

A Study on the Demagnetizing Factor for Predicting Magnetic Signals of the Ship Equivalent Model



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Many recent studies have made it possible to determine the demagnetizing factors of the magnetic materials of various Shape. However, in the case of the non-ellipsoid, the actual internal demagnetizing factors are distributed differently in the body, and the study is insufficient. There is also a lack of research on the demagnetizing factors of hollow cylinders. Hollow cylinders are mainly used in research on magnetic signal reduction. When a magnetic signal is felt from the outside, a magnetic field is applied and the applied magnetic field changes due to the anti-magnetic field. Therefore, it is difficult to predict magnetic signals generated externally.

Therefore, in this study, the distribution of the internal demagnetizing factors of the magnetic body was analyzed and compared with the results of the previous research. Also, new calculation method was proposed to determine demagnetizing factors of hollow cylinder model.

Biography:

Sang Hyeon Im received the Ph.D degree in electrical engineering from Pusan National University, Busan, South Korea in 2020. From 2021 to now, he is an Assistant Professor with Dong Eui University, Busan.