

Thermal Runaway Vehicle Level Investigation and Protection

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Abstract : Nowadays, electric trucks are anticipated to become much more prevalent in the foreseeable future. However, the necessity to investigate the occurrence of thermal runaway phenomenon in the batteries has arisen, and the safety concerns are supported by past events. This article addresses the phenomenon of battery thermal runaway and examines the implications at the vehicle level. Different battery thermal runaway scenarios are evaluated by giving priority to the components that affect customer safety and customer degree evaluation with CAE tools, regulations, related tests. This evaluation aims to support the efforts of the trucking industry to attain safer, greener, more sustainable, and more effective energy storage solutions.

Keywords : thermal runaway, EV truck, heat protection, battery

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