Adjustment of Vacuum Panel Thermal Test Results for Edge Heat Flow

David W. Yarbrough and Hamed H. Saber

The impact of heat flow around the uniform and non-uniform edges of Vacuum Insulation panels (VIPs) on the overall thermal resistance has been determined for a range of practical values such as panel dimensions, heat flux transducer sizes, and enclosure design. The results of finite element evaluations have been used to develop simple and practical correlations between the center-of-panel measurements and the corresponding overall VIP thermal resistances. The correlations when combined with leak-rate data will be useful for the efforts to optimize VIP design. The correlations that have been developed will be described.