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شبكة المعلومات الجامعية التوثيق الالكتروني والميكرو فيلم



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Some general problems for evaluating the magnetic field in sheets with applications.

Presented by

Doaa Mostafa Ali El-Sakout

**A Thesis Submitted
to
Faculty of Science**

**In Partial Fulfillment of the
Requirements for
the Degree of
M. Sc. of Science
(Applied Mathematics)**

**Mathematics Department
Faculty of Science
Cairo University**

(2011)

ABSTRACT

Student Name: Doaa Mosatafa Ali El-Sakout

Title of the thesis: **Some general problems for evaluating the magnetic field in sheets with applications.**

Degree: M.SC (Applied mathematics.)

In this thesis we find two coupled linear Fredholm integral equations of the second kind on two plane closed contours for the determination of the induced magnetic field in an infinite plane current sheet with two insertions of different electric conductivity by a boundary integral method. Some examples were solved and discussed to asses the efficiency of the used boundary integral method. Comparison is carried out with previous results for one insertion and for two holes.

Keywords: 1- Plane current sheets
2- Hole- insertion
3- Boundary integral method

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2- Prof. Dr Mustafa Saber Abou-Dina

3- Prof. Dr Ahmed Fouad Mohamed Fouad Ghaleb

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18/6/2011

APPROVAL SHEET FOR SUMISSION

Thesis Title: Some general problems for evaluating the magnetic field in sheets with applications.

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This thesis has been approved for submission by the supervisors:

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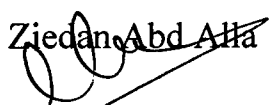
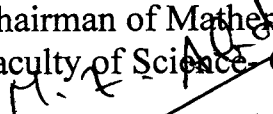
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18/6/2011

To my parents

