

Self-reversal PTRM evidence found in Sakurajima volcanic rocks

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Self-reversal pTRM (partial thermo-remanent magnetization) evidence was found by direct measurement of pTRM in narrow temperature ranges in Sakurajima volcanic rocks.

Self-reversal pTRM was observed at 460~490 degree in annealed samples of An-ei pumice, and at double ranges of 245~260 degree and 330~340 degree in raw samples of An-ei lava and Osumi pumice fall deposit. In the former case, pTRM carrier could not be hemo-

ilmenite because it appeared at much higher temperature than the Curie temperature of hemo-ilmenite which was reported under 400 degree, generally 200~300 degree.

Partial self-reversal magnetism might be caused by interaction between the two phases of titanomagnetite with different blocking temperatures. Different magnetic mineral phases could be seen in repeated initial susceptibility measurement in ascending and descending temperature with variable maximum temperature. Besides, self-reversal pTRM disappeared after upon the stronger field from 200 to 550 micron-T according to the samples.