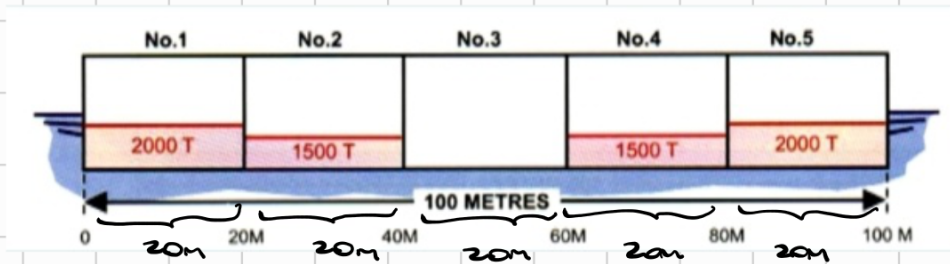


[CUC n°7]

$$\text{Desplazamiento} = 2.000 (T)$$

$$\text{Esfera} = 100 \text{ m}$$

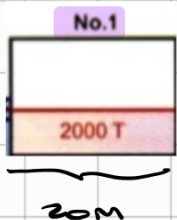


$$\rightarrow 20 \text{ m} \times 5 = 100 \text{ m} \rightarrow \text{Esfera}$$

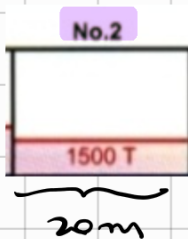
$$2.000(T) + 1500(T) + 1500(T) + 2.000(T) = 7.000(T) \rightarrow \text{carga total}$$

$$\frac{\Delta}{\text{Esfera}} = \frac{2.000(T)}{100 \text{ m}} = \frac{20 T}{\text{m}} \rightarrow \text{sin carga (vacío), distribuida}$$

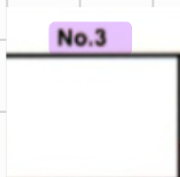
$$\frac{\Delta + \text{carga total}}{\text{Esfera}} = \frac{2.000(T) + 7.000(T)}{100 \text{ m}} = \frac{9.000(T)}{100 \text{ m}} = 90 \frac{T}{\text{m}} \rightarrow \text{con carga, distribuida}$$



$$\rightarrow \frac{2.000 T}{20 \text{ m}} = \frac{100 T}{\text{m}} + \frac{20 T}{\text{m}} = 120 \frac{T}{\text{m}}$$

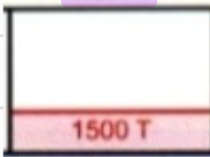


$$\rightarrow \frac{1500 T}{20 \text{ m}} = \frac{75 T}{\text{m}} + \frac{20 T}{\text{m}} = 95 \frac{T}{\text{m}}$$



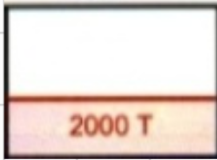
$$\rightarrow = \frac{20 T}{\text{m}}$$

No.4

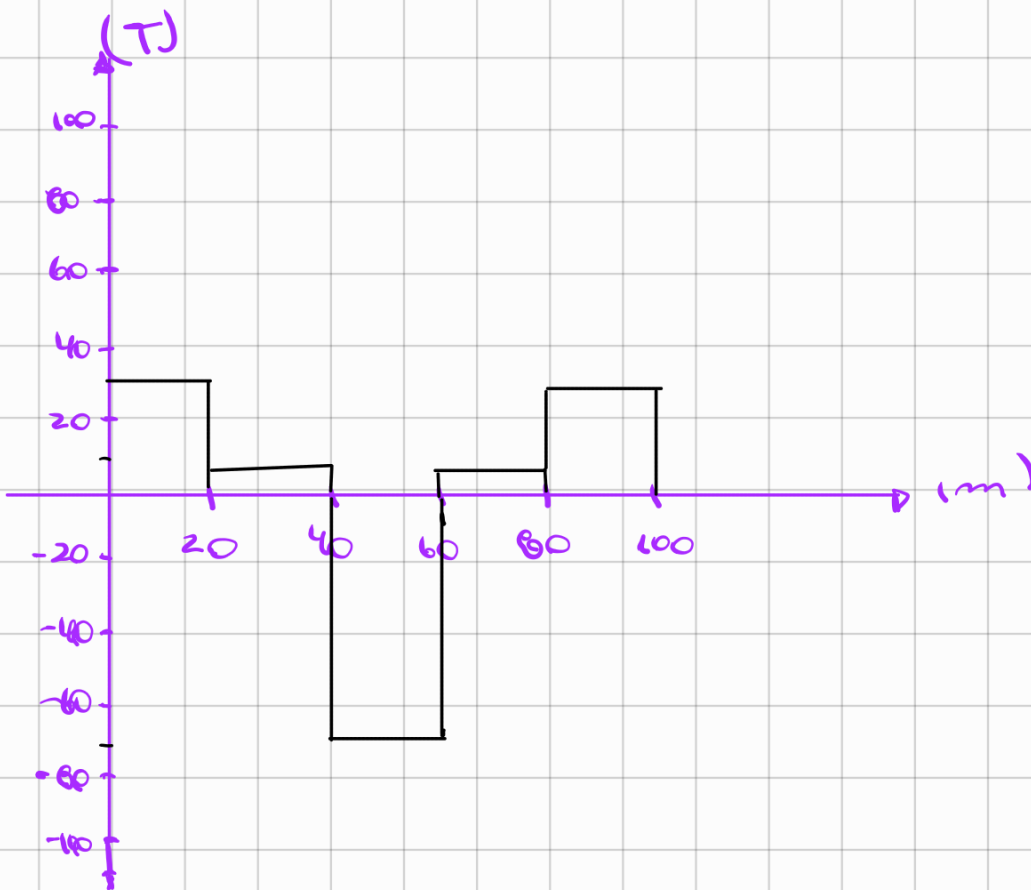


$$\rightarrow \frac{1500 T}{20 m} = 75 \frac{T}{m} + 20 \frac{T}{m} = 95 \frac{T}{m}$$

No.5



$$\rightarrow \frac{2000 T}{20 m} = 100 \frac{T}{m} + 20 \frac{T}{m} = 120 \frac{T}{m}$$



* siendo curva positiva

$$0-20 = 120 - 90 = 30 (T)$$

$$20-40 = 95 - 90 = 5 (T)$$

$$40-60 = 20 - 90 = -70 (T)$$

$$60-80 = 95 - 90 = 5 (T)$$

$$80-100 = 120 - 90 = 30 (T)$$

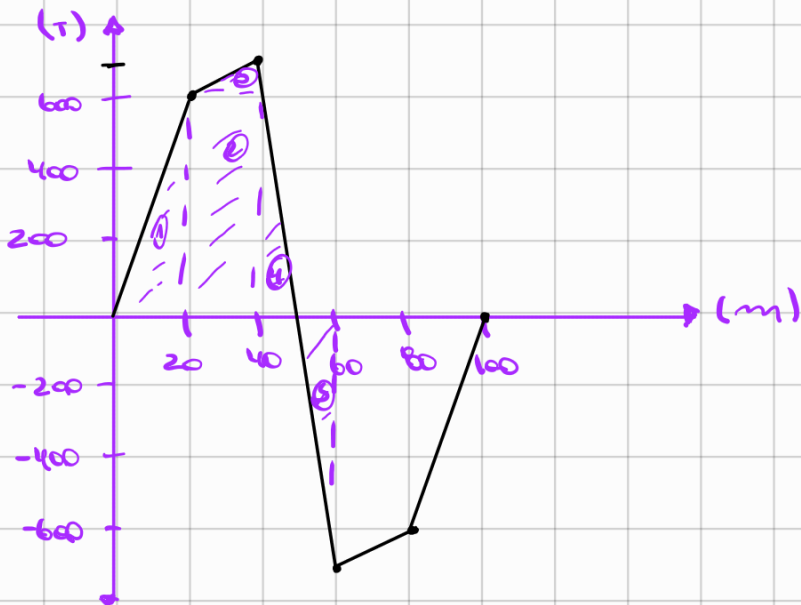
$$0-20 = 20 \text{ m} \cdot 30 \frac{\text{I}}{\text{m}} = 600 \text{ T} \quad (1)$$

$$20-40 = 20 \text{ m} \cdot 5 \frac{\text{I}}{\text{m}} = 100 \text{ T} + 600 \text{ T} = 700 \text{ T} \quad (2)$$

$$40-60 = 20 \text{ m} \cdot -30 \frac{\text{I}}{\text{m}} = -1400 \text{ T} + 700 \text{ T} = -700 \text{ T} \quad (3)$$

$$60-80 = 20 \text{ m} \cdot 5 \frac{\text{I}}{\text{m}} = 100 \text{ T} - 700 \text{ T} = -600 \text{ T} \quad (4)$$

$$80-100 = 20 \text{ m} \cdot 30 \frac{\text{I}}{\text{m}} = 600 \text{ T} - 600 \text{ T} = 0 \text{ T} \quad (5)$$



$$\text{MTO } 20 \text{ m} \quad (1) \quad \Delta = \frac{20 \text{ m} \cdot 600 \text{ T}}{2} = 6000 \text{ T} \cdot \text{m}$$

$$\text{MTO } 40 \text{ m} \quad (1) + (2) + (3) \quad \Delta + \square + \Delta = 6.000 \text{ T} \cdot \text{m} + \frac{20 \text{ m} \cdot 600 \text{ T}}{2} + \frac{20 \text{ m} \cdot 100 \text{ T}}{2} = 19.000 \text{ T} \cdot \text{m}$$

$$6.000 \text{ T} \cdot \text{m} + 12.000 \text{ T} \cdot \text{m} - 1.000 \text{ T} \cdot \text{m}$$

$$\text{MTO } 60 \text{ m} \quad (1) + (2) + (3) + (4) + (5) \quad \Delta + \square + \Delta + \square + \Delta = 19.000 \text{ T} \cdot \text{m} + 0 = 19.000 \text{ T} \cdot \text{m}$$

$$(4) \quad \Delta = \frac{10 \text{ m} \cdot 700 \text{ T}}{2} = 3500 \text{ T} \cdot \text{m} \quad (5) \quad \Delta = \frac{10 \text{ m} \cdot -700 \text{ T}}{2} = -3500 \text{ T} \cdot \text{m}$$

$$3500 \text{ T} \cdot \text{m} - 3500 \text{ T} \cdot \text{m} = 0$$

* El puente se encuentra haciendo esfuerzos de compresión.