

Accepted Manuscript

Title: Heat and mass transfer in cross-flow air-to-air membrane heat exchanger in heating mode

Author: Valerii I. Deshko, Anton Ya. Karvatskii, Iryna O. Sukhodub

PII: S1359-4311(16)30089-8

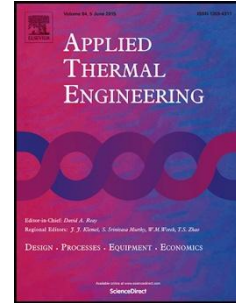
DOI: <http://dx.doi.org/doi: 10.1016/j.applthermaleng.2016.01.139>

Reference: ATE 7699

To appear in: *Applied Thermal Engineering*

Received date: 5-7-2015

Accepted date: 21-1-2016



Please cite this article as: Valerii I. Deshko, Anton Ya. Karvatskii, Iryna O. Sukhodub, Heat and mass transfer in cross-flow air-to-air membrane heat exchanger in heating mode, *Applied Thermal Engineering* (2016), <http://dx.doi.org/doi: 10.1016/j.applthermaleng.2016.01.139>.

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.

HEAT AND MASS TRANSFER IN CROSS-FLOW AIR-TO-AIR MEMBRANE HEAT EXCHANGER IN HEATING MODE

Valerii I. Deshko¹, Anton Ya. Karvatskii², Iryna O. Sukhodub^{1*}

National Technical University of Ukraine “Kyiv Polytechnic Institute”

1 – Department of Heat Engineering and Energy Saving,

2 – Department of Chemical, Polymer and Silica engineering

37, Prosp. Peremohy, Kyiv, Ukraine, 03056

*Corresponding author: ira_krot@ukr.net

Valerii I. Deshko – Doctor of Technical Sciences, Professor, Head of Department of Heat Engineering and Energy Saving NTUU “KPI”

Anton Ya. Karvatskii – Doctor of Technical Sciences, Professor of Department of Chemical, Polymer and Silica engineering NTUU “KPI”

Iryna O. Sukhodub – PhD in Technical Sciences, Senior Lecturer of Department of Heat Engineering and Energy Saving NTUU “KPI”

Corresponding author: Iryna Sukhodub, tel:+380444549690,e-mail: ira_krot@ukr.net

Nomenclature

a – half-width for a rectangular channel, half-base for the triangular, m

b – half-height for rectangular and triangular channel, m

C – heat capacity rate, W/K

c_p – air specific heat capacity, J/(kg·K)

A – area of cell, m²

A_c – cross-sectional area, m²

ERV – energy recovery ventilator

Download English Version:

<https://daneshyari.com/en/article/644854>

Download Persian Version:

<https://daneshyari.com/article/644854>

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