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Longitudinal Fin Effect on Effectiveness of Double Pipe Heat Exchanger

International Conference on Industrial Engineering

ICIE 2018: Proceedings of the 4th International Conference on Industrial Engineering
pp 605-614 | Cite as

- Nail Farilovich Timerbaev (1)
- Omar Abdulhadi Mustafa Almohammed (1) Email author (omeralhayaly1@ntu.edu.iq)
- Asaad Kamil Ali (2)

1. Kazan State Power Engineering University, , Kazan, Russia
2. Engineering College of Anbar University, , Ramadi, Iraq

Conference paper
First Online: 07 December 2018

Part of the Lecture Notes in Mechanical Engineering book series (LNME)

Abstract

In this study, the authors conducted mathematical simulation on the double pipe heat exchanger in which longitudinal fin with the dimension of (2 * 3 * 1000) mm supported on the outer surface of the inner tube. This paper contains the benefits of this design on heat transfer between fluids flowing through the system and at the same time its effect on the heat exchanger effectiveness, which helped us to select the optimum design. A consistent computer program (ANSYS Workbench 15.0) was used in this study to show the behavior of the fluids inside of a heat exchanger, and the results are also obtained by the program.

Keywords

Effectiveness Heat transfer Fin Heat exchanger Optimum design Pressure

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Cite this paper as:

Timerbaev N.F., Almohammed O.A.M., Ali A.K. (2019) Longitudinal Fin Effect on Effectiveness of Double Pipe Heat Exchanger. In: Radionov A., Kravchenko O., Guzeev V., Rozhdestvenskiy Y. (eds) Proceedings of the 4th International Conference on Industrial Engineering. ICIE 2018. Lecture Notes in Mechanical Engineering. Springer, Cham. https://doi.org/10.1007/978-3-319-95630-5_63

- First Online 07 December 2018
- DOI https://doi.org/10.1007/978-3-319-95630-5_63
- Publisher Name Springer, Cham
- Print ISBN 978-3-319-95629-9
- Online ISBN 978-3-319-95630-5
- eBook Packages Engineering Engineering (R0)

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