

Title (en)
GAS TURBINE VENTILATION CIRCUITRY

Title (de)
GASTURBINENLÜFTUNGSSCHALTUNGSANORDNUNG

Title (fr)
CIRCUITS DE VENTILATION DE LA TURBINE D UNE TURBOMACHINE

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Application
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Abstract (en)
[origin: WO2004003347A1] The invention concerns the ventilation circuitry of a gas turbine rotor (1) comprising a turbine disc (3) an upstream side-plate (5) arranged upstream of a combustion chamber and separated therefrom by a cavity (12). A first cooling air circuit delivers air into the cavity (12) via main injectors (15) and holes provided in the side-plate (5). A second cooling air circuit delivers air through chambers delimited by the inner housing of the combustion chamber and the rotor via a discharge labyrinth, a sub-injector labyrinth and at least one labyrinth arranged downstream of the main injectors between an annular structure (27) and the side-plate (5). The invention is characterized in that there are provided three labyrinths (31, 32, 33) comprising each a leak-prevention unit downstream of the main injectors, and which define two cavities (34, 35) upstream of the purging cavity (20) of the turbine disc (3). One of said cavities (34, 35) is supplied with air tapped from the second circuit upstream of the sub-injector labyrinth through perforations (38) sloping tangentially in the rotational direction of the rotor and arranged in the annular structure (27).

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