MAGNETOVOLUME EFFECT IN PARAMAGNETIC $YbAgCu_4$ COMPOUND

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9.7 cm

Magnetovolume effect dlnχ/dlnV in the $YbAgCu_4$ compound with weak intermediate valence has been studied in the temperature range 4.2–300 K. The low temperature paramagnetostriction and direct pressure dependence of the magnetic susceptibility χ at high temperatures were used. Grüneisen parameter for the characteristic Kondo temperature G_K=–dlnT_K/dlnV= –28 follows from the data obtained in Coqblin-Schriffer limit and changes slightly to –22 as temperature increases. This value is consistent with resistivity *vs* pressure data and is close to G_K in the $YbInCu_4$ compound. More sophisticated treatment of the magnetovolume effect in resonant level model for susceptibility suggests that the shift of the resonant level rather than its width change under pressure is the dominant contribution to this effect.

13.4 cm

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