0

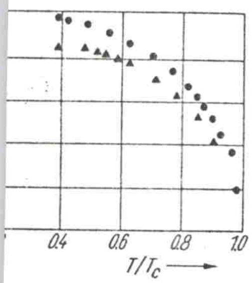

Fig. 2

t P = 0 and·P = 8. 2 katm.

of tin at a pressure of 8. 2 katm;

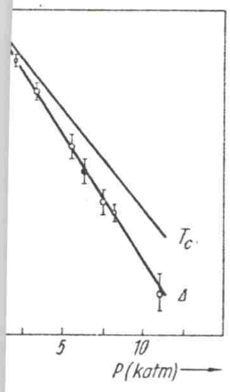

Fig. 4

pressures. Normalized units are

gap and critical temperature of

f $dT_c/dP = -4.8\text{x}10^{-5}$ °K/atm;

The results on the influence of high pressure on the energy gap and critical temperature of tin are represented in Fig. 4.

From experiments the following values are found:

$$\frac{dT_c^{Sn}}{dP} = -(4.8 \pm 0.3)\text{x}10^{-5} \frac{^{\circ}\text{K}}{\text{atm}} ,$$

$$\frac{d2\Delta}{dP} = -(-1.85 \pm 0.1)\text{x}10^{-5} \frac{\text{meV}}{\text{atm}} .$$

Thus it was shown by means of direct experiment that in the case of tin as for lead $2\Delta/kT_c$ changes with pressure. Analysing the experimental data and the data of (1 to 3) on lead, and estimating the change of Θ_D with pressure (6, 7) it is interesting to mark that the magnitude of the shift of $2\Delta/kT_c$ with pressure coincides with the change of T_c/Θ_D.

Multi-band effects can possibly cause a gap decrease with pressure. This question is studied now experimentally.

In conclusion we should like to point out the following: Observation of the Josephson dc (8) under pressure (Fig. 1) apparently shows the essential role of fluctuations in superconducting tunnelling.

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