Development of a Vertical Flame Propagation Test for Composite Structural Materials, Air Ducting, and Wire Insulation

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A lab-scale vertical flame propagation test method was developed with the capability of measuring the flame propagation potential of a variety of aircraft materials typically contained in inaccessible cabin areas, including composite structure, air ducts, and wire insulation. Multiple units have been constructed and tested at multiple locations around the world, and round-robin testing has shown good repeatability and reproducibility of the test method. On-going work includes refinement of apparatus design for off-the-shelf production and continuous evaluation of components of various shapes and sizes to be tested.