

Design class

Sub. Code: CE69013

1. Design a grit chamber for treating sewage flow from a population of 60000 with average water consumption of 120 lpcd. Consider peak flow factor = 2.5, and horizontal velocity as 0.2 m/sec.
2. Design a horizontal flow grit chamber for treating maximum sewage flow of 12 MLD for removal of particles of specific gravity 2.65 and dia ^{0.2}20 mm or larger. Use $\beta = 0.06$, and Darcy-Weisbach friction factor $f = 0.03$ for non-uniform gritty matter.

3. Estimate the screen requirement for a plant treating a peak flow of 60 MLD. Also calculate the head loss through screen when the screen is half clogged.

$P_o f_o = 3$
→ avg. flow = 20 MLD