

HYPERLOOP MAGNETIC LEVITATION AND THRUST

Prepared By:
Ghassan Faris Ghassan
Kanan Muhammed Sleman
Mustafa Imad Ahmed
Naznen Abdulrazzaq Sultan

Thesis advisor
Dr. Mohammed Jawdat Barzanji
Thesis co-advisor
Mr. Mahdi Molan
2017- 2018

Hyperloop MLT (Magnetic Levitation and Thrust) consists of a plastic tunnel with a train that is transported at both low and high speeds throughout the length of the tube. The train is supported on an aluminum plate, featuring electromagnetic thrust and levitation rather than being supported on a cushion of air, featuring pressurized air and aerodynamic lift, such as that in Elon Musk's design. The train in our design is accelerated and levitated via the interaction between the aluminum train base and the electromagnetic rail which produces magnetic fields along the rail once energized. The fields form eddy currents in the base plate which the capsule or the cart is supported on. The rail is affixed throughout the tunnel. The train in Elon Musk's design is accelerated via magnetic linear accelerator affixed at various stations on the tube with rotors contained in each capsule. Passengers may enter and exit Hyperloop at stations located at various branches along the tube length.

