

T plane has a break in the pressure interval 21 to 26 kbar.

This interesting phenomenon is connected with the formation under pressure of a nonmagnetic modification of gadolinium. Such an idea is supported by experimental indications of the existence of a polymorphic transition in the pressure region 20 to 40 kbar at room temperature and at elevated temperatures [10-12].

Our measurements do not permit making a similar deduction; on the contrary, over the whole pressure range studied, the $\mu(p)$ curves retain the jump in permeability that corresponds to the magnetic transition, and the $\Theta(p)$ line undergoes no break. All that can be noticed is a certain diminution (by a factor of one and a half to two) of the size of the jump in μ at the Curie point, at pressures exceeding 20 kbar.

¹ L. Patrick, Phys. Rev. 93, 384 (1954).

² D. Bloch and R. Pauthenet, Compt. rend. 254, 1222 (1962).

³ L. D. Livshitz and Yu. S. Genshaft, JETP 46, 821 (1964), Soviet Phys. JETP 19, 560 (1964).

⁴ L. B. Robinson, F. Milstein, and A. Jayaraman, Phys. Rev. 134, A187 (1964).

⁵ L. D. Livshitz, Yu. S. Genshaft, and Yu. N. Ryabinin, FMM 9, 726 (1960), Phys. Metals Metallog. 9, No. 5, 82 (1960).

⁶ L. D. Livshitz, Yu. S. Genshaft, V. K. Markov, and Yu. N. Ryabinin, Vysokomolekulyarnye soedineniya 3, 624 (1961).

⁷ Yu. S. Genshaft, L. D. Livshitz, and Yu. N. Ryabinin, PMTF (Appl. Math. and Tech. Phys.) 5, 107 (1962).

⁸ K. P. Belov and A. V. Ped'ko, JETP 42, 87 (1962), Soviet Phys. JETP 15, 62 (1962).

⁹ A. G. Worthing and J. Geffner, Treatment of Experimental Data, John Wiley & Sons, Inc., New York, 1944 (Russ. Transl., IIL, 1958).

¹⁰ P. W. Bridgman, Proc. Am. Acad. Arts Sci. 82, 83 (1952-1953).

¹¹ P. W. Bridgman, Proc. Am. Acad. Arts Sci. 83, 1 (1954).

¹² A. Jayaraman and R. C. Sherwood, Phys. Rev. Letters 12, 22 (1964).

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