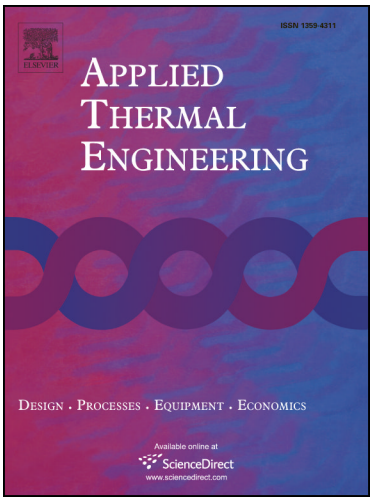

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PII: S1359-4311(17)36692-9
DOI: https://doi.org/10.1016/j.applthermaleng.2018.01.034
Reference: ATE 11688

To appear in: *Applied Thermal Engineering*

Received Date: 20 October 2017
Revised Date: 6 January 2018
Accepted Date: 9 January 2018

Please cite this article as: Z. Zou, C. Ding, A new similarity method for turbomachinery with different working media, *Applied Thermal Engineering* (2018), doi: https://doi.org/10.1016/j.applthermaleng.2018.01.034

A new similarity method for turbomachinery with different working media

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Highlights

A new similarity method for turbomachinery with different media is developed.

Based on kinematic similarity, a new similarity criterion is established.

Utilize similar flow field characteristics, performance transfer methods are built.

The new similarity method is of acceptable precision in engineering.

Abstract: In order to obtain performance characteristics of special media turbomachinery conveniently and accurately, it is essential to study the similarity method for turbomachinery with different working media. Based on kinematic similarity, a new similarity method, consisting of a new similarity criterion and performance transfer methods, is presented in this paper. In order to validate the method,

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