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MINISTRY OF WORKS, MINES AND POWER

(GOVERNMENT OF INDIA)

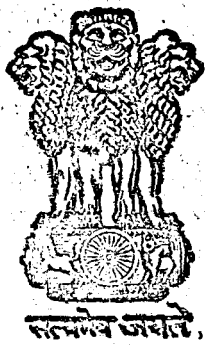
**CENTRAL WATERPOWER IRRIGATION
AND
NAVIGATION COMMISSION**

CWIN RESEARCH STATION, POONA

Director : D. V. JOGLEKAR, B. E.

Research Publication No. 15

ANNUAL REPORT (Technical) 1949



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Errata

Against "Guide Bank, bund and wall" on page 3 read 135 in place of 231 under 1949.

Against "Pier(s)" on page 5 read 135 in place of 133 under 1949.

(See fig. 81A
on page 251)

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COCHIN HARBOUR MODEL

APPENDIX I.

Actual tidal and silt observations at Cochin on 19/4/48 show that during flood tide 18,000 cub. yds. entered from the sea into the gut when the total discharge was 2,627 m. cft.

Therefore, the silt charge was

$$\frac{486000 \times 75.5 \times 1000}{2627 \times 106 \times 62.4}$$

$$=0.224 \text{ parts per 1000}$$

Maximum discharge entering the model in the gut (i.e. East of Station No. 1) is 5.2 cs. and the average is 2.6 cs.

Assuming the same silt charge in model as in the prototype the rate of silt injection will be

$$\frac{2.6 \times 3600 \times 62.4 \times 0.224}{1000 \times 75.5}$$

$$=1.73 \text{ cft/hr.}$$

$$=1.75 \text{ (say).}$$

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APPENDIX II.

(PROTOTYPE DATA OF SILTING IN THE MATTANCHERRY CHANNEL IN AUGUST 1935 AND 1936)

Year.	Berth.	Average depth of silting (ft.).	Total quantity of silting.
1935	4	0.7	$\frac{1100 \times 1000 \times 0.7}{27} = 28,600$ cub. yds.
	5	0.6	$\frac{1100 \times 1000 \times 0.6}{27} = 24,500$..
	6	1.4	$\frac{1100 \times 1000 \times 1.4}{27} = 57,000$..
	7	1.2	$\frac{800 \times 1000 \times 1.2}{27} = 35,600$..
	8	1.2	$\frac{1000 \times 1200 \times 1.2}{27} = 53,400$..
	9	2.5	$\frac{1000 \times 1200 \times 2.5}{27} = 1,11,009$..
		Total ...	3,10,100 ..
1936	4	0.9	$\frac{1100 \times 1000 \times 0.9}{27} = 36,800$..
	5	0.9	$\frac{1100 \times 1000 \times 0.9}{27} = 36,800$..
	6	1.5	$\frac{1100 \times 1000 \times 1.5}{27} = 61,000$..
	7	1.7	$\frac{800 \times 1000 \times 1.7}{27} = 50,500$..
	8	1.0	$\frac{1000 \times 1200 \times 1.0}{27} = 44,500$..
	9	0.7	$\frac{1000 \times 1200 \times 0.7}{27} = 31,000$..
		Total ...	2,60,600 ..

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Errata

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