

Transport in Wick Structures

Faculty: S. V. Garimella

Student: T. W. Davis, B. Iverson

OBJECTIVE

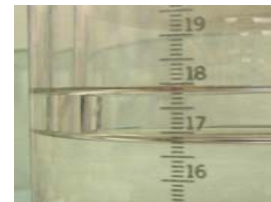
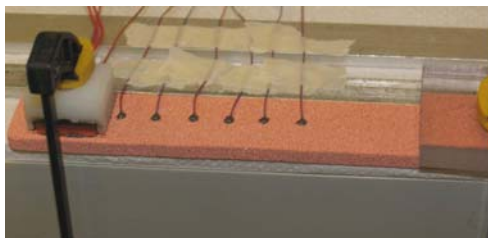
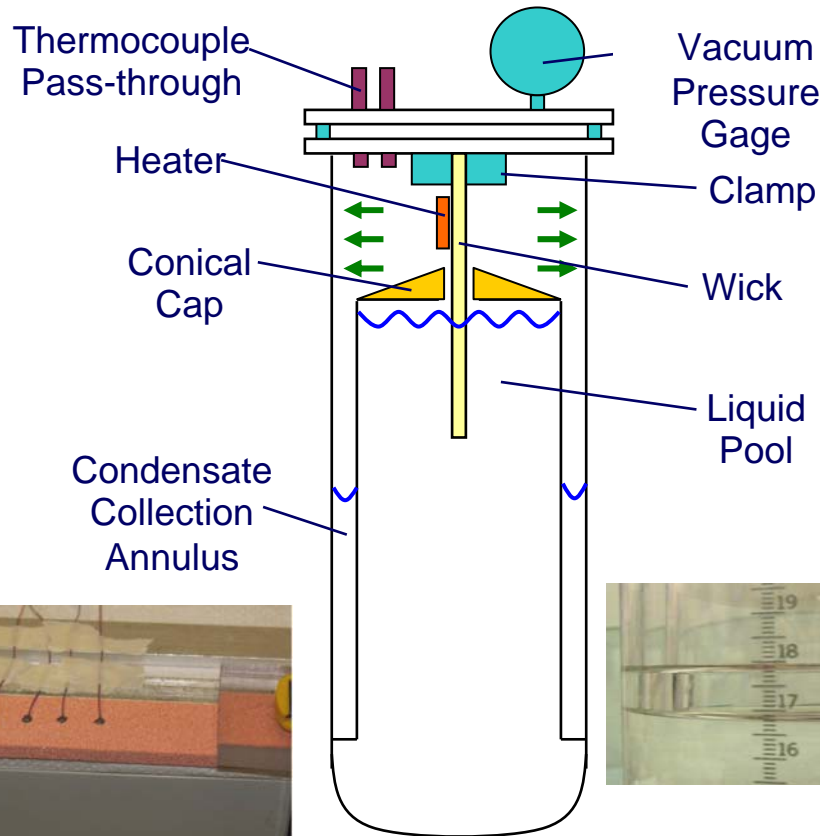
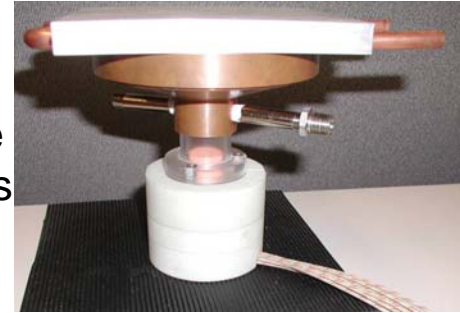
Experimentally determine the performance of wicks under typical heat pipe operating conditions

APPROACH

Two novel setups are developed to evaluate heat pipe wicks in environments typical of operating conditions (partially saturated, evacuated), and measure mass flow rate and wick conductivity

IMPACT

A better understanding of the performance and limits of operation of heat pipe wicks is essential for design improvements and miniaturization efforts.



SELECTED PUBLICATIONS

- B. D. Iverson, T. W. Davis, S. V. Garimella, M. T. North, and S. Kang, AIAA J Thermophysics and Heat Transfer (in press).
- T. W. Davis and S. V. Garimella, Exp Heat Transfer (in review).