Nuclear Magnetic Resonance of Cubic Ferromagnetic Compounds Co$_2$MnSn and CoMnSb

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Abstract

The nuclear magnetic resonance was studied in the cubic ferromagnetic compounds Co$_2$MnSn and CoMnSb. In Co$_2$MnSn four signals were observed, whose frequencies extrapolated to 0\degree K were estimated at 157.0, 150.3, 153.5 and 147.4 Mc/s. They were identified to be due to Sn$^{117}$ and Sn$^{119}$ in domains and walls. In CoMnSb five resonance signals were observed, whose frequencies extrapolated to 0\degree K were found to be 147.8, 126.5, 118.2, 115.4 and 111.1 Mc/s. The first of these lines was identified to be due to Sb$^{123}$, while the identification for the remaining four lines was not so straightforward. The difference between the hyperfine field of Sn$^{117}$ in Co$_2$MnSn and that of Sb$^{123}$ in CoMnSb is discussed.

* The 1337th report of the Research Institute for Iron, Steel and Other Metals. Published in the Journal of the Physical Society of Japan, 21 (1966), 1658.