

Title (en)
Stator vane with inner and outer shroud

Title (de)
Statorschaukel mit innerem und äusserem Deckband

Title (fr)
Aube avec anneau interne et externe

Publication
EP 1707744 A2 20061004 (EN)

Application
EP 06251185 A 20060306

Priority
US 7224905 A 20050307

Abstract (en)
Vibration induced compressor vane failure from tip leakage vortex bursting is eliminated or minimized. By securing the vane at opposite ends to inner and outer stationary casings (44, 42), tip leakage is entirely avoided hence avoiding the mechanism for inducing vibration. By contouring the inner surface of the flow path to converge the flow in a downstream direction with a cantilevered compressor vane having a vane tip spaced from the inner casing surface, airflow lift off is precluded or minimized maintaining the flow attached to the flowpath surfaces with consequent avoidance of tip vortex induced vibration.

IPC 8 full level
F01D 5/22 (2006.01); **F01D 9/04** (2006.01)

CPC (source: EP US)
F01D 5/143 (2013.01 - EP US); **F01D 9/042** (2013.01 - EP US); **F01D 11/14** (2013.01 - EP US); **F04D 29/164** (2013.01 - EP US); **F04D 29/644** (2013.01 - EP US)

Citation (examination)
EP 1098092 A2 20010509 - GEN ELECTRIC [US]

Cited by
EP2218918A1; CN102317634A; EP2218876A1; EP3296516A1; WO2010091956A1

Designated contracting state (EPC)
CH DE IT LI

Designated extension state (EPC)
AL BA HR MK YU

DOCDB simple family (publication)
EP 1707744 A2 20061004; **EP 1707744 A3 20090527**; CN 1831297 A 20060913; JP 2006250147 A 20060921; US 2006198726 A1 20060907; US 2009123275 A1 20090514

DOCDB simple family (application)
EP 06251185 A 20060306; CN 200610059437 A 20060307; JP 2006057059 A 20060303; US 15510108 A 20080529; US 7224905 A 20050307