A Magnetic Force Law 文献(9/15/2021)

1. *Focusing on the material of permanent magnets. Go with an analogy which attempts to derive the laws of permanent magnets by predicting the atomic mass of nuclides to verify the law of Lorentz magnetism.*

The Lorentz magnetic force law has not been precisely verified. The experimental basis of it is in the early experiments done through the pioneers around the 1840s and 1850s; no new experiment has since been done when Hendrik Lorentz presented it in 1895 in its current form: $\mathbf{F} = \mathrm{q}(\mathbf{v} \times \mathbf{B})$. The NIST data base of atomic mass of the various nuclides is actually the experimental data collected in a international distributed experiment to verify the Lorentz magnetic force law by using it to predict the atomic mass of nuclides. By comparing the predicted values with actual values measured using chemical methods, we could indirectly con firm the correctness of the law quantitatively to as much as 1 part in 107.

https://www.vixra.org/pdf/1903.0043v1.pdf

2. *Magnetic coupling (possible). Pay attention to the environment in which the permanent magnets are located: no contact force, no contact shaft bearings, and in a suspended state.*

The magnetic force in the form of magnetic coupling is used in many technical and scientific applications, especially for contact-less force, momentum, contact-less shaft bearing and levitation, for instance. The survey of magnetic coupling methods and applications can be found in literature [1]. In order to achieve optimal system design, theoretical models of magnetic field are often used. In the literature model based on non-existing magnetic charges is often used in a very formal analogy with electrostatic field [2]. But two other models are possible: the model of coupled currents and the model of elementary magnetic dipoles. However the last model is complicated both theoretically and numerically.

http://dsp.vscht.cz/konference_matlab/matlab09/prispevky/073_mikolanda.pdf