66th International Astronautical Congress 2015

SPACE PROPULSION SYMPOSIUM (C4)
Advanced and Combined Propulsion Systems (8)

Author: Mr. Neeraj Jerauld
Student, India, maverick.neeraj@gmail.com

Mr. Nabil Ummer
Hindustan University, India, ummernabil@gmail.com
Mr. Dinesh Kumar G
Hindustan University, India, aerodinu@gmail.com
Mr. Gautam Shivakumar
Hindustan University, India, gautamshivakumar@gmail.com

MAGREP PROPULSION (MAGNETIC REPULSION PROPULSION SYSTEM)

Abstract

Magnetic Repulsive Propulsion system and operating method for a hybrid vehicle that can travel in atmosphere, space and sea is theoretically formulated. Basic theory for the propulsion is proposed and model for the proposed vehicle is theoretically constructed with its working. It generally consists of superconductor (SC) and electromagnets for huge vehicle and in theory electromagnet (EM) are substituted with a natural magnet (NM) for propelling the model, for path direction and also to levitate its structure. By the variation of the electric current thrust, path direction and levitation can be controlled. We assume with the condition that enough power is available for the hybrid vehicle. SC and EM (NM) are placed at location and repulsion occurs. Since they are fixed at a location the repulsive force will tend to act as the propulsive power, with suitable placement of the above arrangement can give path direction and levitation. The magnetic shielding in the vehicle and also reuse of the cryogenic liquid will have added benefit to the hybrid vehicle in case of efficiency as well as reduction of wastage.