解: 认圆锥作为非惯性参琴, 建业园生标: 对质点: $\hat{\Gamma}=\hat{x}$ (1), $\hat{W}=\hat{x}$ (2), $\hat{w}=\hat{w}$ (-conditions) (3). 公主公(4) F= mg+ FNyj+ FNzk = mg(ndî+ (Fuy-mgsma)) + Fuz k (5) Fint = - max (axx) - 2maxx' = mwxsma(smattcoat)+2mwxsmak (6) ω= ω (-cnoζ+smoj), r=x; ... ω×r= wxsma(-k) $\vec{\omega} \times (\vec{\omega} \times \vec{r}) = \omega^2 c s m \alpha (-coa \vec{c} + s m a \vec{c}) \times (-\vec{k})$ $= W_{S} \times 2 \text{mag} \left(-\cos \frac{1}{2} - 2 \text{mag}\right)$ $\vec{\omega} = \omega(-(n\vec{a}\vec{i}+\vec{s}\vec{n}\vec{a}\vec{j}), \ \vec{\omega}' = \vec{x}\vec{i}, \ \vec{\omega} \times \vec{\omega}' = \omega \vec{x} \cdot \vec{s}\vec{m}\vec{a}(-\vec{k})$ t=0 not, x=0, $\dot{x}=0$ F=mgcond+ (Fny-mgsma) j+ Fnzk (5). Fint = mwzsma(smai+cnaj) +2mwzsmak (6) $m\tilde{a} = \tilde{F} + \tilde{F}_{int}$ $\begin{cases} m\dot{x} = mg\cos + m\omega^2x \sin d \cos \alpha \end{cases}$ (7). 0 = Fwz + 2mwisind $\dot{x} = \omega^2 \sin^2 x \left(x + \frac{g \cos \alpha}{\omega^2 \sin \alpha}\right) = \omega^2 \sin^2 x \cdot x', \ x \approx x' = x + k, \ \dot{x}' = \dot{x}, \ \ddot{x}' = \dot{x}$ x'-(wsma)2x'=0, Ryx'= Ae wsmat +Be wsmat x = Aeusmat+Be-usmat g cond, i= usma(Aeusmat-Be-usmat) t=0 rot, x=0, $\dot{x}=0 \Rightarrow A=B=\frac{g\cos\theta}{2\omega^2 sm^2 d}$ $= \frac{9 \cos \theta}{2 w^{2} \sin^{2} \theta} \left(e^{w \sin \theta t} + e^{-w \sin \theta t} \right) - \frac{g \cos \theta}{w^{2} \sin^{2} \theta} = \frac{9 \cos \theta}{2 w^{2} \cos^{2} \theta} = \frac{9 \cos \theta}{2 \cos^{2} \theta} = \frac{9 \cos^{2} \theta}{2 \cos^{2} \theta} = \frac{9$ $=\frac{3\cos\theta}{\text{wishid}}\left[\text{ch(wsindt)-1}\right] = \frac{29\cos\theta}{\text{wishid}} \text{sh}^2\left(\frac{1}{2}\text{wsindt}\right), \left[\frac{1}{3}\cdot\text{ch(2x)} = 2\text{sh}^2x\right] + \frac{1}{3}\left(\frac{1}{2}\text{wsindt}\right)$

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