

# FAA test results for UN propagation test setup



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Presented to: Spring 2021 Systems Meeting

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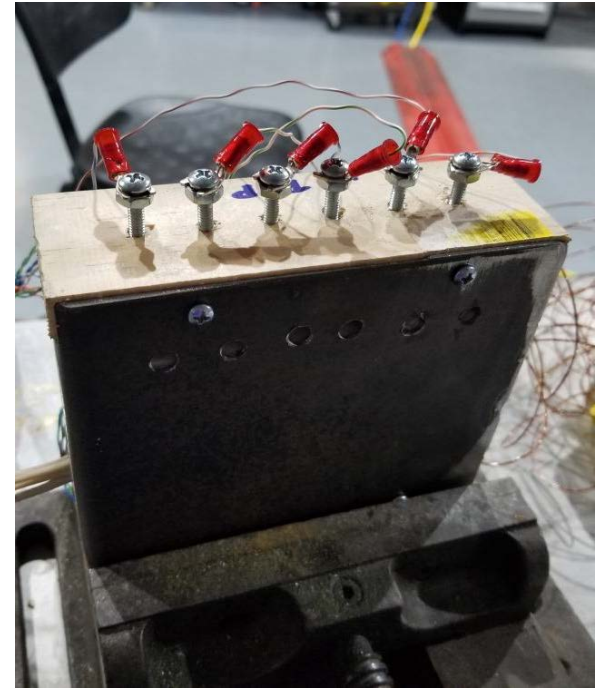
Date: 04/2021

# Background

- **Multiple labs around the world have been conducting tests to come up with a proposed hazard based reclassification for lithium batteries.**
- **A first round of tests was performed looking at propagation.**
- **Multiple labs participated and met together to compare their test results.**
- **Based on the first round of tests, modifications were made to the procedure and a second round was conducted (focus of this presentation).**
  - Propagation of 18650's and Pouch Cells at various States-of-Charge.
  - Gas tests of 18650's and Pouch Cells at various States-of-Charge.



# 18650 Test Setup Pictures



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# Video



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# Pouch Test Setup Pictures



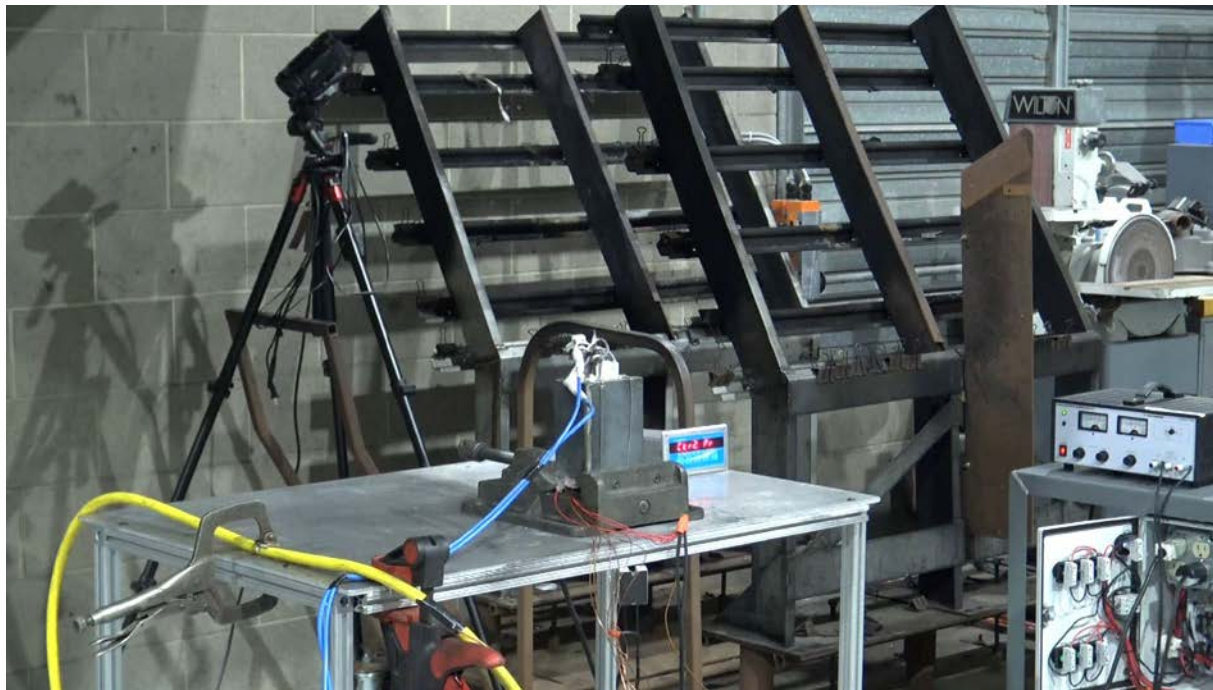
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# Video



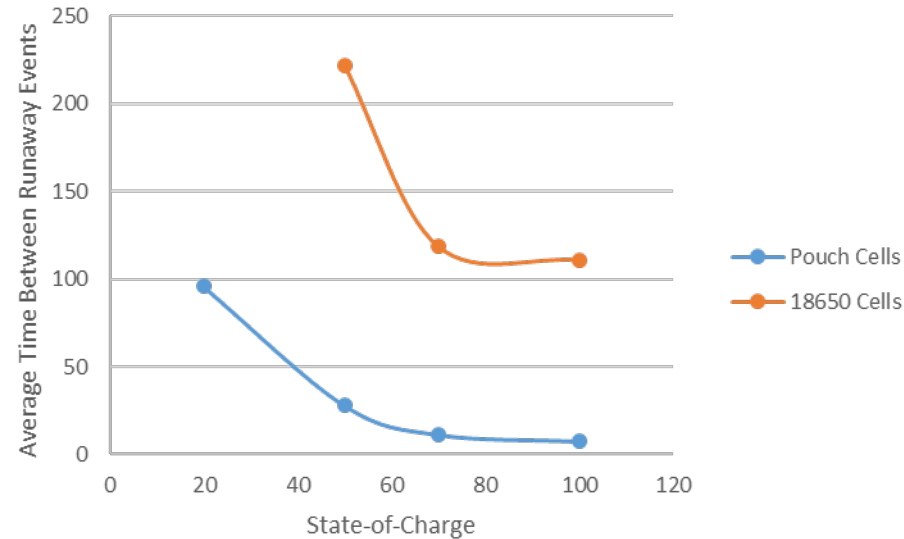
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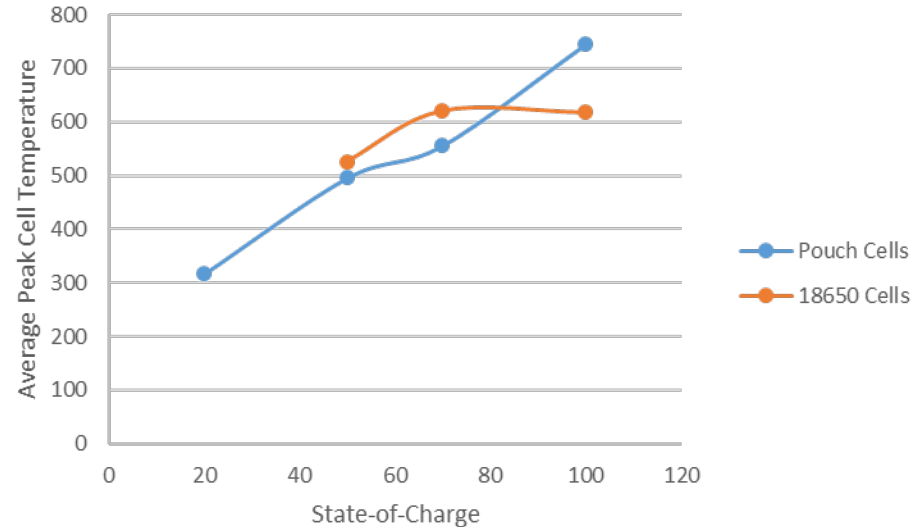


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# Results



- Both types of cells had increased propagation rate with increased SoC
- Pouch cells propagated about 1 order of magnitude faster than 18650 cells



- Both types of cells had increased temperature with increased SoC
- The temperature increase for both types of cells were similar.

- Additional Finding: Pouch cells at 30% SoC and 200C didn't have a clear thermal runaway. This caused us to continue past 200C in future tests.