**DESIGN AND FABRICATION OF**

**“MAGENN AIR POWER GENERATION”**

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**ABSTRACT**

In our universe the energy sources are very limited so we have to move towards non conventional energy sources.so that we discovered a new source of energy known as Magenn air power generation to reduce the pollution of air and also noise created due to conventional energy sources.

**INTRODUCTION**

Magenn Power's (MARS) is a Wind Power Anywhere solution with distinct advantages over existing Conventional Wind Turbines and Diesel Generating Systems including global deployment, lower costs, better operational performance, and greater environmental and suitable to advantages.
MARS is a lighter-than-air tethered wind turbine that rotates about a horizontal axis in response to wind, generating electrical energy. This electrical energy is transferred down the 1000-foot tether for immediate use, or to a set of batteries for later use, or to the power grid. Helium sustains MARS and allows it to ascend to a higher altitude than traditional wind turbines. MARS captures the energy available in the 600 to 1000-foot low level and nocturnal jet streams that exist almost everywhere.

**WORKING PRINCIPLE**

 MARS is a lighter-than-air tethered wind turbine that rotates about a horizontal axis in response to wind, generating electrical energy. This electrical energy is transferred down the tether for consumption, or to a set of batteries or the power grid. Helium sustains the Magenn Air Rotor System, which ascends to an altitude as selected by the operator for the best winds. Its rotation also generates the “Magnus” effect. This aerodynamic phenomenon provides additional lift, keeps the MARS device stabilized, positions MARS within a very controlled and restricted location, and finally, causes MARS to pull up overhead to maximize altitude rather than drift downwind on its tether.

**MODEL LINE DIAGRAM**

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**COMPONENT TO BE USED**

Cylindrical Balloon

Wind vane stabilizer

Axle

Generator

 Aluminum tube

Charge controller



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**WORKING OF AIR ENGINE**

The use of compressed air for running prime mover such as air turbine offers a potential solution to these issues as it does not involve combustion in producing shaft work. The great advantages such as availability of air as fuel and the absence of emissions are also apparent from air motor. Compressed air driven prime movers are also found to be cost effective compared to fossil fuel driven engines. Such prime movers have perennial compressed air requirement, which needs some source of energy for running the compressor. The overall analysis shows that the compressed air system is quite attractive option for light vehicle applications.

**ADVANTAGES**

Wind Power Anywhere™ removes all placement limitations. Coast-line or off-shore locations are not necessary to capture higher speed winds. Reaching winds at 1,000-feet above ground level allow MARS to be installed closer to the grid. MARS is mobile and can be rapidly deployed, deflated, and redeployed without the need for towers or heavy cranes. MARS is bird and bat friendly with lower noise emissions and is capable of operating in a wider range of wind speeds - from 4 mph to greater than 60 mph.

**DISADVANTAGES**

Cost of the system is high as it uses by individual houses. At low altitude speed is low so power generation is low. due to rainy seasons the system has to drop down to earth due to high impact of rain drop.

**REFERENCES**

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