THE CONSUMPTION OF E-CARS CAN BE IMPROVED WITH A NEW MODE OF OPERATION

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ABSTRACT

The economy of a vehicle is a very complex concept. It can be energy efficient, in terms of the use of built-in materials, in terms of total operating costs, in terms of input costs, maintenance costs and, of course, environmental
costs. In this paper, we examine the question primarily from the point of view of the energy comparison, but we also try to make the interested parties at least a little unsure about the other aspects as well. A more complete energy balance, which also takes into account kinetic energy, the energy requirement of the passenger compartment, the energy required for the operation of the engine and the drive system, and the resistances, leads the technical thinker who is inclined to it to quite interesting conclusions, even directly in the case of the vehicle.
It is interesting to compare the energy requirements from the movement of masses, the consequences of different losses on the development of energy consumption. We are looking for answers to seemingly simple questions such as the minimum and maximum value of the possible energy recuperation, or how much the driver's style can affect the efficiency or how the ambient temperature affects the energy balance in the case of ICEV (Internal Combustion Engine Vehicle) and BEV (Battery Electric Vehicle).

The conclusion may even influence the development of the vehicle industry.

Keywords: kinetic energy, recuperation, losses, environment