

Figure: 1

Q.1

a In Figure 1, Y-axis and X-axis denotes σ_A/σ_Y and number of load cycle (n) respectively. Find σ_A for $n=250$ and endurance limit if $\sigma_Y = 250\text{MPa}$.

b For Figure 2, find Yield stress from offset method.

c Find modulus of resilience and toughness for Figure 2.

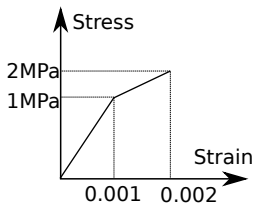


Figure: 2

Q.2

a Cement A has more C_2S content than cement B. Assuming both have same final setting time, which will have more gypsum requirement? Explain.

b Which property of cement is affected by unreacted CaO present in it? How is it measured in laboratory?

c How does fly ash affect workability of cement? Explain.