

force in the direction of the outward force per unit length of the slope is T_r , and this supports or by a ring beam at

cylindrical shell roofs and the section 6.1.9.

ration of membrane action brane forces per unit width of shown on Table 178: to obtain as of shell h . Negative values of in θ_x : positive values of F nt should be provided approxi- list the principal tensile force. If any edges the forces will be

$$q \cos \theta_x) r \cos \theta_x$$

$$j_x + 1.5q(\cos^2 \theta_x - \sin^2 \theta_x)]$$

$$\cos \theta_x)(2x - l) \sin \theta_x$$

$$\pm \sqrt{\frac{1}{2}(F_x - F_y)^2 + V_{xy}^2}$$

$$\theta_x = \theta, x = l/2;$$

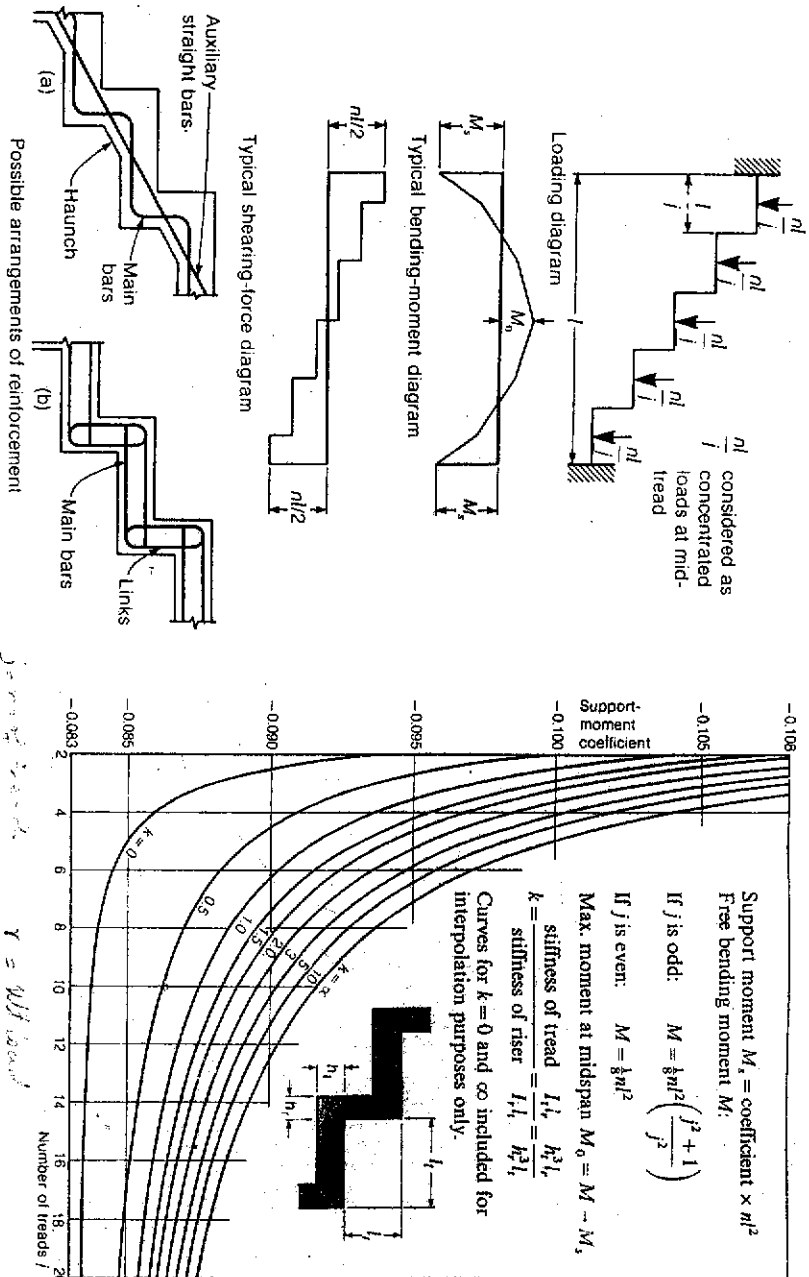
$$\theta) r \cos \theta$$

$$+ 1.5q(\cos^2 \theta - \sin^2 \theta)] r$$

$$x = 0, x = l/2;$$

Stairs 2: sawtooth and helical stairs

Sawtooth stairs



Helical stairs

