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Shock Data Base IGOR LOMONOSOV, KONSTANTIN KHISHCHENKO, PAVEL LEVASHOV, DMITRY MINAKOV, ALEXEY ZAKHARENKOV, JIHT RAS — Shock-wave data provide for the reference information for testing and validating theoretical models. Measurements of principal, reflected and porous Hugoniots and determinations of release isentrope parameters cover a broad range of the phase diagram. This unique information embraces nine orders with respect to pressure and five orders with respect to density. All of the data are unique, have their own history and present a result of complicated expensive experiments. We have collected about 20000 experimental points on shock compression, adiabatic expansion, measurements of sound velocities behind the shock front and free-surface-velocity profiles for more than 650 substances. The database with graphical user interface containing experimental data and typical 1D computational experimental setups has been worked out. One can search the information in the database and obtain the experimental points in tabular or plain text formats directly via the Internet using common browsers. It is also possible to draw the experimental points on graphs in comparison with different approximations and results of equation-of-state calculations. One can present the results of calculations in text or graphical forms and compare them with any experimental data available in the database.

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