

Ch. 6

21. 设拉力为 T .

$$\therefore mg - T = ma$$

$$T - \mu mg = ma$$

$$mg - \mu mg = (m + m)a$$

$$a = \frac{mg - \mu mg}{m + m} = \frac{343}{425} \approx 0.8 \text{ m/s}^2$$

$$T = m(g - a) = \frac{7600}{925} \approx 18.0 \text{ N}$$

方向
沿绳
向上

35. 设表面压力为 T .

$$T - T = ma$$

$$T_{\text{max}} = T_{\text{min}} \cdot \mu_s = mg$$

$$T = ma$$

$$\text{可关主可降 } F_{\text{min}} = 561.5 \text{ N}$$



(b) $a = \frac{-1.019^2}{218} \approx \frac{1.038}{218} \approx 4.76 \times 10^{-3} \text{ m/s}^2$

60 m/s $\varphi 30$ m.

5b. $v = \frac{65}{3.6} = 18 \text{ m/s}$ $v' = 11 \text{ m/s}$

$$F_N \cdot \sin \theta = m \frac{v^2}{r}$$

$$\bar{F}_{\text{ro-ao}} = mg \quad \therefore t_{\text{ao}} = \frac{v^2}{gR}$$

$$mg \sin \theta - \mu F_N = ma \quad \text{and} \quad a = \frac{v^2}{r} \cos \theta$$

$$F_n - mg \cos \theta = ma_t$$

$$a'_L = \frac{v^2}{r} \cdot \text{sec.}$$

中 介 主 理 0.10

59. (a) 24 वी



$f_{lower} = 8.7 \text{ PM}$

(b) $F_{\text{net}} = (35 + 8.7) \times \frac{\sqrt{3}}{2} \approx 31.9 \text{ N}$ 合力垂直于杆向下

(c). $f = m \cdot \frac{v^2}{r}$ $\therefore v = \sqrt{\frac{F \cdot r}{m}} = \sqrt{\frac{(35 + 8.7) \times \frac{13}{2} \times 1.7 \times \frac{13}{2}}{1.34}}$

~~2. 1 m/s~~ 6.45 m/s

