شبكة المعلومات الجامعية
التوثيق الإلكتروني والميكروفيلم

بسم الله الرحمن الرحيم

HANAA ALY

شبكة المعلومات الجامعية
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التوثيق الإلكتروني والميكروفيلم

جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها
علي هذه الأقراص المدمجة قد أعدت دون أية تغيرات

يجب أن

تحفظ هذه الأقراص المدمجة بعيدا عن الغبار

HANAA ALY

IMPACT OF CORONA RING ON THE ELECTRIC FIELD DISTRIBUTION OF HIGH VOLTAGE POLYMERIC INSULATORS

By

Esraa Aziz Mohamed Hammad

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
Electrical Power and Machines Engineering

FACULTY OF ENGINEERING, CAIRO UNIVERSITY
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Title of Thesis:

IMPACT OF CORONA RING ON THE ELECTRIC FIELD DISTRIBUTION OF HIGH VOLTAGE POLYMERIC INSULATORS

Key Words:
Corona ring; electric field; electric potential; pollution on insulator surface; water drops.

Summary:

The study included optimize the grading ring to reduce the electric field on 220 kV polymer suspension insulator in electrostatic physics by COMSOL Multi-Physics Program after drawing it on Auto CAD 2D programme finally reached to the optimum case of electric field when it was clean, then pollution was added to show effect of pollution on electric field distribution, the pollution was water drops with different shapes or cases, also conductivity studied to prove no changing on electric field in electrostatic physics. Therefore, the optimum case was changed after adding pollution on insulator surface to prove the pollution is effect on the electric field distribution then shown the optimum three cases when the insulator was clean and the optimum three cases when it was polluted.

Disclaimer

I hereby declare that this thesis is my own original work and that no part of it has been submitted for a degree qualification at any other university or institute.

I further declare that I have appropriately acknowledged all sources used and have cited them in the references section.

Name: Date:…..../…..../……(it's the date that you handover the thesis)

Signature:

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