

Fig. 1

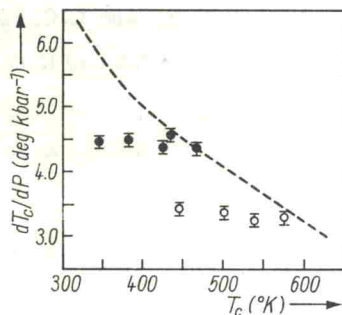


Fig. 2

Fig. 1. Dependence of  $dT_c/dP$  on  $T_c$  of  $\text{Fe}_{66}(\text{Ni}_{1-x}\text{Mn}_x)_{34}$  alloys. The dashed line shows a similar dependence for Fe-Ni alloys (4)

Fig. 2. Dependence of  $dT_c/dP$  on  $T_c$  of Fe-Ni-Cu alloys;  $\bullet$   $\text{Fe}_{66}(\text{Ni}_{1-x}\text{Cu}_x)_{34}$ ,  
 $\circ$   $\text{Fe}_{61}(\text{Ni}_{1-x}\text{Cu}_x)_{39}$ . The dashed line is for Fe-Ni alloys (4)

As it is seen in Fig. 1 and 2 in this case  $dT_c/dP$  either is nearly independent of  $T_c$  (Fe-Ni-Cu alloys) or weakly depends on  $T_c$  (Fe-Ni-Mn alloys). Thus, it is stated experimentally that the value of  $dT_c/dP$  depends basically on the iron concentration.

From the viewpoint of a collective electron ferromagnetism the Curie point and magnetization are determined by a sum curve of the electron density of states and by the value of the exchange interaction shifting sub-bands with spin directions (+) and (-). The fact that the displacement of  $T_c$  with pressure is principally controlled by the Fe concentration allows to suppose that from the summary density of states of our alloys the part concerning Fe may be separated. It is rather sensitive to the volume, depends very weakly on the Fe environment by other ions and gives rise to the observed high pressure effects.

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#### References

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