

Title (en)

FUEL NOZZLE, BURNER HAVING SUCH A FUEL NOZZLE, AND GAS TURBINE HAVING SUCH A BURNER

Title (de)

BRENNSTOFFDÜSE, BRENNER MIT EINER SOLCHEN BRENNSTOFFDÜSE, UND GASTURBINE MIT EINEM SOLCHEN BRENNER

Title (fr)

INJECTEUR DE COMBUSTIBLE, BRÛLEUR AVEC UN TEL INJECTEUR DE COMBUSTIBLE, ET TURBINE À GAZ MUNIE DUDIT BRÛLEUR

Publication

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Application

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Abstract (en)

[origin: WO2015150114A1] The invention relates to a burner (2) having a plurality of pre-mixing chambers (6) each having a fuel nozzle (10) for two fuels, wherein the fuel nozzle (10) has a fuel lance (14) that extends in a flow direction (S), in which fuel lance a number of first outlet openings (18) for a first fuel is introduced, and the fuel lance (14) is surrounded by an outer pipe (16) having at least one second outlet opening (20) for a second fuel, wherein the first outlet openings (18) are oriented radially and the second outlet opening (20) is oriented axially, wherein a flow cross-section (Q) is formed between the fuel lance (14) and the inside of the pre-mixing chamber (6) and wherein a number of vortex generators (22) is arranged on the fuel lance (14), which vortex generators reduce the flow cross-section (Q) oriented transversely to the flow direction (S), wherein at least one vortex generator (22) is arranged upstream of the first outlet openings (18) and downstream of the second outlet opening (20) and the pre-mixing chamber (6) has a cross-section (50) and an end (52) and the distance of the first outlet openings (18) from the end (52) of the pre-mixing chamber (6) is at least three times as large as the cross-section (50) of the pre-mixing chamber (6). The invention further relates to a gas turbine (4) having such a burner (2). The invention further relates to a fuel nozzle (10).

IPC 8 full level

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