

LIST OF FIGURES

<u>NO.</u>	<u>DESCRIPTION</u>	<u>PAGE</u>
2.1	A TYPICAL SCOUR PROFILE AFTER LAURSEN	25
3.1	SCHEMATIC DIAGRAM SHOWING THE DIFFUSED JET	25
3.2	A TYPICAL VELOCITY PROFILES DUE TO A JET IN SHALLOW TAILWATER	26
3.3	A TYPICAL VELOCITY PROFILE AND A PRESTON TURE FOR THE MEASUREMENT OF BOUNDARY SHEAR STRESS	26
4.1	LABORATORY FLUME FOR SAND BEDS (FLUME NO. 1)	33
4.2	LABORATORY FLUME FOR GRAVEL BED (FLUME NO. 2)	34
4.3	GRAIN SIZE DISTRIBUTION CURVES FOR BED MATERIALS	35
4.4	GRAIN SIZE DISTRIBUTION CURVES FOR BED MATERIALS	36
5.1	A PLOT SHOWING THE RELATIONSHIP BETWEEN D/B_0 AND F_0	45
5.2	VELOCITY DISTRIBUTION PROFILES AT VARIOUS LOCATIONS FOR SAND BED -1 (SERIES - I), RUN NOS. 1 TO 9	47-55
5.3	VELOCITY DISTRIBUTION PROFILES AT VARIOUS LOCATIONS FOR SAND BED -2 (SERIES - II), RUN NOS. 10 TO 14	56-60
5.4	VELOCITY DISTRIBUTION PROFILES AT VARIOUS LOCATIONS FOR SAND BED -3 (SERIES -III), RUN NOS. 15 TO 23	61-69
5.5	VELOCITY DISTRIBUTION PROFILES AT VARIOUS LOCATIONS FOR GRAVEL BED (SERIES - IV), RUN NOS. 24 TO 31	70-77
5.6	JET DIFFUSION CHARACTERISTICS (SAND BED -1)	98
5.7	JET DIFFUSION CHARACTERISTICS (SAND BED -2)	99
5.8	JET DIFFUSION CHARACTERISTICS (SAND BED -3).....	100
5.9	JET DIFFUSION CHARACTERISTICS (GRAVEL BED)	101
5.10	COMPARISON OF EXPERIMENTAL DATA WITH DERIVED RELATION FOR U/U_0 ALONG RIGID APRON	104
5.11	COMPARISON OF EXPERIMENTAL DATA WITH DERIVED RELATION FOR U/U_0 ALONG ERODIBLE BED.....	105

5.12	COMPARISON OF EXPERIMENTAL DATA WITH DERIVED RELATION FOR U/U_0 AT THE TRANSITION REGION	106
5.13	BOUNDARY LAYER GROWTH (SAND BEDS)	108
5.14	BOUNDARY LAYER GROWTH (GRAVEL BED)	109
5.15	VELOCITY DISTRIBUTION A LONG RIGID APRON	111
5.16	VELOCITY DISTRIBUTION AT THE LOCATION OF MAXIMUM SCOUR	112
5.17	POWER LAW FITTING TO THE VELOCITY DISTRIBUTION AT THE LOCATION OF MAXIMUM SCOUR	114
5.18	RELATIONSHIP OF CRITICAL SHEAR STRESS AND DIAMETER FOR A BED OF UNIFORM GRAINS AFTER SHIELD (1936)	120
5.19	TIME VARIATION OF BOUNDARY SHEAR STRESS AT THE LOCATION OF MAXIMUM SCOUR	123
5.20	A PLOT OF (τ_t/τ_{oc}) VERSUS (t/T) ON LOG-DIAGRAM	124
5.21	A PLOT OF MEQUILIBRIUM TIME VERSUS EFFLUX VELOCITY	127
5.22	COMPARISON OF EXPERIMENTAL DATA WITH DERIVED RELATION FOR T	128
5.23	A PLOT OF H_m/B_0 VERSUS F_0 ON LOG-DIAGRAM	129
5.24	COMPARISON OF EXPERIMENTAL DATA WITH DERIVED RELATION FOR H_m/B_0	130
5.25	EVOLUTION OF SCOUR PROFILES WITH TIME	132
5.26	EVOLUTION OF SCOUR PROFILES WITH TIME	133
5.27	SIMILARITY OF SCOUR PROFILES	139
5.28	A PLOT OF X/X_m VERSUS h/H_m FOR COMPARISON OF TEST RESULTS	140
5.29	RELATIONSHIP BETWEEN V_s AND OTHER PARAMETERS	146
5.30	A PLOT OF X_m VERSUS V_s	149
5.31	A PLOT OF X_t VERSUS V_s	150
5.32	A PLOT OF h_m VERSUS V_s	154
5.33	RELATIONSHIP BETWEEN h_m AND (t/T) AND OTHER PARAMETERS.....	155
5.34	A PLOT OF WEIGHT RATE OF TRANSPORT VERSUS TRANSPORT STAGE	161
5.35	CORRELATION OF WEIGHT RATE OF TRANSPORT WITH FLUID POWER OF THE JET, TRANSPORT STAGE AND OTHER PARAMETERS	162