

Title (en)
Combined convection/effusion cooled one-piece can combustor

Title (de)
Kombiniertes konvektions-/effusionsgekühltes, einteiliges Flammrohr

Title (fr)
Chambre de combustion d'un seul tenant refroidie par effusion/convection

Publication
EP 2241812 A2 20101020 (EN)

Application
EP 10159603 A 20100412

Priority
US 42253609 A 20090413

Abstract (en)
An industrial turbine engine comprises a combustion section, an air discharge section downstream of the combustion section, a transition region between the combustion and air discharge section, a combustion transition piece (120) and a sleeve (129). The transition piece (120) defines an interior space (304) for combusted gas flow. The sleeve (129) surrounds the combustor transition piece (120) so as to form a flow annulus (124) between the sleeve (129) and the transition piece (120). The sleeve (129) includes a first set of apertures (400) for directing cooling air (I) from compressor discharge air into the flow annulus (124). The transition piece (120) includes an outer surface (300a) bounding the flow annulus (124) and an inner surface (300b) bounding the interior space (304), and includes a second set of apertures (200) for directing cooling air in the flow annulus (124) to the interior space (304). Each of the second set of apertures (200) extends from an entry portion (200a) on the outer surface (300a) to an exit portion (200b) on the inner surface (300b).

IPC 8 full level
F23R 3/06 (2006.01)

CPC (source: EP US)
F23R 3/005 (2013.01 - EP US); **F23R 3/06** (2013.01 - EP US); **F23R 2900/03041** (2013.01 - EP US)

Cited by
EP2538028A3

Designated contracting state (EPC)
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 SE SI SK SM TR

Designated extension state (EPC)
AL BA ME RS

DOCDB simple family (publication)
EP 2241812 A2 20101020; CN 101858256 A 20101013; JP 2010249131 A 20101104; US 2010257863 A1 20101014

DOCDB simple family (application)
EP 10159603 A 20100412; CN 201010165364 A 20100412; JP 2010088257 A 20100407; US 42253609 A 20090413