BÖLÜM 1

Numerical Evaluation of Heat Transfer Performance of Lower GWP Refrigerants in a Thermosyphon Type Heat Pipe

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1. Introduction

The heat pipe, which is used in many different areas today, was first discovered by Perkins in the 1830s and was named after him as the "Perkins tube". The idea of heat pipe has been the subject of much research since the 1830s. It is keeping topicality with many studies on heat pipes and has continued to attract the attention of researchers. For the first time, wickless gravity-assisted (thermosyphon type) heat pipe was made in England in the 18th century. Gaugler and Trefethen made significant contributions to the development of the heat pipe with their work in 1944 and 1962, respectively. Gaugler received the first patent for the heat pipe in 1942 [1]. However, at that time, it was believed that such a

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Subscripts

a: Adiabatic

e: Evaporator

c: Condenser

i: In

o: Out

eo: Out of evaporator

co: Out of condenser

so: Heat source

si: Heat sink

v: Vapor

l: Liquid

T: Total

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