

Flammability Limits of Hydrogen at Sub-Atmospheric Pressures and Reduced Oxygen Concentrations

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There is currently a major push in the aviation industry to reduce the amount of harmful emissions produced. Using hydrogen fuel cells to produce power for an aircraft is an effective way to do this. However, hydrogen is extremely flammable so testing is being done to determine its flammability limits in air at pressures simulating the altitudes at which commercial aircraft fly. Testing is also being done at different concentrations of oxygen-depleted air at these pressures by replacing part of the air with nitrogen. These concentrations vary from pure air down to the limiting oxygen concentration for combustion. This presentation will provide an update on current progress, as testing is still ongoing.