

Magveh Energy Recovery Systems

Website / Facebook page (link):

www.magveh.com

Location:

Hubli, Karnataka, India

PROPOSAL TITLE (10 words)

Suspension Energy Recovery System (SERS)

EXECUTIVE SUMMARY (50 words)

Suspension Energy Recovery System recovers energy from vehicle suspension movement and increases the overall efficiency of a vehicle. This applied to a fleet of hybrid/electric public transport vehicles will directly result in reduced emissions, increase in range, savings in charging cost and time leading to a net-positive environmental impact.

SOLUTION NARRATIVE (250 words)

We are looking for a solution that is built on an open and scalable platform, that enables secure integration with other systems, and that can improve over time, including the possibility to add new services and/or complement other third-party solutions. Provide a general description of your solution, including your current status and any description of locations where your solution is currently implemented (if applicable).

Suspension Energy Recovery System-SERS Technology, is build on a platform that enables it to be applied on variety of vehicles from cars/SUV to trains. The design also provides flexibility in terms of connecting with existing systems of electric and hybrid vehicles. Our technology can also be integrated with other kinetic energy recovery systems like braking and heat. Semi-active control technology is another feature that in future will be incorporated in our system. This leads to improved vehicle efficiency, ride comfort and vehicle handling.

Road imperfections and vehicle movements during acceleration, braking and turning gets transferred to the automotive shock absorbers which creates a pressure variation in the internal fluid. SERS harnesses energy from this pressure variation through an oscillator, generator and power electronics system. This energy is stored and used to power vehicle auxiliary systems or recharge the main battery in case of hybrid or electric drives. The main attribute of this technology is that it provides a cost-effective solution to address some of the transportation issues like emissions, vehicle efficiency and clean energy.

Currently, we are pilot testing with a fleet owner and also engaged in road testing independently. These have confirmed the system functionality. Areas for manufacturing improvements have been identified. Designs are being considered in terms of manufacturing challenges. Components are finalised and their effective integration for packaging is being considered. Components are looked into for improving cost-effectiveness through their ease of availability. Initial supply chain requirements have been noted and suitable suppliers have been identified.

Suspension Energy Recovery System - SERS Technology

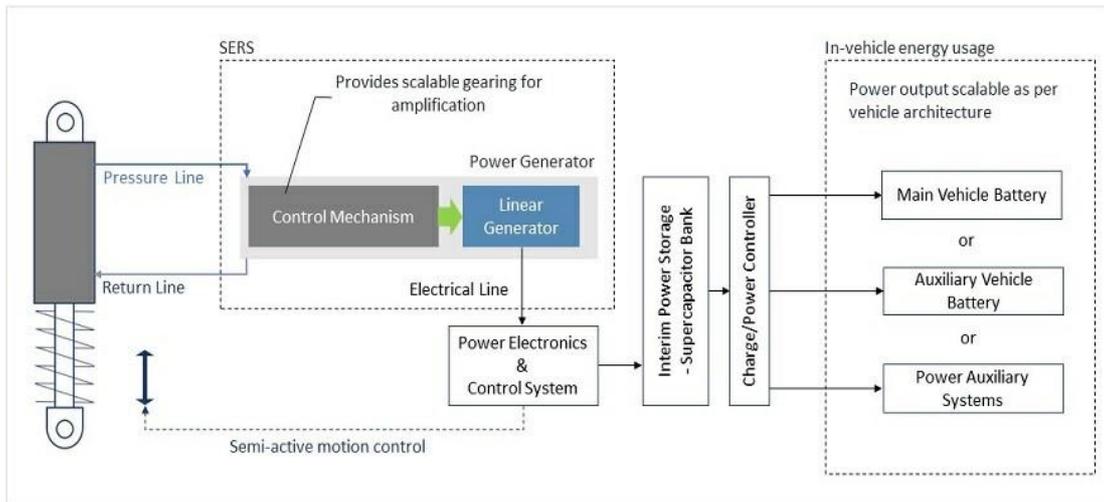


Figure 1 : System Layout