

Title (en)
An aerofoil and a method for construction thereof

Title (de)
Tragfläche und Konstruktionsverfahren dafür

Title (fr)
Profil et procédé de construction associé

Publication
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Application
EP 12190807 A 20121031

Priority
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Abstract (en)
The present invention relates to an aerofoil (10) and a method for construction of the aerofoil (10). The aerofoil (10) comprises an outer wall (20) and an inner wall (30), wherein the walls (20,30) are separated by a cooling channel (40), and a coolant fluid (60) is guidable through the cooling channel (40) during the operation of the aerofoil (10). The inner wall (30) is provided with a protrusion (70), which is profiled and arranged such that it extends from the inner wall (30) into the cooling channel (40). The protrusion (70) directs at least a part of the coolant fluid (60) to impinge the coolant fluid (60) on a first region (64) of the outer wall (20).

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Citation (applicant)
US 7722327 B1 20100525 - LIANG GEORGE [US]

Citation (search report)
• [A] US 5383766 A 19950124 - PRZIREMBEL HANS R [US], et al
• [A] US 5704763 A 19980106 - LEE CHING-PANG [US]
• [J] PROMVONGE P ET AL: "Thermal performance assessment of turbulent channel flows over different shaped ribs", INTERNATIONAL COMMUNICATIONS IN HEAT AND MASS TRANSFER, PERGAMON, NEW YORK, NY, US, vol. 35, no. 10, 1 December 2008 (2008-12-01), pages 1327 - 1334, XP025695296, ISSN: 0735-1933, [retrieved on 20080808], DOI: 10.1016/J.ICHEATMASSTRANSFER.2008.07.016
• [A] J.C. HAN ET AL: "High performance heat transfer ducts with parallel broken and V-shaped broken ribs", INTERNATIONAL JOURNAL OF HEAT AND MASS TRANSFER, vol. 35, no. 2, 1 February 1992 (1992-02-01), pages 513 - 523, XP055058390, ISSN: 0017-9310, DOI: 10.1016/0017-9310(92)90286-2

Cited by
EP3090145A4; US10364683B2

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