a meter fall. Calibration tests indicated that the coefficient of discharge Co below modular limit is 3.1. The original adopted procedure was :

a. Adjusting the upper stop dam for H = 2feet over test flume with a drowning ratio less than 2/3 so that flume is running below its modular limit.

b. Recording of water levers at installed gauges.

c. Adding a Kari to the lower stop-dam so as to slightly increase the drowning ratio until the modular limit is reached.

During the experimentation stage it was observed that there was variation in results due to the fact that modular limit varies considerably for different values of heads. Therefore it was decided to adjust the upper stop-dam to make H = 2 feet and as soon as the modular limit was reached and H began to increase, karries were added to the upper stop dam and thus the discharge was reduced in order to keep H = 2 feet throughout the experiment. From the experimental results, flumes were divided into the following types :

1. Flume type A, glacis slope 1 in 10, wing walls diverging 1 in 5 or vice versa.

2. Flume type B, glacis slope 1 in 10, wing walls diverging 1 in 10.

3. Flume type D, glacis slope 1 in 10, wing walls diverging at 1 in 15.

4. Flume type E, glacis slope 1 in 15, wing walls diverging 1 in 10.

Other experiments were conducted to find the results of extending the glacis from 2.5 H to 3.75 H. It was found that in flumes of these comparative dimensions a glacis length of 2.5H is enough. Experiments were also carried out to observe the effect of increasing the throat length from 2.5H to 3.75H. The results show that an increase in length of throat upto 3.5H does not reduce the modular limit. This amended E