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Energy Recovery System Optimisation in Automotives

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ABSTRACT

In the near future, a significant increase in electric power consumption in vehicles is expected. To limit the associated increase in fuel consumption and exhaust emissions, smart strategies for the generation, storage/retrieval, distribution, and consumption of electric power will be used. Inspired by the research on energy recovery system for modern vehicles, this system complement and supply the vehicular electric power system to reduce the fuel use and emissions, by generating and storing electrical energy only at the most suitable moments. The aim of this research is to develop and optimise energy recovery systems in automotives. Especially, the focus will be on systems to recovery energy from braking and vibration processes in which the energy density is high.

Keywords: energy recovery, vibration, electrical energy.