

Title (en)  
FILM COOLING STRUCTURE

Title (de)  
FILMKÜHLSTRUKTUR

Title (fr)  
STRUCTURE DE REFROIDISSEMENT PAR FILM

Publication  
**EP 2083147 A1 20090729 (EN)**

Application  
**EP 07738382 A 20070313**

Priority  
• JP 2007054910 W 20070313  
• JP 2006306538 A 20061113

Abstract (en)  
A film cooling structure 10 includes a structural wall 11 that has an outer surface 12 exposed to combustion gas and an inner surface 13 positioned opposite to the outer surface 12, and film cooling holes 14 are formed at the structural wall 11 and introduce cooling air from the inner surface 13 toward the outer surface 12 in order to perform film cooling. The film cooling hole 14 includes an introducing portion 14a that extends to a middle position in the structural wall 11 from the inner surface 13 toward the outer surface 12, an enlarged portion 14b of which the cross-sectional area is gradually increased toward the outer surface 12 from an end of an outer surface side of the introducing portion 14a and which is opened at the outer surface 12, and a partition portion 16 that partitions the inside of the enlarged portion 14b into a plurality of spaces in a width direction of the hole perpendicular to a flow direction of the combustion gas.

IPC 8 full level  
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CPC (source: EP US)  
**F01D 5/186** (2013.01 - EP US); **F05D 2250/52** (2013.01 - EP US); **F05D 2260/202** (2013.01 - EP US)

Cited by  
EP2815103A4; EP2815109A4; EP2815105A4; EP3388632A1; EP2815078A4; EP2815102A4; US10422230B2; WO2013165502A2;  
WO2013123006A1; WO2013123120A1; EP2815101A4; EP2815077A4; WO2013122913A1; US9988933B2; US11299633B2; US11384245B2

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