Title (en)

Tilted turbine vane with impingement cooling

Title (de)

Geneigte Turbinenschaufel mit Prallkühlung

Title (fr)

Aube de turbine inclinée avec refroidissement par impact

Publication

EP 1808575 A2 20070718 (EN)

Application

EP 07000554 A 20070111

Priority

US 33059806 A 20060112

Abstract (en)

A turbine airfoil (10) having enhanced cooling capabilities. The turbine vane (10) may be configured such that when a generally elongated airfoil (12) of the turbine vane (10) is attached to a turbine engine, a longitudinal axis (14) of the generally elongated airfoil (12) may be positioned nonparallel relative to a radial axis (16) of the turbine engine in which the turbine vane (10) is mounted. In this position, cooling orifices (18) may be positioned in a region (48) that is typically a dead zone in a conventional turbine vane where no cooling occurs. In one embodiment, a plurality of cooling orifices (18) in an inner shroud (20) of the turbine vane (10) may be positioned between an outer edge (22) of the inner shroud (20) in closest proximity to a suction side (24) of the airfoil (12) near a leading edge (26) of the airfoil (12) and an intersection (28) between the suction side (24) and the inner shroud (20).

IPC 8 full level

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CPC (source: EP US)

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Cited by

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