



**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

**FACULTY OF ENGINEERING, CAIRO UNIVERSITY
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Title of Thesis:
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IN AIRCRAFTS CABINS PASSENGERS CABINS**

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

Summary:

Improving comfortable environmental conditions for passengers is the airlines 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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