

Title (en)

Gas turbine engine

Title (de)

Gasturbinentriebwerk

Title (fr)

Moteur à turbine à gaz

Publication

**EP 1013894 B1 20030604 (EN)**

Application

**EP 99310555 A 19991223**

Priority

US 22054498 A 19981223

Abstract (en)

[origin: EP1013894A2] A fan case 48 in a gas turbine engine has a radial zone of interaction 60 bounded outwardly by a fan case surface 53. Hardened structure 42 such as overlapping shingles is disposed in the zone 60. The zone 60 is less than one hundredth of the fan case diameter as measured from the blade tips 38 in a non-operative, zero speed engine condition and is such that during a high rotor imbalance condition, the blade tips 38 skid on the hardened structure 42 and reduce the destructive cutting away of the fan case, and reduce torque and imbalance loads transmitted to the interface of the engine and the aircraft. <IMAGE>

IPC 1-7

**F01D 21/04**; F01D 11/12; F01D 25/24

IPC 8 full level

**F02C 7/00** (2006.01); **F01D 11/12** (2006.01); **F01D 21/04** (2006.01); **F01D 25/24** (2006.01)

CPC (source: EP)

**F01D 11/12** (2013.01); **F01D 21/04** (2013.01); **F01D 25/24** (2013.01)

Citation (examination)

EP 0922837 A2 19990616 - UNITED TECHNOLOGIES CORP [US]

Cited by

EP1475516A1; EP1589195A1; GB2494137A; GB2494137B; US7402022B2; WO2013154642A1; US10221718B2; US9097114B2; US8961113B2; US9017010B2; WO2015076882A3

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DE FR GB

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