CN 1900533 B 20110907; DE 602006002673 D1 20081023; FR 2888897 A1 20070126; FR 2888897 B1 20071019; JP 2007032564 A 20070208; JP 5005975 B2 20120822; RU 2006126401 A 20080127; RU 2392500 C2 20100620; US 2007020089 A1 20070125; US 7458769 B2 20081202

DOCDB simple family (application)

EP 06117009 A 20060712; CA 2552287 A 20060718; CN 200610099207 A 20060721; DE 602006002673 T 20060712; FR 0507753 A 20050721; JP 2006196450 A 20060719; RU 2006126401 A 20060720; US 45795406 A 20060717