بسم الله الرحمن الرحيم

شبكة المعلومـــــات الجامعية

التوثيق الالكتروني والميكروفيلم

شبكة المعلومات الجامعية

جامعة عين شمس

التوثيق الالكتروني والميكروفيلم

﴿ قـــسـم ﴾

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

El-Mansoura University.
Faculty of Engineering.
Public Works Dept.

The Use of Dissolved-Air Flotation in Reducing The Polutant Load on The Rapid Sand Filtration.

By

Mohamad Ragab El-Adawy
B.Sc. Civil Engineering, El-Mansoura University, 1992

A Thesis

Submitted in Partial Fulfillment for the Requirements of The Degree of Master of Science.

In

Public Works Engineering

Supervisors

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Prof. of Sanitary Engineering
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Thesis Title:

The Use of Dissolved-Air Flotation in Reducing The Polutant Load on The Rapid Sand Filtration.

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Abstract

Flotation is an important process in the water treatment. Flotation can be described as a gravity separation process in which gas bubbles attach to sollid particles to cause the apparent density of the bubbles-solid agglomerates to be less than that of the water, thereby allowing the agglomerate to float to the surface. Different methods of producing gas bubbles give rise to different types of flotation . processes: electrolytic flotation, dispersed-air flotation, and dissolved-air flotation.

A pilot plant was constructed in Sandoop water treatment plant to evaluate dissolved air flotation for treating raw surface water. The raw water was brought El-Bahr El-Sagheir branch from the Nile river.

Dissolved-Air flotation is regarded as "high-rate" process because of the relatively high surface loadings possible. This label also implies it is compact process and so occupies less area. That is important where land is at a premium. This process is also likely to need shallower and smaller tanks, which is important in coping with preparing foundations in difficult sites. Dissolved-air flotation is likely to be less expensive than floc-blanket sedimentation.

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