

teristics of the high pressure phase. The temperature at this point is probably near 3000°K. Drickamer³⁹ has concluded from his high pressure work on some solid aromatic hydrocarbons that these compounds undergo crosslinking of the molecular bonds at pressures of 200 kbar and temperatures of 2000°K. The Hugoniot of benzene may be influenced by such a mechanism and the elevated temperatures available may actually promote the process.

The results of some crude electrical conduction experiments performed on benzene indicate no appreciable increase in conductivity up to pressures of 140 kbar.

E. Carbon Disulfide

The carbon disulfide data are presented in Table VI and in the shock-particle velocity ($U_s - U_p$) and the pressure-relative volume ($P - V/V_0$) planes of Figs. 18 and 19. The data from references 14 and 16 are also plotted.

The carbon disulfide $U_s - U_p$ points fit two straight lines separated by a region of constant shock velocity. On the upper line, the first six points were obtained from experiments in which the explosive was in contact with the driver plate and the remainder from flying plate assemblies. The significance of this observation is that the two lines do accurately describe the behavior of carbon disulfide and are not a result of changing the experimental technique. A comparison of these data with references 14 and 16 indicates the agreement is, in general, poor. The reasons given for the lack of agreement of Cook and Rogers' benzene data probably apply for carbon disulfide also. In addition, many of their points lie in the transition region