Clarence Chang
NASA Glenn Research Center

Abstract:

The recent center wing tank explosion on airliners prompted NASA's Aviation Safety Program to look into ways to prevent fuel tank explosion. NASA's current goal is to develop advanced means to provide onboard inert gas generation (OBOGS) for aircraft fuel tank purging as well as for cargo compartment fire suppression. However, since oxygen is a byproduct of air separation, we are also looking at means of generating emergency breathing oxygen for passengers and crew to replace the existing pressurized storage and solid oxygen generators (OBIGGS). NASA is currently working through Boeing to solicit technology demonstration prototypes that will culminate in a series of flight demonstrations using NASA Langley's B757 in April of 2004. The intent of this demonstration is to provide the industry with a technology basis to improve on, whether in whole or in parts that can be built upon, resulting in practical solutions to inerting fuel tanks and provide oxygen.