

Title (en)  
Combined vortex reducer

Title (de)  
Kombinierter Wirbelgleichrichter

Title (fr)  
Redresseur de tourbillons combiné

Publication  
**EP 2123860 B1 20170607 (DE)**

Application  
**EP 09158557 A 20090423**

Priority  
DE 102008024146 A 20080519

Abstract (en)  
[origin: EP2123860A2] A vortex reducer (10) has at least one ring (11) with first hole passages (13) and second hole passages (14) evenly distributed around the ring circumference. Inwardly extending bleed air tubes (15) are evenly distributed around the ring circumference and are provided only on the first hole holes. The second hole passages are devoid of such tubes and opened into inter-spaces between bleed air tubes. An independent claim is also included for a method for guiding bleed airflows in a gas turbine.

IPC 8 full level  
**F01D 5/08** (2006.01); **F01D 17/10** (2006.01); **F04D 29/32** (2006.01); **F04D 29/58** (2006.01)

CPC (source: EP US)  
**F01D 5/081** (2013.01 - EP US); **F01D 17/105** (2013.01 - EP US); **F04D 29/321** (2013.01 - EP US); **F04D 29/582** (2013.01 - EP US)

Cited by  
EP2617941A1; EP2612988A3; CN107023394A; EP2787169A1; FR2997584A1; FR3016936A1; GB2537293A; GB2537293B; EP3048248A1; EP3656978A1; US10598096B2; WO2015110751A1; US10030517B2; US10458243B2

Designated contracting state (EPC)  
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US 2009282834 A1 20091119; US 8250870 B2 20120828

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