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Development of El-Salam Canal Automation System

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ABSTRACT

In Egypt irrigation water is becoming more scarce with the continuously increasing demand for agriculture, domestic and industrial purposes. To face this increasing irrigation demand, the available water supply in Egypt is supplemented by the reuse of agricultural drainage water as in El-Salam Canal that do not satisfy water quality standards defined for the canal. This paper introduces an automation system for El-Salam Canal to control the flow of the fresh water and drainage water supplied to the canal. This automatic control system (ACS) is able to process data of various flows and water quality data along the canal. This control system is represented by a canal computer model. This system computes the required control actions at the Damietta branch and the feeding drains. It is also able to generate optimum solutions for the canal to satisfy the pre-defined canal conditions and standards.

KEYWORDS

Water Quality; Automatic Control; Modeling

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