

Title (en)
TRAPPED VORTEX COMBUSTION CHAMBER

Title (de)
BRENNKAMMER ZUR ERZEUGUNG EINGESCHLOSSENER WIRBEL

Title (fr)
CHAMBRE DE COMBUSTION À VORTEX PIÉGÉ

Publication
EP 2142777 A4 20110413 (EN)

Application
EP 07761677 A 20070501

Priority
US 2007067928 W 20070501

Abstract (en)
[origin: WO2008133695A1] The combustor consists of a can-type configuration which combusts fuel premixed with air and delivers the hot gases to a turbine. Fuel is premixed with air and is delivered to the combustor with a swirl motion. This swirling mixture of reactants is conveyed through a flowpath that expands, the mixture reacts, and establishes a central recirculation zone. An imperforate trapped vortex cavity is disposed proximal to the swirler apparatus which provides for a second reaction zone. Fresh fuel/air reactants are exchanged with burned products in the trapped vortex and a pilot flame is established in the trapped cavity. The imperforate trapped cavity is not supplied with either fuel or air, but is cooled on a backside of the cavity with a flow of cooling air. The cooling air is then conveyed to the combustion chamber so as to not interfere with the critical flame holding flow features of the combustor.

IPC 8 full level
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CPC (source: EP)
F23L 15/04 (2013.01); **F23R 3/14** (2013.01); **F23R 3/34** (2013.01); **F23R 2900/00015** (2013.01); **Y02E 20/34** (2013.01)

Citation (search report)

- [XA] US 6951108 B2 20051004 - BURRUS DAVID LOUIS [US], et al
- [A] US 2002112482 A1 20020822 - JOHNSON ARTHUR WESLEY [US], et al
- See references of WO 2008133695A1

Designated contracting state (EPC)
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DOCDB simple family (publication)
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