

Title (en)
BURNER FOR A GAS TURBINE AND METHOD FOR REDUCING THERMO-ACOUSTIC OSCILLATIONS IN A GAS TURBINE

Title (de)
BRENNER FÜR EINE GASTURBINE UND VERFAHREN ZUR REDUZIERUNG VON THERMOAKUSTISCHEN SCHWINGUNGEN IN EINER GASTURBINE

Title (fr)
BRÛLEUR POUR UNE TURBINE À GAZ ET PROCÉDÉ DE RÉDUCTION D'OSCILLATIONS THERMOACOUSTIQUES DANS UNE TURBINE À GAZ

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Abstract (en)
[origin: WO2015040228A1] The invention relates to a burner (24) for a gas turbine (1), having at least one air passage (26) which can be charged with compressor air, at least one fuel passage (28) which can be charged with at least one fuel gas, wherein the two passages (26, 28) each have a main outlet opening (36, 38) opening into the combustion chamber (34) of the gas turbine (1), wherein the air passage (26) and the fuel passage (28) are connected fluidically to each other via at least one connecting duct (54) arranged upstream of the main outlet openings (36, 38). The burner permits the reduction of thermo-acoustic oscillations in a combustion chamber on a gas turbine in an alternative way. To this end, the burner (24) is formed in such a way that, in at least one first operating state of the burner while the air passage (26) is charged with compressor air and while the fuel passage (28) is charged with fuel gas, part (82) of the fuel gas flowing in the fuel passage flows into the air passage (26) via at least one connecting duct (54) and, for the purpose of the combustion thereof, can be introduced into the interior of the combustion chamber (36) through the main outlet opening (36) of the air passage, and a remaining part (80) of the fuel gas can be introduced into the interior of the combustion chamber through the main outlet opening (38) of the fuel passage, and the quantity and the radial fuel distribution of the branched-off part (82) of the fuel stream is such that the feedback of the heat-of-liberation fluctuations is reduced by using the pressure fluctuations in the combustion chamber.

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