

"Development of a Next-Generation Fire Test Burner"

A next-generation (NexGen) fire test burner has been developed to replace the discontinued oil burners specified in the various FAA fire test methods. The NexGen burner has no moving parts, no electrical dependence, and can be constructed easily with off-the-shelf parts. It relies upon compressed, conditioned air and pressurized fuel which gives more consistent, reliable burner performance. Reproducibility has been confirmed around the world with comparative burnthrough testing of Polyacrylonitrile material on a standard specimen holder. Currently, the NexGen burner is being used for FAA certification testing (14CFR25.856b) by the major aircraft manufacturers and their principal thermal/acoustic insulation suppliers. Present research is focused on developing burner operational parameters for other FAA fire test methods, including aircraft seat cushions, cargo compartment liners, and powerplant components.