

DETERMINATION OF MAGNETOSTRICTIVE
CONSTANTS OF A POLYCRYSTALLINE
FERROMAGNETIC BY RESONANCE
FREQUENCIES OF RADIAL
VIBRATIONS OF A RING

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S u m m a r y

We constructed a mathematical model of radial vibrations of a ring made of a polycrystalline ferromagnetic (magnetostrictive) material. We show the appearance of the resonance absorption of the energy of a magnetic field source at certain frequencies, which is accompanied by a resonant increase and decrease in the inductance of a toroidal coil, whose core is a ring of the material under study. We propose an algorithm for the determination of material constants of a polycrystalline ferromagnetic by measured frequencies of magnetomechanical resonances.