

Title (en)  
Airfoil shape for variable stator vanes

Title (de)  
Schaufelprofil für verstellbare Statorschaufeln

Title (fr)  
Profil d'aube pour aubes statoriques variables

Publication  
**EP 1798375 B1 20110302 (DE)**

Application  
**EP 06024318 A 20061123**

Priority  
DE 102005060699 A 20051219

Abstract (en)  
[origin: EP1798375A2] For the purposes of blade profile definition, a profile skeleton line extends along the meridional flow line, and the stator is divided into three radial zones (Z0, Z1, Z2). These zones, from the radially inner- to the radially-outer edge, have a profile skeleton line constructed to satisfy a set of equations. These relate angles of inclination at the stator leading edge ( $\alpha_1$ ) and trailing edge ( $\alpha_2$ ), the dimensionless reference angle of overall curvature ( $\alpha^*$ ), dimensionless running length ( $S$ ) (reference) and angles ( $\alpha_P$ ) between the tangent and meridional flow line at each point, and other variables.

IPC 8 full level  
**F01D 5/14** (2006.01); **F01D 17/16** (2006.01); **F04D 29/32** (2006.01); **F04D 29/46** (2006.01); **F04D 29/56** (2006.01)

CPC (source: EP US)  
**F01D 5/141** (2013.01 - EP US); **F01D 17/165** (2013.01 - EP US); **F04D 29/544** (2013.01 - EP US); **F04D 29/563** (2013.01 - EP US);  
**F05D 2240/301** (2013.01 - EP US); **F05D 2250/00** (2013.01 - EP US); **F05D 2250/14** (2013.01 - EP US); **F05D 2250/74** (2013.01 - EP US);  
**Y10S 416/02** (2013.01 - EP US)

Designated contracting state (EPC)  
DE FR GB

DOCDB simple family (publication)  
**EP 1798375 A2 20070620; EP 1798375 A3 20081029; EP 1798375 B1 20110302;** DE 102005060699 A1 20070621;  
DE 502006008986 D1 20110414; US 2007140837 A1 20070621; US 7416382 B2 20080826

DOCDB simple family (application)  
**EP 06024318 A 20061123;** DE 102005060699 A 20051219; DE 502006008986 T 20061123; US 64040406 A 20061218