

Summary of the 19th Plenary Special Committee 235 - Non-Rechargeable Lithium Batteries

Meeting Summary:

The 19th Plenary Meeting of Special Committee 235 (SC-235) was held on January 18, 2022. The meeting was conducted as a Virtual Meeting with the following attendees participating via WebEx:

John Trela (Chairman)	The Boeing Company
Norman Pereira (Government Authorized Representative)	Federal Aviation Administration
Jeff Densmore (Secretary)	Radiant Power Corporation
Rebecca Morrison (Program Director)	RTCA, Inc.
Camilo Camargo	ECA Aerospace
Antonio Chiesa	Transport Canada
Nick Conquest	National Institute for Aviation Research
Claude Cresp	ECA Aerospace
Bryan Easterwood	Federal Aviation Administration
Nazih Khaouly	Federal Aviation Administration
Thomas Maloney	Federal Aviation Administration
Frederic Menard	Orolia
Fernando Menendez Rodriguez	EASA
Kathryn Mulhollen	U.S. Air Force
Tom Pack	ACR Electronics
Paul Pfeifer	Textron
Ray Rodriguez	U.S. Air Force
Jim Russell	The Boeing Company
Leire Segura Martinez de Ilarduya	Airbus
Adrian Sfetcu	Bell Helicopter Textron
Greg Smith	U.S. Air Force
Clayton Vondrasek	Garmin

Opening Plenary

- The 19th Plenary meeting of SC-235 was convened on January 18, 2022 at 11:00pm EST by Chair John Trela (Boeing). Jeff Densmore (Radiant Power) was the SC-235 Recording Secretary.
- Norman Pereira was introduced as the Government Authorized Representative.
- An RTCA overview, including RTCA's Proprietary References Policy was read by Rebecca Morrison, the Program Director.
- Welcoming remarks were made by John Trela. Each person in attendance was invited to introduce themselves.
- The meeting agenda was reviewed.
- The Meeting Summary for SC-235 Plenary #18 was reviewed and approved as written. It was pointed out that Sebastian Dussaud's name was misspelled in the attendance list.
- All documents and presentation material reviewed during Plenary #19 have been uploaded and are available on in the RTCA AerOpus documents folder.

Plenary #18 Action Item Review

There were two (2) action items assigned during Plenary #18. The status of each is reviewed below:

- (1) Summarize and forward comments to DO-227A based on previous and on-going testing efforts
Assigned to: Susanna Bruffett
Status: **CLOSED**. It was agreed to close this action. Comments have been incorporated in an on-going basis
- (2) Summarize and forward comments to DO-227A based on previous and on-going installation efforts
Assigned to: Leire Segura Martinez de Ilarduya
Status: **CLOSED**. It was agreed to close this action. Comments have been incorporated in an on-going basis

SC-235 Schedule Review

John Trela discussed the committee's progress towards updating and releasing DO-227B. The current Terms of Reference (TOR) identifies the committee's completion date as March 2022. John stated that the committee will not be able to deliver the document in time to meet the March 2022 deadline. He presented the following timeline representing achievable milestones:

- Upcoming RTCA PMC Meetings: Mar 17, 2022, Jun 23, 2022, Sep 15, 2022, and Dec 15, 2022
- Plenary #19: January 18th
- Plenary #20: late February / early March
- Plenary #21: week of April 4th (to open FRAC)
- FRAC Process:
 - Submit Draft DO-227B to RTCA for FRAC April 11th
 - FRAC Start April 18th
 - FRAC comments due May 18th
- Plenary #22: week of June 20th
- Plenary #23: week of July 18th (for SC 235 approval)
- Release Process:
 - Document to RTCA August 1st
 - Target RTCA PMC Approval September 15th

The committee discussed this timeline and agreed to the approach. It was asked if the TOR required due to the delay in release of the document. Rebecca stated that it was acceptable to proceed without changing the TOR, but would confirm.

DO-227B Comment Spreadsheet Review

The committee reviewed the current status of the DO-227B Comment Spreadsheet. It was suggested that each item be designated as “closed” or “open” to provide better visibility for those items requiring further discussion prior to the Final Review and Comment (FRAC) process. This designation was captured real-time as the document was reviewed. A revised copy with this added information has been uploaded to AerOpus.

Cell Discharge and Polarity Reversal Test Procedure Question

Prior to Plenary #19, EASA submitted a question regarding the Cell Discharge and Polarity Reversal Test Procedure. It was pointed out that the procedure states that testing must begin before the test article temperatures decreased by more than 5 degrees if removed from the temperature chamber. This statement doesn't properly consider the COLD temperature condition. It was suggested that better wording would be test article temperatures don't vary more than 5 degrees if removed from the temperature chamber. The committee agreed and it was also pointed out that this allowance appears several times within the document. This change should be captured throughout all applicable procedures.

Best Practices for Thermal Runaway Testing.

Jim Russell presented a discussion of Best Practices for performing the Thermal Runaway Containment Test. These were a compilation of inputs discussed during an earlier working group meeting. Jim suggested that a separate working group begin meeting regularly to compile these inputs for inclusion in DO-227B as an appendix. Jim solicited volunteers for these meetings, which will begin in early February.



Action Item Summary

There were no new action items assigned during Plenary #19.

Working Group Meetings

Weekly Working Group meetings will continue on Monday's at 10am (EST) for 1 hour. It was also suggested that a second Working Group be formed to draft an Appendix to DO-227B to document Thermal Runaway test procedure "best practices." Volunteers were requested to participate in this group.

Next Plenary

Plenary #20 has been tentatively scheduled as a Virtual Meeting on March 7, 2022. A detailed agenda and WebEx meeting information will be issued closer to this meeting date.

-S-
Jeff Densmore
Secretary

CERTIFIED as a true and accurate summary of the meeting.

-S-
John Trela
Chairman