

Abstract Submitted
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Semiempirical multi-phase Equation of state of Al GONGMU ZHANG, HAI-FENG LIU, Institute of applied physics and computational mathematics — Equation of state (EOS) is the fundamental characteristic of matter determining its thermodynamic properties over a wide range of the phase diagram. EOS are based on a three-term Helmholtz free energy, given as a function of the specific volume V and temperature T . Semiempirical EOS use with great efficiency results obtained by theories and experimental data. Al serves as a standard material for high pressure region, the EOS for this metal need to be especially exact and reliable. We construct the EOS for Al can describe the phase solid, liquid and gas, it agrees with IEX and DAC experiment data and the other theories data well.

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