CALIBRATION OF DRAINPIPE WEIR

THESIS SUBMITTED

BY

HASSAN ZIA MUNAWAR
(90-PG-WRM-17)

FOR THE DEGREE OF

MASTER OF SCIENCE IN

WATER RESOURCES MANAGEMENT

CENTRE OF EXCELLENCE IN WATER RESOURCES ENGINEERING
UNIVERSITY OF ENGINEERING AND TECHNOLOGY
LAHORE 54890, PAKISTAN
MARCH, 1994

ABSTRACT

This study was performed to test 8" sharp crested weir in a drainpipe and develop a head-discharge relationship. The drainpipe weir is a simple sharp crested weir installed at the out fall of a subsurface drain into a sump or a manhole.

After taking observations in the laboratory, a relationship between head and discharge was developed for horizontal crest at a pipe slope of 0.1 %. Regression analysis was used to check the reliability of the results.

The weir was also tested on tilted positions and for different slopes of the pipe to check the sensitivity of the relationship to these parameters. The head-discharge relationship for drainpipe weir was also checked for submerged condition. The water surface profiles were also measured in the pipe for 0.1 % slope. The comparison of laboratory test results of this study with those of Brussel's work shows the same trend with some minor differences.