NUMERICAL INVESTIGATION OF IMPROVING AIR DISTRIBUTION SYSTEMS IN AIRCRAFTS PASSENGERS CABINS

By

Eng. Mostafa Salah Sayed Hassan

A Thesis Submitted to the Faculty of Engineering at Cairo University in Partial Fulfilment of the Requirements for the Degree of MASTER OF SCIENCE

In

MECHANICAL POWER ENGINEERING

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Under Supervision of

Prof. Dr. Essam E. Khalil
Mechanical Power Engineering Department
Faculty of Engineering
Cairo University

Prof. Dr.Ahmed A. Medhat
Professor of Mechanical Power Engineering
Housing and Building Research Centre

Dr.Ismail M. Ali Elbialy
Mechanical Power Engineering Department
Faculty of Engineering
Cairo University

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Approved by the Examining Committee

Prof. Dr. Essam E. Khalil Professor of mechanical power engineering	**Thesis Main Advisor**
Prof. Dr. Mahmoud Ahmed Fouad Professor of mechanical power engineering	**Internal Examiner**
Prof. Dr. Osama Ezzat Abdullatif Head of department of mechanical power engineering at Shoubra, faculty of engineering, Benha university	**External Examiner**

FACULTY OF ENGINEERING, CAIRO UNIVERSITY
GIZA, EGYPT
2016

Engineer: Mostafa Salah Sayed Hassan

Date of Birth : 01 / 07 / 1987

Nationality : Egyptian

E-mail: Moustafa.salah@hotmail.com

Phone : (+2) 01067806160

Address : 44 Mubarak Housing,Altagmoaa Elkhames, New Cairo , Egypt

Registration Date: 01/10/2012

Awarding Date : 31/07/2016

Degree : Master of Science

Department : Mechanical Power Engineering

Supervisors : Prof. Dr. Essam E. Khalil Hassan Khalil

Prof. Dr. Ahmed A. Medhat

Dr. Esmail M. Ali Elbialy

Examiners : **Prof. Dr. Essam E. Khalil Hassan Khalil**
Professor of mechanical power engineering
Prof. Dr. Mahmoud Ahmed Fouad
Professor of mechanical power engineering
Prof. Dr. Osama Ezzat Abdullatif
Head of department of mechanical power engineering at Shoubra, faculty of engineering, Banha university.

Title of Thesis:

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Key Words: **(**Thermal Comfort – Personalized Ventilation – Cabin)

Summary:

Improving comfortable environmental conditions for passengers is the airliners interests in the recent decades. This can be satisfied by studying air distribution systems and factors affecting on achieving this goal inside the cabin to make a healthy and comfortable environment for the passengers and cabin crew. This Research was done by using CFD Software (ANSYS FLUENT 17.0). The standard air distribution systems used in recent air cabin are combined between mixing ventilation and personalized ventilation and this study will making simple applicable modification on the ventilation system that can improving the ventilation efficiency ,thus safe passengers from being infected from each other.

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