

Title (en)

Leading edge cooling of a gas turbine component using staggered turbulator strips

Title (de)

Kühlung der Leitkante einer Gasturbinenkomponente mittels gestaffelt angeordneten Turbulatoren

Title (fr)

Refroidissement du bord d'attaque d'un composant de turbine à gaz par générateurs de turbulence

Publication

EP 1870561 A2 20071226 (EN)

Application

EP 07252545 A 20070622

Priority

US 47389306 A 20060622

Abstract (en)

A turbine engine component has an airfoil portion (32) having a leading edge, a suction side (46), a pressure side (42) and a radial flow leading edge cavity (34) through which a cooling fluid flows for cooling the leading edge. The turbine engine component further has a staggered arrangement of trip strips (40; 44) for generating a vortex (49) in the leading edge cavity (34) which impinges on a nose portion (36) of the leading edge cavity (34).

IPC 8 full level

F01D 5/18 (2006.01); **F01D 25/12** (2006.01)

CPC (source: EP US)

F01D 5/187 (2013.01 - EP US); **F05D 2240/12** (2013.01 - EP US); **F05D 2240/121** (2013.01 - EP US); **F05D 2240/303** (2013.01 - EP US); **F05D 2260/2212** (2013.01 - EP US); **F05D 2260/22141** (2013.01 - EP US)

Citation (applicant)

US 6068445 A 20000530 - BEECK ALEXANDER [DE], et al

Cited by

EP3181817A1; EP1873354A3; EP2236751A3; US10337334B2; US10422233B2; US10577947B2; US8348613B2; US10280841B2

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Designated extension state (EPC)

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EP 1870561 A2 20071226; **EP 1870561 A3 20101222**; **EP 1870561 B1 20170405**; JP 2008002464 A 20080110; US 2007297916 A1 20071227

DOCDB simple family (application)

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