

Title (en)
COOLED STATOR HEAT SHIELD

Title (de)
GEKÜHLTES STATORHITZESCHILD

Title (fr)
Bouclier thermique de stator refroidi

Publication
EP 2894302 A1 20150715 (EN)

Application
EP 15150590 A 20150109

Priority
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• EP 15150590 A 20150109

Abstract (en)
The present invention provides a stator heat shield (10) for a gas turbine, the gas turbine having a rotor defining an axis of rotation, the stator heat shield comprising a plurality of cooling units (20) disposed in array along the axis of rotation, each of the cooling units comprises an outside part (21) facing hot gas path of the gas turbine, and an inside plate (22) positioned on the outside part and exposed to cooling air, wherein the inside plate comprises a plurality of inlet openings (23) formed through the inside plate to introduce the cooling air into the outside part and thereby impingement cooling of the hot gas washed wall of the outside part, the outside part comprises a cooling air channel (24) formed therein with a first central portion (25) to receive the cooling air, and a second spiral portion (26) around the first central portion to convey the cooling air outward to a cooling air outlet of the second spiral portion.

IPC 8 full level
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Citation (applicant)
• US 2012251295 A1 20121004 - TURNER LYNNE H [GB], et al
• US 6354795 B1 20020312 - WHITE GREGORY ALAN [US], et al
• EP 0257451 A2 19880302 - AGFA GEVAERT AG [DE]
• US 8449246 B1 20130528 - LIANG GEORGE [US]
• US 2006210390 A1 20060921 - DRAPER SAMUEL D [US], et al
• US 2010183428 A1 20100722 - LIANG GEORGE [US]

Citation (search report)
[ID] US 2010183428 A1 20100722 - LIANG GEORGE [US]

Cited by
EP3133254A1; GB2584299A; US10107128B2; US11905886B2; WO2020239559A1

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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

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DOCDB simple family (application)
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