

Title (en)

Aeromechanical injection system with non-return primary swirler

Title (de)

Aeromechanisches Einspritzsystem mit Primärverwirbelungs- und Rückschlagvorrichtung

Title (fr)

Système d'injection aéromécanique à vrille primaire anti-retour

Publication

EP 1278012 B1 20061025 (FR)

Application

EP 02291767 A 20020712

Priority

FR 0109456 A 20010716

Abstract (en)

[origin: US2003010034A1] An injection system for a turbomachine combustion chamber, the system comprising a fuel injection nozzle for vaporizing fuel in the combustion chamber and a mixer/deflector assembly coaxial with the injection nozzle and serving to mix fuel and oxidizer and to diffuse the mixture in the combustion chamber, said mixer/deflector assembly comprising a primary swirler and a secondary swirler disposed at a determined distance apart from each other in the axial direction and separated by a Venturi device disposed coaxially with the injection nozzle, the primary swirler being fixed securely to the injection nozzle and being spaced apart therefrom by a constant radial distance which is determined in such a manner that the fuel vaporized by the injection nozzle can under no circumstances impact on the primary swirler. The Venturi device preferably has an inside surface that presents an upstream portion with a slope discontinuity P.

IPC 8 full level

F23R 3/14 (2006.01); **F23R 3/28** (2006.01)

CPC (source: EP US)

F23R 3/14 (2013.01 - EP US); **F23R 3/286** (2013.01 - EP US)

Cited by

EP1873456A1; FR2903170A1; EP1873457A1; FR2903173A1; EP1488086A4; US7908865B2; US7861529B2

Designated contracting state (EPC)

DE ES FR GB IT SE

DOCDB simple family (publication)

EP 1278012 A2 20030122; EP 1278012 A3 20031119; EP 1278012 B1 20061025; CA 2393082 A1 20030116; CA 2393082 C 20101019; CN 1230650 C 20051207; CN 1407280 A 20030402; DE 60215589 D1 20061207; DE 60215589 T2 20070830; ES 2272650 T3 20070501; FR 2827367 A1 20030117; FR 2827367 B1 20031017; JP 2003042452 A 20030213; JP 4066241 B2 20080326; RU 2002118252 A 20040210; RU 2295645 C2 20070320; UA 76709 C2 20060915; US 2003010034 A1 20030116; US 6959551 B2 20051101

DOCDB simple family (application)

EP 02291767 A 20020712; CA 2393082 A 20020710; CN 02126114 A 20020716; DE 60215589 T 20020712; ES 02291767 T 20020712; FR 0109456 A 20010716; JP 2002203572 A 20020712; RU 2002118252 A 20020710; UA 2002075852 A 20020715; US 19423002 A 20020715