

**TURBINE BLADE WITH RADIAL
COOLING CHANNELS**

ABSTRACT OF THE DISCLOSURE

A turbine blade is cooled by cooling air that flows through a radial cooling channel. The turbine blade includes a root and an airfoil. The flow of cooling air into the cooling channel is limited by a pre-meter orifice to provide a reduced pressure within the cooling channel. The pressure drop results from the cross-sectional area of the pre-meter orifice being less than the cross-sectional area of the adjacent cooling channel. After flowing through the cooling channel, the cooling air exits the cooling channel through a film hole to form a film layer over the airfoil to cool and insulate the turbine blade.