Title (en)

BURNER FOR A GAS TURBINE

Title (de)

BRENNER FÜR EINE GASTURBINE

Title (fr)

BRÛLEUR POUR UNE TURBINE À GAZ

Publication

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Application

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Abstract (en)

[origin: EP2436977A1] The invention relates to a burner (B) for a gas turbine comprising a burner housing (BH) and a pilot combustor (PC) comprising a supply module (SM) providing pilot fuel (F) and pilot air (A) into pilot combustion room (PCR) being enclosed by a pilot combustor housing (PCH) comprising a tapered exit with a throat (THR) of a defined lengths into the resulting main flow direction, said throat (THR) discharging a concentration of radicals (R) and heat (H) generated in said pilot combustion room (PCR) into a main combustion room (MCR) enclosed by said burner housing (BH), wherein a burner axis (CS) is defined by a centre line of said throat (THR) extending in the direction of the resulting main flow through said throat (THR). To improve stability the invention proposes that the interior cross section area of said throat(THR) deviates from a circle by means of flow guiding elements (FGE) provided as protrusions (PRO) with a defined radial hight or as recesses (RCE) with a defined depth extending longitudinally along the direction of the burner axis (CX) to give the discharging flow a defined velocity distribution with regard to a circumferential direction.

IPC 8 full level

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