

Title (en)

Gas turbine engine fuel/air premixers with variable geometry exit and method for controlling exit velocities

Title (de)

Kraftstoff/Luft-Vormischeinrichtung mit veränderlicher Geometrie und Methode, die Ausströmgeschwindigkeit zu regeln

Title (fr)

Dispositif de prémélange carburant / air avec géométrie variable et méthode de contrôle de vitesse de sortie

Publication

EP 1319896 A2 20030618 (EN)

Application

EP 02027665 A 20021212

Priority

US 1441501 A 20011214

Abstract (en)

Apparatus (1430) for premixing fuel and air to provide a fuel/air mixture includes a mixing tube (1434) configured for receiving fuel and air, a mixing tube axis (1442), and a mixing tube exit (1454) for discharging a fuel/air mixture. The apparatus further includes a mixture valve (1444) associated with the mixing tube exit (1454) and including inner and outer valve members that define an exit flow area (1402). The defined exit flow area includes at least two segmented, substantially opposed area portions with respect to angular position about the mixing tube axis provided by contours in the outer valve member for directing the mixture flow, and at least one of the inner and outer valve members is movable relative to the other of the valve members to selectively vary the defined exit flow area with respect to time. In a gas turbine gas generator or engine application, a separate controllable combustion air valve can be used with a fuel valve to provide controlled fuel/air ratios for the mixture. <IMAGE>

IPC 1-7

F23R 3/28

IPC 8 full level

F23R 3/22 (2006.01); **F02C 9/20** (2006.01); **F23D 11/10** (2006.01); **F23D 14/64** (2006.01); **F23R 3/28** (2006.01); **F23R 3/50** (2006.01)

CPC (source: EP)

F23D 11/103 (2013.01); **F23D 14/64** (2013.01); **F23R 3/286** (2013.01); **F23R 3/50** (2013.01)

Citation (applicant)

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