

Title (en)

AIR FILM COOLING DEVICE FOR THE FLAME TUBE OF A GAS TURBINE ENGINE

Publication

EP 0049190 B1 19840328 (FR)

Application

EP 81401447 A 19810917

Priority

FR 8020558 A 19800925

Abstract (en)

[origin: EP0049190A1] 1. Air-film cooling device for the flame tube of a gas-turbine engine, the said device forming an annular connecting member between a downstream section (1) and an upstream (2) of the flame tube, comprising an external wall (7) and an internal wall (8) defining between them a chamber (9) supplied in a radial direction by at least one series of orifices (10) provided in the external wall, the internal wall defining with the external wall an annular slot (13) for outlet purposes through which flows a cooling air-film and serving to insulate the internal wall of the downstream section of the flame tube, the external wall (7) and the internal wall (8) each having a cylindrical portion (14, 15) extending axially, the said portions being co-axial and spaced one from the other, the cylindrical portions of the external and internal walls being connected upstream by at least one portion of approximately conical shape (17) to the upstream (2) of the flame tube, characterized in that the cylindrical portion (14) of the external wall (7) is connected downstream by a conical portion (16) to the downstream section (1) of the flame tube in such a manner that the dimensions of the chamber are defined by the following values : $H \geq 2 h$ $c \geq 1.2 H$ $L \geq 2 h$ $d \leq 0.5 h$ h = width of the slot H = height of the chamber c = projected length of the conical portion between the internal wall and the downstream section of the flame tube L = length of the annular duct of the slot d = diameter of the orifices.

IPC 1-7

F23R 3/08

IPC 8 full level

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CPC (source: EP)

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Cited by

US6250082B1; US6389792B1; CN109340824A; US4566280A; CN113154453A; CN113266849A; FR2604509A1; EP0268505A1; DE3540942A1; US4723413A; DE3540942C2; US6675582B2; EP1104872A1; DE3248439A1; FR2526083A1; EP2189723A1; CH699997A1; US8479524B2

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