

Title (en)
IMPINGEMENT COOLING ARRANGEMENT WITH GUIDED COOLING AIR FLOW FOR CROSS-FLOW REDUCTION IN A GAS TURBINE

Title (de)
ANORDNUNG MIT GEFÜHRTEM KÜHLLUFTSTROM ZUR QUERFLUSSVERRINGERUNG IN EINER GASTURBINE

Title (fr)
AGENCEMENT DE REFROIDISSEMENT PAR IMPACT À ÉCOULEMENT D'AIR DE REFROIDISSEMENT GUIDÉ POUR LA RÉDUCTION D'ÉCOULEMENT CROISÉ DANS UNE TURBINE À GAZ

Publication
EP 3425174 A1 20190109 (EN)

Application
EP 17179339 A 20170703

Priority
EP 17179339 A 20170703

Abstract (en)
An impingement cooling arrangement (1) for cooling a target surface in a gas turbine (10), the arrangement includes an impingement component (60) and a target component (70) having the target surface. The impingement component includes pluralities of linearly arranged impingement holes (61h, 62h, 63h) through which impingement jets of cooling air are ejected towards the target surface. The target component includes a target region (71, 72, 73) corresponding to each plurality that extends from the target surface towards the impingement component and on the target surface linearly corresponding to the linear arrangement of the impingement holes of the corresponding plurality. At least one trench (80) is present on the target surface adjacent to each target region and extends linearly corresponding to the target region. Each target region is arranged such that the impingement jets from the corresponding plurality are received on the target region and guided by the target region into the trench formed adjacent to the target region.

IPC 8 full level
F01D 25/12 (2006.01); **F01D 5/18** (2006.01)

CPC (source: EP)
F01D 5/187 (2013.01); **F01D 25/12** (2013.01); **F05D 2260/201** (2013.01); **F05D 2260/221** (2013.01)

Citation (search report)
• [X] WO 2016025054 A2 20160218 - GEN ELECTRIC [US]
• [A] EP 2369235 A2 20110928 - GEN ELECTRIC [US]
• [A] US 2003140632 A1 20030731 - DAILEY GEOFFREY M [GB], et al

Cited by
CN113374546A; CN114198154A; CN114658492A; US11131199B2

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)
EP 3425174 A1 20190109

DOCDB simple family (application)
EP 17179339 A 20170703