

Paleomagnetic and rockmagnetic study on a Mn crust from the northwestern Pacific

Hirokuni Oda[1]; Masato Joshima[2]; Akira Usui[3]; Mark J. Dekkers[4]

[1] IGG, GSJ, AIST; [2] IGG,GSJ,AIST; [3] Natl. Env. Sci., Kochi Univ.; [4] Faculty of Earth Sci., Utrecht Univ.

Magnetostratigraphic study was performed on thin slices of a Mn crust from the northwestern Pacific. 0-7.5mm shows normal (N) polarity, 7.5-18mm shows reversed (R) polarity, and 18-19mm shows normal polarity. N-R transition at 7.5mm may be correlated with Brunhes/Matuyama transition (0.78 Ma) and R-N transition at 18mm with upper Olduvai transition (1.77 Ma). The growth rate can be estimated as 10 mm/Myr. Rockmagnetic study revealed that the magnetic mineral is well dispersed single domain magnetic mineral with coercivity of remanence of about 30 mT. Thermomagnetic analysis and low temperature analysis suggest the absence of magnetite and hematite, however, high temperature susceptibility indicate the presence of magnetic mineral with Curie temperature of 570 degrees C.