

Title (en)

Combustor comprising swirler with twisted vanes

Title (de)

Gasturbinenbrennkammer mit verwundenen Drallschaufeln

Title (fr)

Chambre de combustion avec une vrille avec des aubes tordues

Publication

EP 0902237 B1 20031203 (EN)

Application

EP 98116591 A 19980902

Priority

JP 24547797 A 19970910

Abstract (en)

[origin: EP0902237A2] Pre-mixture forming swirler in gas turbine pre-mixed flame type low NO_x combustor is improved so as to accelerate mixing of fuel and air and to prevent occurrence of flame stagnation and burning of component. Three-dimensional swirler is constructed such that swirler vane (101a) is twisted from hub side thereof to tip side so that fitting angle (β) of the tip side relative to fuel nozzle (102) center axis (C) is larger than that (α) of the hub side. Thereby, while the angle (α) of the hub side is set smaller so that flame stagnation and burning of components resulted therefrom may be prevented from occurring, the angle (β) of the tip side may be selected so that shearing flow necessary for appropriate mixing of fuel (F) and air (A) is obtained, thus favorable pre-mixing is done, life deterioration due to the burning etc. is prevented and combustion efficiency is enhanced. <IMAGE>

IPC 1-7

F23R 3/14

IPC 8 full level

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CPC (source: EP)

F23R 3/14 (2013.01)

Cited by

EP1985924A1; EP2728260A1; EP2728261A1; CN103807879A; US7360363B2; US9557061B2; US7753677B2; KR20170003053A; KR20170003050A; WO03006887A1; WO2004025183A3; WO2008128955A1

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