

THERMODYNAMICS OF DYNAMICALLY COMPRESSED HELIUM AT MEGABAR PRESSURE RANGE

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New results of experiments and calculations of equation of state of dynamically compressed helium at megabar pressure range are observed. Thermodynamic model based on chemical picture was used for calculations of composition, equation of state and thermodynamic functions of shock and quasiisentropically compressed helium. Comparison of the calculation results with new experimental data of terapascal pressure range on pre-compressed helium of high initial density and new calculation data obtained with methods based on the first principles are represented and discussed.