



CHART FOR DISCHARGE ETC ACCORDING TO MANNING'S FORMULA

(1) $v = \frac{1}{n} R^{2/3} S^{1/2} = \frac{3.968 \times 10^{-3}}{n} d^{2/3} S^{1/2}$ (2) $Q = \frac{3.118 \times 10^{-6}}{n} d^{8/3} S^{1/2}$

WHERE :-
 v IS VELOCITY IN METRES PER SEC ; Q IS DISCHARGE IN LITRES PER SEC ;
 R IS HYDRAULIC RADIUS IN METRES ; d IS DIAMETER OF CIRCULAR PIPE IN mm
 (1/4 DIA FOR CIRCULAR PIPES) ;
 S = SLOPE ; n = MANNING'S COEFFICIENT OF 0.013 ADOPTED.
 FOR ANY OTHER VALUE OF n SAY n₁, THE VALUES OF v AND Q AS FOUND FROM
 THE CHART FOR GIVEN VALUE OF d AND S, ARE TO BE MULTIPLIED BY
 A FACTOR $K_1 = \left(\frac{0.013}{n_1}\right)^{3/2}$, AND FOR A GIVEN VALUE OF d AND Q OR v, THE SLOPE
 AS FOUND FROM THE CHART HAS TO BE MULTIPLIED BY A FACTOR $K_2 = \left(\frac{n_1}{0.013}\right)^3$

VALUE								
n	0.010	0.011	0.012	0.013	0.014	0.015	0.017	0.02
K ₁	1.30	1.16	1.08	1.00	0.93	0.87	0.76	0.65
K ₂	0.59	0.72	0.85	1.00	1.16	1.33	1.71	2.37