

CERM.VOL.(16)NO.(12)DEC.P. 1281-1290.1994.

COMPUTERIZED AUTOMATION OF FARM DELIVERY SYSTEM

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ABSTRACT: In Egypt, irrigated agriculture depends on large scale water delivery system. The performance of farm delivery system (mesqas and marwas) is crucial to the overall efficiency the irrigation system. The present farm delivery system, in most of the old lands, suffers from substantial conveyance losses. To alleviate such problem, the full aspects of problems including constrains and causes must be investigated thoroughly. However, addressing these problems is complex. Therefore, many alternative-schemes can be utilized to improve the existing situation. The proposed scheme, in this paper, consists of the following; 1) replacing the old mesqas and marwas with rectangular channels built with bricks and coated to prevent seepage and 2) applying computerized automation control. A field case study is presented in which the recommended design was positively received and the system is being used successfully.