

5

$$G_2 = 18 \text{ kN} / \text{m}^3$$

G =

+

$$W = 15 \text{ } L_0$$

$$W \text{ } G \text{ } / F_f$$

15

A

L_0

10

A

K

L_0

$$\frac{1.05 \text{ } 10 \text{ } 13.8 \text{ } 3 \text{ } 10 \text{ } 0.5 \text{ } 2}{15}$$

15

$$L_0 = 5.5 \text{ m}$$

2

36mm

10

1.8m × 1.8m

$$R_a = 450 \text{ kN}$$

2m

$$5.5 \text{ m} ($$

3.5

);

110mm

110mm

180mm

III

1

3.5m

$$N_{tk}$$

mck

$$a = 0.001 \times 3.14 \times 110 \times 0.3 \times 10^3 \times 1.0 \times 3.5 = 362.7 \text{ kN}$$

2.0m

$$N_{tk}$$

mck

$$a = 0.001 \times 3.14 \times 110 \times 0.4 \times 10^3 \times 1.0 \times 2.0 = 276.3 \text{ kN}$$

2

$$N_{tk} = l_r \text{ } l f_{rk} A_{ln} = 2.6 \times 3 \times 4.24 \times 10^3 \times 15935 \times 10^{-6} = 527 \text{ kN}$$

A_{ln} -

A_{ln}

$$\left(\frac{180}{2} \right)^2$$

$$\left(\frac{110}{2} \right)^2$$

15935 mm^2

3

$$K_r N_{tk} = N_{tk1} + N_{tk2} = 362.7 + 276.3 + 527 = 1166 \text{ kN}$$

$$N_{tk} = 1166 / 2 = 583 \text{ kN}$$

$$A_s-$$

$$A_{s(36)}=1017\text{mm}^2$$