

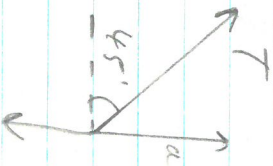
5 kN per m² dead for live load.

live load \rightarrow people

dead load \rightarrow material

Wind loads \rightarrow snow.

17 metre long deck section \rightarrow 136m³ concrete
 \rightarrow 326400 kg
per section



$$a = 3198720 \text{ N}$$

$$a = T \sin 45$$

$$3198720 = T \sin 45$$

$$T = 4523623.206$$

live load per deck section = 5 kN/m² (8x17) = 680 kN
= 680000 N

$$a = 680000 + (326400 \times 9.8) = 3878720 \text{ N}$$

$$\frac{3878720}{\sin 45} = T = 5485338.429 \text{ N}$$

$$\text{Area} \times 355 = 5490000$$

$$\text{Area} = 15464.78873$$
$$= 15465 \text{ m}^2$$

$$\text{Area} = \pi r^2 = 15465$$

$$r = 71 \text{ mm} \quad \therefore d = 142 \text{ mm}$$