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Effect of Cargo Loading on Smoke Detection in Freighter Aircraft

Abstract: This project documented the changes in smoke detection times when the same quantity of smoke was introduced into both fully loaded and completely empty cargo compartments. The ground testing was conducted on the main deck of a Boeing 727 and in the below floor compartment of a Boeing 747SP under ventilated conditions. The testing concluded that, in general, smoke detection occurs faster in a loaded cargo compartment than an empty one.