Title (en)

SIZE SCALING OF A BURNER

Title (de)

GRÖSSENSKALIERUNG EINES BRENNERS

Title (fr)

MISE À L'ÉCHELLE DE TAILLE DANS UN BRÛLEUR

Publication

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Application

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Abstract (en)

[origin: EP2107311A1] The invention relates to a method for upscaling the size of a burner (1) of a gas turbine engine comprising a burner housing (2), in which burner (1) at an upstream end a mixture of fuel (14) and air (12) is provided from a premixing channel (10) for sustaining a main flame (7) at a downstream end of the burner (1), wherein the premixing channel (10) is defined at its exit (8) by a circular inner wall formed by an inner quarl section (4a) and a circular outer wall formed by an outer quarl section (4b). According to the invention the burner (1) can be increased in size by adding a quarl section (4c) outside and circumferenting said quarl section (4b) and forming an annular space between the added quarl section (4c) and the existing outer quarl section (4b) and by adding a premixing channel (11) defined at its exit (9) by a circular inner wall formed by said previously outmost quarl section (4b) and a circular outer wall formed by the added quarl section (4c), wherein said quarl sections (4a,4b,4c) are defining a combustion room for housing said main flame (7), wherein an outer quarl section (4c,4b) has a greater diameter than a neighboring inner quarl section (4b,4a) and extends a greater distance downstream than the neighboring inner quarl section (4b,4a).

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