

Title (en)
GAS TURBINE ENGINE WITH ACOUSTIC MODE STABILIZATION, METHOD FOR CONTROLLING AND METHOD FOR RETROFITTING A GAS TURBINE ENGINE

Title (de)
GASTURBINENMOTOR MIT AKUSTISCHER MODENSTABILISIERUNG, VERFAHREN ZUR STEUERUNG UND VERFAHREN ZUM NACHRÜSTEN EINES GASTURBINENMOTORS

Title (fr)
MOTEUR À TURBINE À GAZ À STABILISATION DE MODE ACOUSTIQUE, PROCÉDÉ DE COMMANDE ET PROCÉDÉ DE MODIFICATION DE MOTEUR À TURBINE À GAZ

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Application
EP 21195837 A 20210909

Priority
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Abstract (en)
A gas turbine engine includes a combustor (3) having a natural vibration frequency (f_0) and provided with a plurality of first burners (17) and a plurality of second burners (18). The first burners (17) are configured to produce first flames with a first time delay ($\tau_{1</sub>1</sub>}$) and the second burners (18) are configured to produce second flames with a second time delay ($\tau_{2</sub>2</sub>}$). A difference between the first time delay ($\tau_{1</sub>1</sub>}$) and the second time delay ($\tau_{2</sub>2</sub>}$) is equal to a reciprocal of the natural vibration frequency ($f_{0</sub>0</sub>}$): $\tau_1 - \tau_2 = 1/f_0$ where $\tau_{1</sub>1</sub>}$ is the first time delay, $\tau_{2</sub>2</sub>}$ is the second time delay and $f_{0</sub>0</sub>}$ is the natural vibration frequency of the combustor.

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