

Title (en)
DEVICE FOR STABILIZING COMBUSTION IN GAS TURBINE ENGINES

Title (de)
VORRICHTUNG ZUR STABILISIERUNG DER VERBRENNUNG IN TURBOMOTOREN

Title (fr)
DISPOSITIF CON U POUR STABILISER LA COMBUSTION DANS DES TURBINES A GAZ

Publication
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Application
EP 04809669 A 20040903

Priority
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• US 50051703 P 20030905

Abstract (en)
[origin: WO2005040682A2] Disclose is a burner for a gas turbine combustor that uses a central bluff body flame holder and a quarl to shape the recirculation zone in order to stabilize the combustion process. The burner includes, among other elements, a cylindrical main body and a flame holder. The flame holder is disposed within a fuel-air mixing chamber and includes a base portion and an elongated bluff body. The base portion engages with the main body of the burner in a supporting manner and the elongated bluff body extends in an axially downstream direction from the base portion through the internal mixing chamber so as to position a combustion ignition point downstream of the internal mixing chamber. In a representative embodiment, the burner further includes a quarl device disposed adjacent to the downstream end portion of the burner main body. The quarl device defines an interior recirculation chamber and a burner exit. The interior recirculation chamber is adapted for receiving precumbustion gases from the mixing chamber and for recirculating a portion of the combustion product gases in an upstream direction so as to aid in stabilizing combustion.

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