Investigation of the compressibility of beryllium oxide in shock waves

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In the present experiments with shock waves, the behavior of beryllium oxide (BeO) ceramic samples is studied in the pressure range up to 130 GPa. To obtain shock waves, steel impactors were used, accelerated up to velocities 6 km/s by the detonation products of an explosive. The parameters of shock waves in the samples were determined using electrocontact or manganin sensors. The data obtained supplemented the previously available information on the shock compressibility of beryllium oxide. On the basis of a set of experimental information, a semiempirical equation of state for this material has been constructed in a wide range of densities and pressures.