



شبكة المعلومات الجامعية

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ



شبكة المعلومات الجامعية
@ ASUNET



شبكة المعلومات الجامعية التوثيق الالكتروني والميكروفيلم



شبكة المعلومات الجامعية

جامعة عين شمس

التوثيق الالكتروني والميكرو فيلم

قسم

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



يجب أن

تحفظ هذه الأفلام بعيدا عن الغبار

في درجة حرارة من ١٥-٢٥ مئوية ورطوبة نسبية من ٢٠-٤٠%

To be Kept away from Dust in Dry Cool place of
15-25- c and relative humidity 20-40%

بعض الوثائق الأصلية تالفة

بالرسالة صفحات لم ترد بالاصل



SEPARATION OF VALUES FROM THE EGYPTIAN SAND PLACERS

A Thesis Submitted to
Department of Mining and Minerals Engineering
Faculty of Petroleum and Mining Engineering
Suez Canal University

ع.ص.ف

For

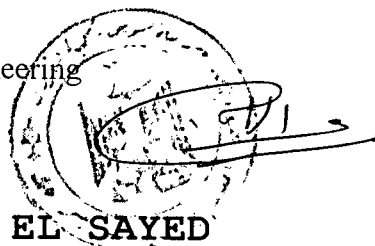
The Master Degree of Science

In

Mining and Minerals Engineering

By

EHAB EL SAYED GOMAA EL SAYED
(B.Sc. in Mining Engineering.)



Supervised by

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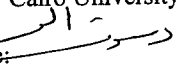
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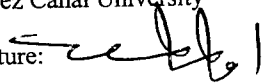
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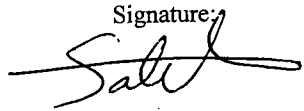
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English Abstract

The main aim of this contribution is to study the amenability of concentrating black sand minerals by using froth flotation. Extensive research program and the flotation behavior of zircon, rutile and ilmenite has been conducted over wide pH range and using different (various reagent schemes). The study is consider an effort to characterize and to put forward same basic study related to surface chemistry of froth flotation of zircon and Ti-bearing minerals.

First, study the flotation behaviors of a single pure zircon, ilmenite and rutile using Hallimond tube. The flotation response of the three minerals with different anionic, cationic and nonionic collector was studied. Different type of inorganic and organic resurfacing agents such as lignin sulfonate, polyoxyethylene glycol and polyvalent ions were employed to enhance the selectivity between zircon and Ti-bearing minerals (ilmenite and rutile).

A further flotation study on synthetic mixtures of pure zircon, pure ilmenite and pure rutile has been carried out. The aim of these experiments is to determine the efficiency of separation of these minerals by flotation independently of the proposed theoretical commentary of the data obtained, it should be conceived from the experiment data of this investigation that lignin sulfonate, sodium oleate, and / or polyoxyethylene glycol, sodium oleate reagent system open up new potential fields and challenge trends for flotation separator of zircon from Ti-bearing minerals.

Key Words	Flotation, Ilmenite, rutile, zircon,
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In the name of ALLAH, Most Gracious, Most Merciful, He Who created
man, out of A (mere) clot of congealed blood, He Who taught
(The use of) Pen, Taught man that which he knew not

*ALL PRAISES BE TO ALLAH ALMIGHTY, WHO IS THE
MOST GRACIOUS, MERCIFUL AND BENEFICENT. FIRST
OF ALL I OWE MY ENDLESS THANKS AND MOST SINCERE
GRATITUDE TO HIM (SWT), AS IT IS HE WHO ENABLED
ME TO CONDUCT THE PRESENT RESEARCH STUDIED
AND BESTOWED ME THE WISDOM AND ABILITY TO
WRITE THIS PIECE OF MANUSCRIPT.*



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