Subida - VII

Como calcular diagrama V_V vs. V_H
En función de δ_T

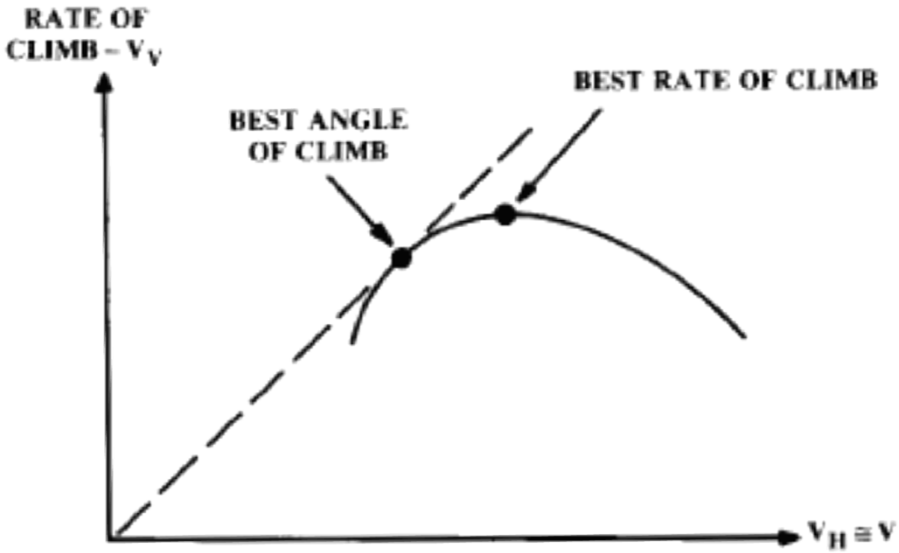

Fig. 17.3 Graphical method for best climb.

Jet

$$V_V = V \sin\gamma = V\left(\frac{T-D}{W}\right) \cong V\left(\frac{T}{W} - \frac{1}{L/D}\right)$$

$$\Leftrightarrow \quad \frac{L}{D} = \frac{1}{\frac{qC_{D_0}}{W/S} + \frac{W}{qS}\frac{1}{\pi ARe}}$$

Fijar posición palanca - δ_T $\Rightarrow$ $T = \delta_T T_{SL}\left(1 + \frac{\gamma-1}{2}M^2\right)^{\frac{\gamma-1}{\gamma}}\left(1{,}00 - 0{,}49\sqrt{M}\right)\frac{\rho}{\rho_{SL}}$

Prop

$$V_V = V \sin\gamma = V\left(\frac{T-D}{W}\right) = \left(\frac{VT}{W} - \frac{VD}{W}\right) = P_{AV} - P_{REQ}$$

Fijar posición palanca - δ_T $\Rightarrow$ $P = \delta_T P_{SL}\left(1 + \frac{\gamma-1}{2}M^2\right)^{\frac{\gamma-1}{\gamma}}\frac{p}{p_{SL}}$

P_{AV} - potencia disponible siendo $P_{AV} = P\,\eta_P$
P_{REQ} - potencia necesaria