



21CR Project 605-20040

Refrigerant Evaporation Characteristics Inside Flat Passages

Updated 4 May 2005

Objective:

To evaluate refrigerant evaporation heat transfer and pressure drop characteristics inside flat passages.

Information/items expected to result from this project:

- (1) Literature review on heat transfer and fluid flow in non-circular passages
- (2) Heat transfer coefficient and pressure drop correlations based on experimental measurements
- (3) Comparison of evaporation heat transfer and pressure drop data between circular tubes and flat passages

How are the results likely to be applied:

The results will be used by HVAC&R equipment manufacturers to assess the potential benefit of flat tube heat exchangers in air conditioning and refrigeration applications.

Research subcontractor:

Swiss Federal Institute of Technology, Lausanne, Switzerland (Principal Investigator: John Thome, Ph.D.)

Status:

The project is completed. The final report is available to download at no cost from the ARTI website.

Responsible 21CR Subcommittee: HVAC&R Energy Efficiency