Escape Slide Performance at High Altitude

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Although the Technical Specifications for emergency evacuation slides for many airplanes require operational capability at airport altitudes that range from -1,000ft to 15,000ft, ASL, actual deployment data at high altitudes have not been available. Typically, predictions of performance are generated by a combination of ambient tests conducted under factory conditions and by analysis of mass flow and the inflation system's efficiency. To evaluate these predictions, a cooperative research program between FAA-Civil Aeromedical Institute (CAMI) in Oklahoma City and Goodrich Interiors in Phoenix was conducted. The altitude chamber at CAMI was used to determine the actual effects of altitude on inflation performance for normally aspirated inflatable slides.