

CUSTOM TRANSLATION

GDA

PHYSICS

EFFECT OF UNIFORM ALL-ROUND ~~PRESSURE~~ COMPRESSION ON THE SATURATION
MAGNETIZATION OF IRON AT THE TEMPERATURE OF LIQUID NITROGEN (E)

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The effect of high pressures on the magnetic properties of ferromagnetics has so far been little studied; for example, the effect of uniform compression on the saturated magnetization of pure metals has only been considered in two experimental investigations /1, 2/. The authors of these papers directly determined the effect (the change in the magnetic flux.....through the ferromagnetic, see formula (2)) due to uniform compression. The change in the saturated magnetization was calculated from the formula

$$\dots R.p. 419$$

where.....and..... are respectively the saturated magnetization ~~mm~~ of unit mass and the ~~m~~ magnetic flux at pressure p_0 , while..... and..... are the same quantities at a pressure p , and..... is the compressibility. (1)

We see from Table 1 that the numerical values of the effect as given in the papers cited differ both in absolute magnitude and sign; according to /1/ the latter is negative, and according to /2/ it may be either negative or positive. We are therefore here