

Electrification in Transportation Systems

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Abstract

Environmental questions and shortcomings in hydro carbon resources are the driving forces for the electrification in transportation systems. The report describes these starting points of the discussion and studies the design of batteryelectric and fuel-cell powered cars. They are both using electricity for driving. The questions regarding the energy sources (batteries, fuel-cells) are discussed, the new requirements for these electric operated cars are described. The requirements are touching the whole car and especially the aggregates like steering, braking, heating, etc. As a consequence changes in industrial structures will happen. This finally opens the discussion about large scale changes in conventional car companies and the chances for "new-comers". Co-operations seem to be an adequate solution for the future business.

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