

of  $(\partial e / \partial p)_v$  provides no guarantee that  $C_v$  and  $(\partial p / \partial T)_v$  are also constant. In fact different sets of values of  $C_v$  and  $(\partial p / \partial T)_v$  that satisfy the condition of constant  $(\partial e / \partial p)_v$  can be associated with different (T-p-v) equations of state that will give different values of shock temperature.

It is concluded that the values of shock temperature calculated along the isentropes are more realistic than those that would be calculated with models based on less thermodynamic information.

#### ACKNOWLEDGMENTS

The authors are grateful to Physical Research Laboratory, Edgewood Arsenal, for supporting this work under Contract DA-18-035-AMC-122(A), and thank Miss B. Loo for performing the numerical integration and plotting the diagrams.