شبكة المعلومات الجامعية

بسم الله الرحمن الرحيم

شبكة المعلومـــات الجامعية

التوثيق الالكتروني والميكروفيلم

شبكة المعلومات الجامعية

جامعة عين شمس

التوثيق الالكتروني والميكروفيلم

﴿ قَسَـــم ﴾

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها
علي هذه الأفلام قد اعدت دون آية تغيرات

يجب أن

تحفظ هذه الأفلام بعيداً عن الغبار

في درجة حرارة من 15 – 20 مئوية ورطوبة نسبية من 20-40 %

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

بعض الوثائق الأصلية تالفة

بالرسالة صفحات

لم ترد بالأصـــل

ELECTROPLATING OF SOME TIN ALLOYS FROM AQUEOUS SOLUTIONS

A thesis Submitted
By

Manal Elsayed Ahmed Abass
B.Sc.Very good (Chemistry)1991

To
Faculty of Science (Benha)
Zagazig University

For
The Award of M.Sc. Degree In Chemistry

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M.A.A.ABASS

Aim of the work

Tin is one of the most important metals due to its widely industrial application as a result of its good properties as softness, ductility, corrosion resistance, easily soderable, attractive in appearance and is non-toxic in content with food stuffs. In view of these attributes, it has been used for many centuries as coating of other metals. Therefore, the present work was devoted to study the electrodeposition of tin, nickel and tin-nickel alloy onto mild steel substrate from acidic baths. These baths are characterized by their cheapness. In our work, the effect of some plating and operating variables such as bath composition, current density and temperature on potentiodynamic cathodic polarization, cathodic current efficiency, surface morphology, microhardeness and structure of the deposits were investigated. Moreover, the effect of these parameters on the throwing power of the acidic baths also were investigated.

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