

PROPERTIES OF THE SUPERCONDUCTING STATE IN COMPRESSED SULPHUR

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The thermodynamic properties of the superconducting state in Sulphur under the pressure at 160 GPa were obtained. It has been proven that: (i) the Coulomb pseudopotential is equal to 0.127 for $T_C = 17$ K; (ii) the dimensionless ratios: $2\Delta(0)/k_B T_C$, $\Delta C(T_C)/C^N(T_C)$ and $T_C C^N(T_C)/H_C^2(0)$ differ from the BCS values; (iii) the ratio of the electron effective mass to the bare electron mass is high and reaches its maximum equal to ~ 1.77 for T_C .

9.7 cm

13.4 cm

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