

Title (en)
Tangential entry fuel nozzle

Title (de)
Tangentiale Brennstoffeintrittsdüse

Title (fr)
Ajustage d'entrée tangentiel

Publication
EP 0849529 A3 19990609 (EN)

Application
EP 97310463 A 19971222

Priority
• US 77140896 A 19961220
• US 77140996 A 19961220

Abstract (en)
[origin: EP0849529A2] A method of reducing the tendency of the combustion flame to attach to the centerbody of a tangential entry nozzle 10 is disclosed which comprises mixing fuel and air in a mixing zone 28 within a fuel nozzle assembly, thereby producing a first fuel/air mixture, which is isolated from the combustion products by maintaining sufficiently high axial velocities throughout the mixing zone. The nozzle has a longitudinal axis 26 and two cylindrical-arc scrolls 22,24 with the centerline of each offset from that of the other. Overlapping ends of these scrolls form an air inlet slot therebetween for the introduction of an air/fuel mixture into the fuel nozzle. A combustor-end endplate 18 has a central opening 20 to permit air and fuel to exit into a combustor, while at the opposite end another endplate 16 blocks the nozzle flow area. The scrolls are secured between these endplates. A centerbody 12 is located between the scrolls coaxial with the axis. The centerbody 12 has a base 58 which includes at least one air supply port extending therethrough, and an internal passageway 64. It includes a frustum portion (54) and aerodynamic ramps that prevent flow reversal and flame stabilisation between the endplates 16,18. <IMAGE>

IPC 1-7
F23C 7/00; **F23D 17/00**

IPC 8 full level
F23C 7/00 (2006.01); **F23D 17/00** (2006.01)

CPC (source: EP)
F23C 7/002 (2013.01); **F23D 17/002** (2013.01); **F05B 2250/322** (2013.01); **F23C 2900/07002** (2013.01)

Citation (search report)
• [XA] WO 9619699 A1 19960627 - UNITED TECHNOLOGIES CORP [US]
• [XA] WO 9523316 A1 19950831 - UNITED TECHNOLOGIES CORP [US]
• [PA] EP 0778445 A2 19970611 - ASEA BROWN BOVERI [CH]

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CN113669726A; EP4310304A1; EP0959298A2

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