

Title (en)

TANGENTIAL ANNULAR COMBUSTOR WITH PREMIXED FUEL AND AIR FOR USE ON GAS TURBINE ENGINES

Title (de)

TANGENTIALE RINGFÖRMIGE VERBRENNUNGSEINHEIT MIT VORGEMISCHTEM BRENNSTOFF ZUR VERWENDUNG IN GASTURBINENMOTOREN

Title (fr)

CHAMBRE DE COMBUSTION ANNULAIRE TANGENTIELLE COMPRENANT UN PRÉMÉLANGE D'AIR ET DE CARBURANT DESTINÉE À ÊTRE UTILISÉE DANS DES MOTEURS À TURBINE À GAZ

Publication

EP 2748533 A4 20150304 (EN)

Application

EP 11871342 A 20110822

Priority

US 2011048595 W 20110822

Abstract (en)

[origin: WO2013028164A2] A combustion device used in gas turbine engines to produce propulsion or rotate a shaft for power generation includes an annular combustor with a system of fuel and air inlet passages and nozzles that results in a staged combustion of premixed fuel and air. The fuel and air inlets are placed at various longitudinal locations circumferentially, and can take on different configurations where all nozzles inject a fuel-air mixture or some may inject only air. The combustion device provides an optimal mixing of fuel and air, creates an environment for combustion that reduces pollutant emissions reducing the need for costly pollution control devices, enhances ignition and flame stability, reduces piloting issues, allows increased fuel flexibility, decreases the required size of the first stage nozzle guide vane (NGV), and improves vibration reduction.

IPC 8 full level

F23R 3/28 (2006.01); **F23R 3/04** (2006.01); **F23R 3/50** (2006.01); **F23R 3/54** (2006.01); **F23R 3/58** (2006.01)

CPC (source: EP RU)

F02C 3/14 (2013.01 - EP); **F23R 3/06** (2013.01 - EP); **F23R 3/12** (2013.01 - EP); **F23R 3/283** (2013.01 - EP); **F23R 3/343** (2013.01 - EP); **F23R 3/50** (2013.01 - EP); **F23R 3/58** (2013.01 - EP); **F05D 2240/128** (2013.01 - EP); **F05D 2250/314** (2013.01 - EP); **F23R 3/28** (2013.01 - RU); **F23R 3/46** (2013.01 - RU); **F23R 2900/00002** (2013.01 - EP); **F23R 2900/03041** (2013.01 - EP); **F23R 2900/03044** (2013.01 - EP); **F23R 2900/03045** (2013.01 - EP); **Y02T 50/60** (2013.01 - EP); **Y02T 50/678** (2013.01 - EP)

Citation (search report)

- [X] US 2004144098 A1 20040729 - WILLIS JEFFREY W [US], et al
- [X] US 5816041 A 19981006 - GRENINGER ALLEWIS A [US]
- [X] US 2008307792 A1 20081218 - CAMERIANO LAURENT BERNARD [FR], et al
- [E] WO 2011149973 A1 201111201 - TOGAN MAJED DR [AE], et al
- See references of WO 2013028164A2

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)

WO 2013028164 A2 20130228; WO 2013028164 A3 20140320; WO 2013028164 A8 20140410; CN 103930723 A 20140716;
EP 2748533 A2 20140702; EP 2748533 A4 20150304; JP 2014524562 A 20140922; JP 6110854 B2 20170405; KR 101774630 B1 20170919;
KR 20140090141 A 20140716; RU 2014110629 A 20150927; RU 2626887 C2 20170802

DOCDB simple family (application)

US 2011048595 W 20110822; CN 201180073012 A 20110822; EP 11871342 A 20110822; JP 2014527125 A 20110822;
KR 20147007517 A 20110822; RU 2014110629 A 20110822