21CR Project 611-10060

CO_2 Compressor-Expander Analysis

Updated 7 August 2003

Objective:

Identify the most promising compressor and expander candidate technologies and evaluate their combined performance potential for use with CO_2 in residential space-conditioning applications.

Information/items will result from this project:

The project will result in the rationale and selection of the best candidates, the comparison of merits, and the performance potential expected for the most suitable compressor and expander technology combinations, using CO_2, for the power range and the operating conditions required for residential space-conditioning applications.

How are the results likely to be applied:

The tools developed would help the HVAC Industry determine the capability potential of the most promising compressor-expander concepts suitable for the application and to evaluate the overall suitability of CO_2 systems

Research Subcontractor:

University of Maryland, College Park, MD (Principal Investigator: Reinhard Radermacher, Ph.D.)

Status:

This project was concluded in the third quarter of 2003 and a final report approved for release. The final report is available free for downloading from the ARTI website.

Responsible 21CR Subcommittee: Alternative Equipment