

MAGNETIC LEVITATION TRAINS

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This project involves the design, hardware, technology, application and future uses of “Magnetic levitation trains.” The maglev transportation system is more stable, faster, economic, and efficient. Maglev systems are currently in use for applications such as bearings, high- speed trains, and manufacturing. Maglev is a method of propulsion that uses magnetic levitation to propel vehicles with magnets rather than with wheels, axles and bearings. With maglev, a vehicle is levitated a short distance away from a guide way using magnets to create both lift and thrust (levitation would not exceed above 10 centimetres). In future these High-speed maglev trains would give a huge competition to the aviation industry.

These trains consume very less energy compared to conventional trains. They require no large engine kind of stuff as they run using linear motors. They Move a lot faster than normal trains because they are not affected by ground friction; they would only have air resistance or drag resistance. They are incompatible with existing rail lines because they need separate track to levitate, unlike the traditional high-speed trains. Initially the cost is very high but it may decrease in near future.

Maglev trains use magnetism to levitate above the tracks on which they travel. They are faster, more efficient, and more environmentally friendly than modern wheeled trains. It may be that one day soon, maglev technology will be commonplace throughout the world. This project reviews the history of these trains, how they work, as well as their benefits and drawbacks. It also discusses the importance of electrical engineering in developing maglev, and how electrical engineers can make this technology the next transportation revolution.