NUMERICAL INVESTIGATION OF AIR FLOW AND THERMAL PATTERN IN TRANSFORMERS ROOMS

by

Eng. Ahmed Abdulnabi Mustafa Shaban

A Thesis Submitted to the

Faculty of Engineering at Cairo University

In Partial Fulfillment 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: NUMERICAL INVESTIGATION OF AIR FLOW AND THERMAL PATTERN IN TRANSFORMERS ROOMSROOM

Key Words: Transformer Room, Switchgear, Temperature Distribution, Numerical Investigation

Summary:

This research studies the distribution of temperature ،air flow rate and speed inside the electrical transformer room. Where these transformers are a source of heat is the study of conditioning this room and concentrate on the value of temperatures and velocities near the electrical equipment and the objective of this work is to simulate and analyze air flow and thermal systems Patterns in the transformers room to determine the optimal performance of the ventilation systems. In order to provide a comfortable and good thermal indoor environment with energy efficiency, this increases the efficiency of the work of the electrical equipment.

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