

Title (en)

Device and method for damping thermoacoustic oscillations in a combustion chamber

Title (de)

Vorrichtung und Verfahren zur Dämpfung von thermoakustischen Schwingungen in einer Brennkammer

Title (fr)

Appareil et procédé d'amortissement des oscillations thermoacoustiques dans une chambre de combustion

Publication

**EP 1557609 A1 20050727 (EN)**

Application

**EP 04001240 A 20040121**

Priority

EP 04001240 A 20040121

Abstract (en)

The invention relates to a Helmholtz resonator (11), which has a resonating volume in connection with the combustion chamber volume via a connective opening (15). The device has the unique characteristic that an adjustable flow (14,20) of cooling air can be introduced into the resonating volume and connective opening (15). As opposed to other approaches for tuning a Helmholtz resonator (11), the present invention allows for the first time the resonance frequency of the Helmholtz resonator (11) to be adjusted by a dynamic flow (14,25) of cooling air. A method for damping thermoacoustic oscillations in a combustion chamber is also given, wherein a flow (14,25) of cooling air is adjusted in order to modify the resonator characteristics of the Helmholtz resonator (11) fluidically connected to the combustion chamber (20). <IMAGE>

IPC 1-7

**F23M 13/00**

IPC 8 full level

**F23M 20/00** (2014.01)

CPC (source: EP)

**F23M 20/005** (2015.01); **F23R 2900/00013** (2013.01)

Citation (applicant)

- EP 0974788 A1 20000126 - ASEA BROWN BOVERI [CH]
- DE 4414232 A1 19951026 - ABB MANAGEMENT AG [CH]
- DE 10004991 A1 20010809 - VOLKSWAGEN AG [DE]
- DE 19640980 A1 19980416 - ASEA BROWN BOVERI [CH]
- EP 0974788 A1 20000126 - ASEA BROWN BOVERI [CH]

Citation (search report)

- [DXY] DE 4414232 A1 19951026 - ABB MANAGEMENT AG [CH]
- [XY] DE 19640980 A1 19980416 - ASEA BROWN BOVERI [CH]
- [DX] EP 0974788 A1 20000126 - ASEA BROWN BOVERI [CH]
- [A] US 5431018 A 19950711 - KELLER JAKOB [US]

Cited by

WO2019020474A1; DE102005062284B4; EP1762786A1; EP3434876A1; US2020141577A1; US11525396B2; US8789372B2; US8966903B2; US8919128B2; WO2007031376A1; US9341375B2; US10072843B2

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PT RO SE SI SK TR

DOCDB simple family (publication)

**EP 1557609 A1 20050727; EP 1557609 B1 20160316**

DOCDB simple family (application)

**EP 04001240 A 20040121**