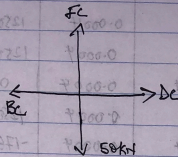


Aghasiti Chukwudi William

At point C \Rightarrow



From previous calculated examples,

$$B_c = 50 \text{ kN}$$

$$\therefore -B_c + D_c = 0 \quad (\text{Resolving to horizontal})$$

$$-50 + D_c = 0$$

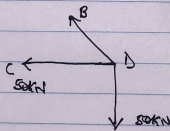
$$D_c = 50 \text{ kN} \quad (\text{Tensional})$$

Resolving to vertical

$$\Rightarrow -50 \text{ kN} + F_c = 0$$

$$F_c = 50 \text{ kN} \quad (\text{Tensional})$$

At joint D



$$\text{Resolving horizontal} = -50 \text{ kN} - DE \cos 45 = 0$$

$$50 \text{ kN} = -DE \cos 45$$

$$DE = \frac{50}{-\cos 45} = -70.7$$

$$- \cos 45$$

$$DE = 70.7 \quad (\text{Compressional})$$

Member	P (kN)	t (m)	a (m ²)	p = P/a (kN/m ²)	u	PuL
AF	-70.71	4.24	0.0004	-176775	-0.471	353026.95
AB	50	3	0.0004	125000	0.333	124825
BC	50	3	0.0004	125000	0.666	249750
BF	50	3	0.0004	125000	0.333	124825
FE	50	3	0.0004	125000	0.333	-124825
BE	0	4.24	0.0004	0	-0.471	0
EC	50	3	0.0004	125000	1.000	375000
ED	-70.71	4.24	0.0004	-176775	-0.942	706053.492
CD	50	3	0.0004	125000	0.666	249750
						$\Sigma = 2058455.24$

$$\frac{\Sigma PuL}{\Sigma} = \frac{2058455.24}{(200000)} = 10.29 \text{ mm} \text{ Ans}$$

Resolving to vertical
 $0 = 207 + 1029 - \Sigma$
 $\Sigma = 207 + 1029 = 1236$

