

Thermal Runaway Initiation Variation

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The installation of lithium batteries on aircraft has been a topic of concern due to their potential to undergo thermal runaway and compromise safety due to onboard fires. RTCA is creating a standard that will specify design criteria for installed battery packs aboard aircraft. Within the standard several tests must be performed to verify that a battery installation is safe. At least one of the tests requires thermal runaway to be initiated within the pack. This study seeks to understand the differences between the various methods of thermal runaway initiation such as overheat, overcharge and reverse charge. It also looks at the difference in thermal runaway for various heating rates.