

Title (en)  
Seal system for a gas turbine

Title (de)  
Dichtungssystem für eine Gasturbine

Title (fr)  
Système d'étanchéité pour turbine à gaz

Publication  
**EP 2540973 A1 20130102 (EN)**

Application  
**EP 11172105 A 20110630**

Priority  
EP 11172105 A 20110630

Abstract (en)  
An abradable seal system for a gas turbine comprises a rotor blade tip (7) with an abrasive coating system (9, 11) and a stationary heat shield ring (1) facing opposite to the blade tip (7) and coated with an abradable coating. The abrasive coating system comprises an oxidation resistant and/or corrosion resistant bond coat (9) and a thermal barrier coating (11) atop of the bond coat (9). The thermal barrier coating (11) is a ZrO<sub>2</sub> coating that is partially stabilized by Y<sub>2</sub>O<sub>3</sub> and free of vertical macrocracks.

IPC 8 full level  
**C23C 28/00** (2006.01); **F01D 5/20** (2006.01); **F01D 5/28** (2006.01); **F01D 11/12** (2006.01)

CPC (source: EP)  
**C23C 4/02** (2013.01); **C23C 28/30** (2013.01); **C23C 28/321** (2013.01); **C23C 28/3215** (2013.01); **C23C 28/345** (2013.01); **C23C 28/3455** (2013.01); **F01D 5/20** (2013.01); **F01D 5/288** (2013.01); **F01D 11/122** (2013.01); **F05D 2230/90** (2013.01); **F05D 2260/95** (2013.01); **F05D 2300/2118** (2013.01); **F05D 2300/611** (2013.01)

Citation (applicant)  
EP 0707091 A1 19960417 - PRAXAIR TECHNOLOGY INC [US]

Citation (search report)  
• [X] US 2003138658 A1 20030724 - TAYLOR THOMAS ALAN [US], et al  
• [Y] EP 2192098 A2 20100602 - ROLLS ROYCE CORP [US]  
• [Y] WO 2011019486 A1 20110217 - PRAXAIR TECHNOLOGY INC [US], et al

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