

$C_u = \frac{D_{60}}{D_{10}} = \frac{0.29}{0.072} = 4.03$

Well design

① plot the values in graph.



② $D_{60}, D_{10}, D_{50} \rightarrow$ obtain from graph.

③ if $D_{50} > 0.25 \text{ mm}$
 $C_u > 3$ \rightarrow both satisfied then screen well otherwise gravel well

For screen well

obtain D_{70} from graph.

Slot size = $\frac{D_{70}}{25.4}$ in.

" no = $\frac{D_{70}}{25.4} \times 1000 = \square$ lower round.

For gravel well:

multiply D values by 4-6 times.

if check new $C_u = \frac{D_{60}}{D_{10}} < 2.5$ then OK.

Slot no = $\frac{D_{10}}{25.4} \times 1000 = \square$ lower limit

Flow

velocity = 0.1 fps.

$H = 4 \text{ ft.}$

$D = \text{dia of strainer (ft)}$

$$Q = \frac{2\pi r h k (D - d)}{\ln \frac{R}{r}}$$

area = $\pi D H \times \%$ opening of strainer.

$$\begin{aligned} \text{Discharge} &= \text{Area} \times \text{velocity} \\ &= \text{Area} \times 0.1 \end{aligned}$$

$$F \cdot S = 2.5$$

$$\text{Yield} = \frac{\text{Discharge}}{F \cdot S} \text{ ft}^3/\text{s}$$

$$= \frac{\text{Discharge} \times 7.48 \text{ US gallon/s}}{F \cdot S}$$

$$= \frac{\text{Discharge} \times 7.48}{F \cdot S} \times 3600 \text{ US gallon/hr}$$