

Accepted Manuscript

A new similarity method for turbomachinery with different working media

Zhengping Zou, Chao Ding

PII: S1359-4311(17)36692-9

DOI: <https://doi.org/10.1016/j.applthermaleng.2018.01.034>

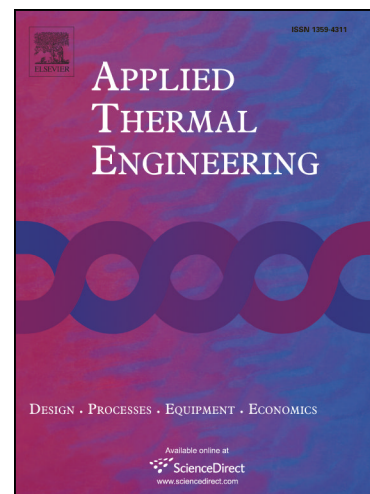
Reference: ATE 11688

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>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

A new similarity method for turbomachinery with different working media

Zhengping Zou^{*}, Chao Ding

*National Key Laboratory of Science and Technology on Aero-Engine Aero-thermodynamics;
Collaborative Innovation Center of Advanced Aero-Engine, School of Energy & Power
Engineering; Beihang University, Beijing 100191, China*

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,

^{*}Corresponding author.

E-mail: zouzhengping@buaa.edu.cn (Zhengping Zou)

Download English Version:

<https://daneshyari.com/en/article/7045868>

Download Persian Version:

<https://daneshyari.com/article/7045868>

[Daneshyari.com](https://daneshyari.com)