Microscale Combustion Calorimetry to Demonstrate Similarity

N. Safronava[a] and R.E. Lyon[b]

[a]SRA International , Linwood, NJ
[b]Federal Aviation Administration, William J. Hughes Technical Center, Atlantic City International Airport, NJ

Dozens of samples of adhesives and potting compounds used in aircraft interior construction were tested in the FAR Vertical Bunsen Burner (VBB) by members of Flammability Standardization Task Group (FSTG). These same samples were tested at the FAA using Microscale Combustion Calorimeter (MCC) to determine if MCC could be used to establish similarity of flammability in VBB tests. It was found that the total heat of combustion of the sample and the heat of combustion of the fuel gases in MCC were highly correlated with 12 and 60 sec VBB Pass/Fail results.