

Design of RBC Flume for Water Measurement in Field Channels of Low Discharges

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ABSTRACT

Water is the most valuable asset of irrigated agriculture. Accurate measurement of irrigation water permits more intelligent use of this valuable natural resource. A new style of portable flow measuring flume (RBC) is designed for furrows and unlined canals. These flumes are relatively easy to install and operate. They are long throated flumes and broad crested weirs requiring very little head loss for satisfactory operation. This article presents the design procedure of a RBC flume using advanced software model namely Winflume based on trial and error procedure till the design requirement is attained. Once the design is made, the fabrication could be done with the help of local workshops using low cost materials either by GI sheets or fiber plates. For the study, the design was made for a discharge range of 3-8 lps.

Key words : Field channels, RBC flume, Water measurement