

عنوان مقاله:

AXISMMETRIC STUDY OF FLOW IN PRE-SWIRL ROTOR-STATOR SYSTEM

محل انتشار:

چهاردهمین کنفرانس سالانه مهندسی مکانیک (سال: 1385)

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خلاصه مقاله:

In a 'direct-transfer' pre-swirl supply system, cooling air flows axially across the wheel space from stationary pre-swirl nozzles to receiver holes located at a higher radius in the rotating turbine disc. This paper describe axismmetric numerical study in such system. As 3D computations incur long computation time and needs a huge amount of resources, A simplified aixsymmetric model has been built to study the effects of flow parameter on flow in a rotor-stator pre-swirl system. This allows the effects of the main non-dimensional parameters on the flow in the system to be studied with computation time reduced by a factor of around 7 compared with 3-dimensional computation. Available measured data are also compared with computed values obtained from the simplified solver

کلمات کلیدی:

Numerical methods, pre-swirl systems, Gas turbine cooling system

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