

Title (en)

Cooling of a multimode injection device for a combustion chamber, particularly for a gas turbine

Title (de)

Kühlung einer multimodalen Einspritzvorrichtung für eine Brennkammer, insbesondere für eine Gasturbine

Title (fr)

Refroidissement d'un dispositif d'injection multimode pour chambre de combustion, notamment d'un turboréacteur

Publication

**EP 1806536 A1 20070711 (FR)**

Application

**EP 07100253 A 20070108**

Priority

FR 0650069 A 20060109

Abstract (en)

The multi-mode injector, containing two coaxial fuel atomising systems fed by primary (17) and secondary (19) circuits, has an atomising head in which the secondary circuit is connected to an annular distribution chamber (30) pierced with a series of equally-spaced fuel ejection holes (31). In the head the primary circuit forms at least part of a cooling duct (86) adjoining the distribution chamber and made with inner and outer radial surfaces.

Abstract (fr)

Refroidissement d'une partie du dispositif d'injection correspondant à un circuit secondaire par une circulation de carburant à débit permanent d'un circuit primaire. Le circuit secondaire (19) est connecté à une chambre de distribution (30) percée d'une pluralité de trous d'éjection de carburant et le circuit primaire (17) comporte au moins une partie de conduit (86) jouxtant la chambre de distribution, pour son refroidissement.

IPC 8 full level

**F23R 3/28** (2006.01); **F23D 11/36** (2006.01); **F23R 3/34** (2006.01)

CPC (source: EP US)

**F23D 11/36** (2013.01 - EP US); **F23R 3/283** (2013.01 - EP US); **F23R 3/343** (2013.01 - EP US); **F23D 2900/00016** (2013.01 - EP US)

Citation (search report)

- [X] US 3684186 A 19720815 - HELMRICH WILLIAM F
- [X] US 4111369 A 19780905 - SHARPE CECIL H
- [X] US 4798330 A 19890117 - MANCINI ALFRED A [US], et al
- [A] US 5577386 A 19961126 - ALARY JEAN-PAUL D [FR], et al

Cited by

FR2911667A1; FR2951245A1; FR2951246A1; CN102575843A; RU2477808C2; EP2026002A1; FR2919898A1; US10451282B2; US8186163B2; US8959772B2; US10190774B2; US9003802B2; US9046271B2; US10288293B2; WO2011045486A1; WO2011045503A1; WO2015147935A1

Designated contracting state (EPC)

DE FR GB IT SE

Designated extension state (EPC)

AL BA HR MK YU

DOCDB simple family (publication)

**EP 1806536 A1 20070711**; **EP 1806536 B1 20170816**; CA 2572857 A1 20070709; CA 2572857 C 20141021; CN 101000136 A 20070718; CN 101000136 B 20101208; FR 2896030 A1 20070713; FR 2896030 B1 20080418; JP 2007183094 A 20070719; JP 5008401 B2 20120822; RU 2007100426 A 20080720; RU 2431082 C2 20111010; US 2007157616 A1 20070712; US 7891193 B2 20110222

DOCDB simple family (application)

**EP 07100253 A 20070108**; CA 2572857 A 20070104; CN 200710000096 A 20070109; FR 0650069 A 20060109; JP 2007000529 A 20070105; RU 2007100426 A 20070109; US 62026907 A 20070105