

Title (en)

DAMPING DEVICE FOR A GAS TURBINE, GAS TURBINE AND METHOD FOR DAMPING THERMO-ACOUSTIC VIBRATIONS

Title (de)

DÄMPFUNGSVORRICHTUNG FÜR EINE GASTURBINE, GASTURBINE UND VERFAHREN ZUR DÄMPFUNG THERMOAKUSTISCHER SCHWINGUNGEN

Title (fr)

DISPOSITIF D'AMORTISSEMENT POUR UNE TURBINE À GAZ, TURBINE À GAZ ET PROCÉDÉ PERMETTANT D'AMORTIR DES VIBRATIONS THERMOACOUSTIQUES

Publication

EP 2962039 A1 20160106 (DE)

Application

EP 14707733 A 20140228

Priority

- EP 13157106 A 20130228
- EP 2014053921 W 20140228
- EP 14707733 A 20140228

Abstract (en)

[origin: WO2014131876A1] The invention relates to a damping device (50) for a gas turbine, said damping device having: • - at least one Helmholtz resonator (23) and • - at least one duct (53), • - wherein the Helmholtz resonator has a resonator housing (27) and at least one resonator neck pipe (28) and the resonator housing (27) encloses a resonance volume (30) of the Helmholtz resonator (23), into which volume acoustic vibrations can be injected by means of the resonator neck pipe (28). The damping device according to the invention enables a particularly effective damping of thermo-acoustic vibrations. For this purpose, the duct (53) is formed with a duct jacket and at least one outlet opening (52). Acoustic vibrations of a fluid stream flowing through a burner plenum and a combustion chamber can be injected into the outlet opening. A cooling fluid can be applied to the duct and the at least one resonator neck pipe opens on the hot-gas side into such a duct upstream of the at least one outlet opening.

IPC 8 full level

F23R 3/00 (2006.01); **F23M 20/00** (2014.01)

CPC (source: EP US)

F02C 3/04 (2013.01 - US); **F02C 7/18** (2013.01 - US); **F02C 7/24** (2013.01 - US); **F23M 20/005** (2015.01 - EP US); **F23R 3/002** (2013.01 - EP US); **F23R 3/005** (2013.01 - US); **G10K 11/172** (2013.01 - EP US); **F05D 2220/32** (2013.01 - US); **F05D 2260/963** (2013.01 - US); **F23R 2900/00014** (2013.01 - EP US)

Citation (search report)

See references of WO 2014131876A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

WO 2014131876 A1 20140904; CN 105008805 A 20151028; EP 2962039 A1 20160106; US 2016003162 A1 20160107

DOCDB simple family (application)

EP 2014053921 W 20140228; CN 201480010933 A 20140228; EP 14707733 A 20140228; US 201414768859 A 20140228