CABIN

BUNSEN BURNER – AGAIN (UPDATE)?

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IAMFTF – Cologne, Germany

SAFRAN

Bunsen Burner Drip Flame Time

Fire Test Handbook, Chapter 1

1.2.3 Drip Flame Time

Drip flame time is the time in seconds that any flaming material continues to flame after falling from the specimen to the floor of the chamber. If no material falls from the specimen, the drip flame time is reported to be 0 seconds, and the notation "No Drip" is also reported. If there is more than one drip, the drip flame time reported is that of the longest flaming drip. If succeeding flaming drips reignite earlier drips that flamed, the drip flame time reported is the total of all flaming drips.

Replace highlighted sentence with, "In the event that multiple drips continuously fuel a flame at the bottom of the chamber (or drip collection pan), then the longest continuous flame shall be recorded."

Bunsen Burner 60-degree Wire Test Applicability

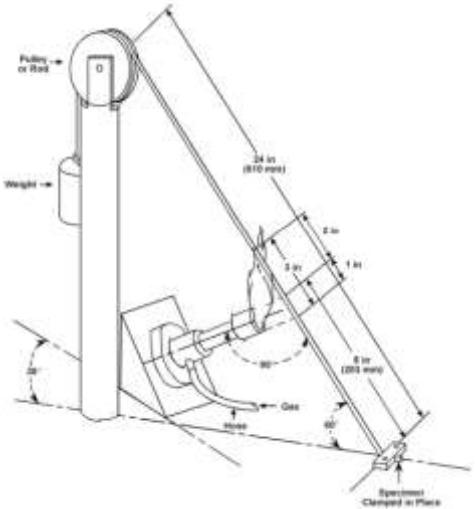
14CFR 25.1713(c) 25.869(a)(4)

What is applicable? Just electrical wire?

What about shrink wrap tubing? Most regard shrink wrap tubing as a thermoplastic and test to a 12-second vertical BB test. Others require a 60-degree BB test.

Acceptable ways to test shrink wrap tubing- suspended alone, one a properly sized wire, or on a properly sized metal dowel?

Can shrink wrap tubing over a wire be considered a small part?

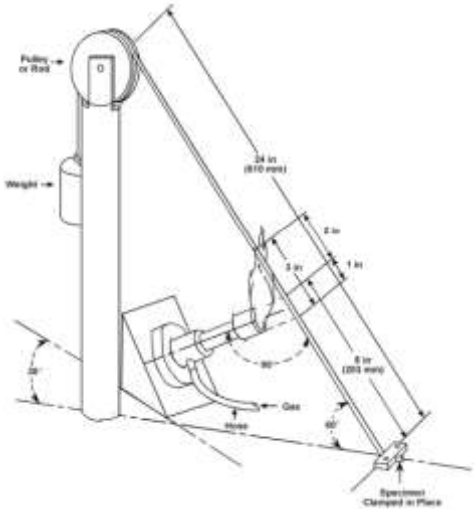


Bunsen Burner 60-degree Wire Test Applicability

14CFR 25.1713(c) vs. 25.869(a)(4)

14CFR 25.869(a)(4)

(4) Insulation on electrical wire and electrical cable installed in any area of the airplane must be self-extinguishing when tested in accordance with the applicable portions of Part I, Appendix F of this part.

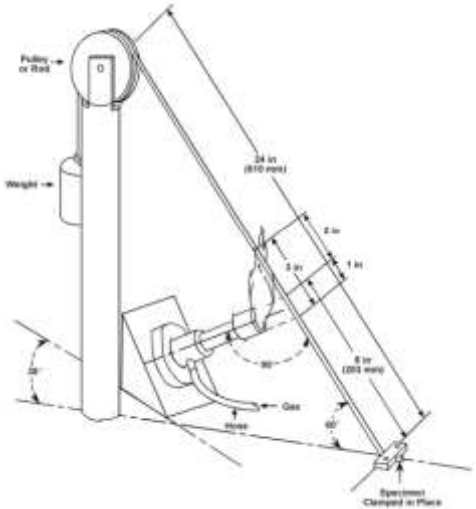


Bunsen Burner 60-degree Wire Test Applicability

14CFR 25.1713(c) vs. 25.869(a)(4)

14CFR 25.1713(c)

(c) Insulation on electrical wire and electrical cable, and materials used to provide additional protection for the wire and cable, installed in any area of the airplane, must be self-extinguishing when tested in accordance with the applicable portions of Appendix F, part I, of 14 CFR part 25.

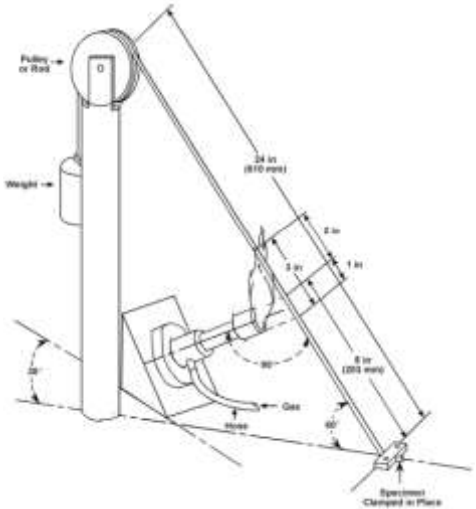


Bunsen Burner 60-degree Wire Test Applicability

14CFR 25.1713(c) vs. 25.869(a)(4)

Appendix F, Part 1, Paragraph (b)(7) states:

(7) *Sixty degree test.* A minimum of three specimens of each wire specification (make and size) must be tested. The specimen of wire or cable (including insulation) must be placed at an angle of 60° with …



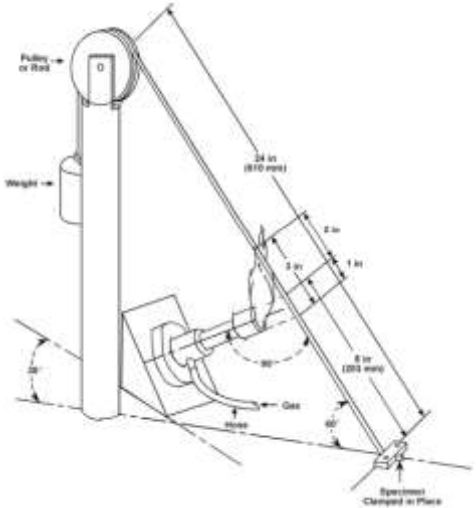
Appendix F, Part 1, Paragraph (a)(1)(ii) mentions applicability for electrical conduit and thermoformed parts.

So what are the “applicable portions” of appendix F?

Bunsen Burner 60-degree Wire Test Applicability

14CFR 25.1713(c) vs. 25.869(a)(4)

The amendment 25-123 NPRM discussion of comments makes it clear the FAA was considering the 60-degree wire test for these extra components, but is not stated anywhere else.



Additionally, no provision in the Fire Test Handbook on how to test these components. A quick sampling last meeting demonstrated nothing is standard regarding how to test.

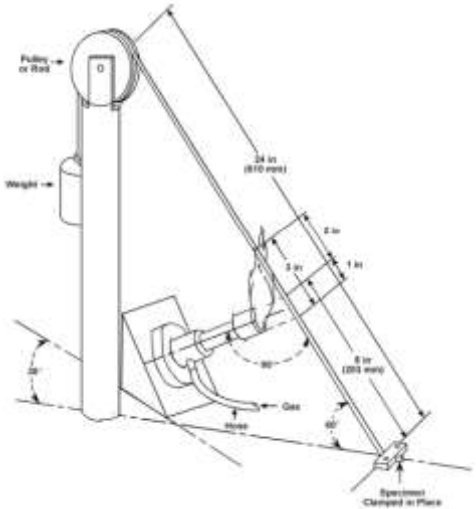
Several suggested perhaps a standard gauge of compliant wire should be used while worse-case may still be testing an unsupported 12-second vertical test as done today.

Bunsen Burner 60-degree Wire Test Applicability

14CFR 25.1713(c) vs. 25.869(a)(4)

Recommend an update to Part 25 Appendix F Part 1 to clarify ‘applicable paragraphs’.

Recommend an update to chapter 4 of the Fire Test Handbook to standardize testing.



Bunsen Burner Testing of Backlit Overlays

Appendix F Part 1 (a)(1)(ii) vs. (a)(1)(iv)

Is it a thermoplastic? Or a clear plastic sign?

How many per aircraft? Location? Spacing? Etc?

Test the overlay alone or in combination with the background plastic (if applicable)?

What to think of bringing up topics like these?

Nobody thinks..

Everyone Thinks