







شبكة المعلومـــات الجامعية التوثيق الالكتروني والميكروفيا.



## جامعة عين شمس

التوثيق الالكتروني والميكروفيلم



نقسم بللله العظيم أن المادة التي تم توثيقها وتسجيلها على هذه الأفلام قد اعدت دون آية تغيرات



#### يجب أن

تحفظ هذه الأفلام بعيداً عن الغبار

40-20 في درجة حرارة من 15-20 منوية ورطوبة نسبية من

To be kept away from dust in dry cool place of 15 – 25c and relative humidity 20-40 %











El Mansoura University Faculty of Engineering Mech. Design and prod. Eng. Dept.

## Surface Modification of Engineering Materials by Physical Vapour Deposition Coatings and Ion Implantation

By
Eng. Gaber Abd El-Fattah El-Awadi
Atomic Energy Authority
Nuclear Research Center
Cyclotron Project

A Thesis Submitted to the Faculty of Engineering at Mansoura University

In Partial Fulfillment of the Requirement of the degree of

PhD of Science
In
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## بسم الله الرحمن الرحيم



[البقرة: الآية ٣٢]



#### Supervisors

**Thesis Title:** Surface Modification of Engineering Materials by Physical Vapour Deposition Coatings and Ion Implantation

Researcher Name: Gaber Abd El-Fattah El-Awadi

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#### **Examination Committee**

**Thesis Title:** Surface Modification of Engineering Materials By Physical Vapour Deposition Coatings and Ion Implantation

Researcher Name: Gaber Abd El-Fattah El-Awadi

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Examination Date : 20 / 2 / 2006 Thesis Grade : PhD degree

Signatures

No.	Name	Signature
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