

SLUDGE BLANKET CLARIFICATION

BY

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A B S T R A C T

This thesis deals with the study of factors affecting the performance and operation of sludge blanket clarifiers.

The methods include the use of a full size operational hopper bottom clarifier to determine the floc characteristics of the sludge blanket as well as treated water quality, and a model 1/183<sup>th</sup> of the full size clarifier to study the hydraulic flow patterns.

Also included is an account of the Nairobi Water Supply System which incorporates the Sasumua Water Treatment Plant, the site of the full size clarifier.

The results show that the flow through the clarifier is a major controlling factor on the performance of the clarifier and that the floc settling characteristics are reasonably uniform throughout the clarifier. The model experiments show that there is turbulence in the clarifier and that the hydraulic flow patterns are not uniform.