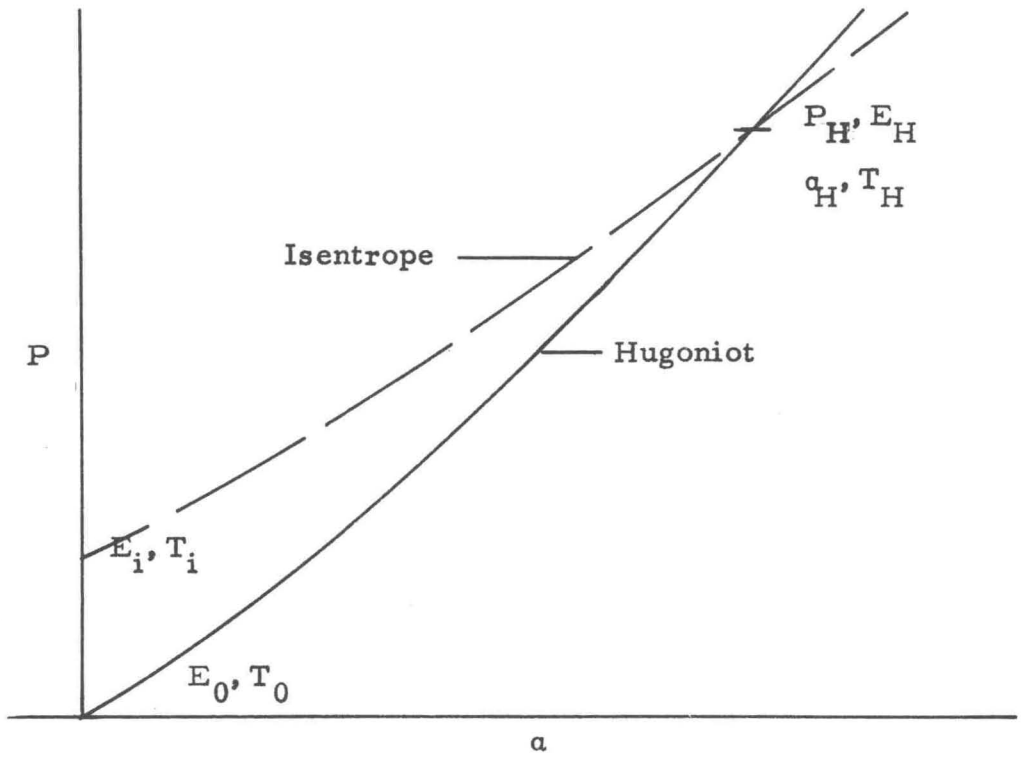

Fig. 7. P-α plot showing a Hugoniot and an isentrope curve.

Hence, the initial temperature can be written as

$$T_i = (E_i/C_V) + T_0 \ . \tag{60}$$

The energy E_S on the isentrope is determined from the differential equation

$$dE_S/d\alpha = P_S \tag{61}$$

where P_S is given by Eq. (43) and the solution to Eq. (61) can be written as a series

$$E_S = \frac{A}{k} e^{k\alpha} + B + \frac{C^2}{(V_0 - M\alpha)} \sum_{i=0}^{\infty} a_i \alpha^i \tag{62}$$

where $a_0 = a_1 = 0$ and

$$a_i = \left[A_{i-1} + (i-2)Ma_{i-1}\right] / iV_0 \quad \text{for } i \geq 2 \ . \tag{63}$$

The constant of integration B is found by letting $E_S = P_H \alpha_H / 2$ on the