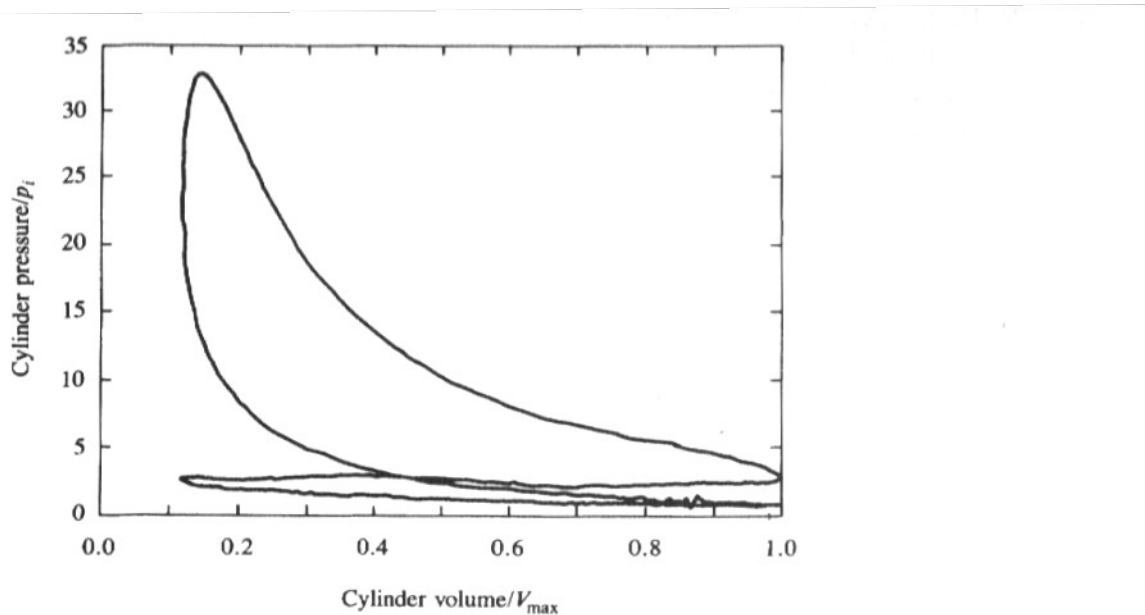**MEC 011**

MÁQUINAS TÉRMICAS

$$\eta = 1 - \frac{1}{r_c^{\gamma-1}} \left[\frac{\alpha\beta^{\gamma} - 1}{\alpha\gamma(\beta - 1) + \alpha - 1} \right]$$

$$\alpha = \frac{p_3}{p_2} \qquad \beta = \frac{V_{3b}}{V_{3a}}$$

Pressure-volume diagram of firing spark-ignition engine. $r_c = 8.4$, 3500 rev/min, $p_i = 0.4$ atm, $p_e = 1$ atm, $imep_n = 2.9$ atm.