P - 017

HEAT TRANSPORTED BY BUOYANT FORCE MAY AUGMENT SOLUTION CONVECTION IN FLOW CALORIMETRIC SYSTEMS

Mitchell Swartz, **JET Energy Technology, Inc.**, Massachusetts, USA

ABSTRACT

Thermometry may not be sole limiting factor for obtaining semi-quantitative information from flow calorimeters if the non-dimensional number, η_B (defined as the ratio of heat transfer by buoyancy to the heat transfer by convection) is greater than zero. This does not imply that such systems do not exhibit 'excess heat'; but rather that any such reported 'excess heat' parameters may be inflated, if the information was indeed collected with a vertical flow calorimetric system, in the absence of confirmatory calibrations under low to moderate flow conditions where the non-dimensional number η_B; (as the ratio of heat transported by the buoyant forces to the heat transported by solution convection) is not trivial. Suggestions for improvement will be discussed.