



21CR Project 605-20030

## **High-Temperature Mold Materials to Die Cast Copper Motor Rotor for Improved Motor Efficiency**

Updated 18 June 2003

### **Objective:**

Support the Copper Development Association (CDA) in its effort to design, fabricate, and demonstrate mold technologies designed to withstand the copper motor rotor die casting environment for an economically acceptable life.

### **Information/items expected to result from this project:**

- (1) Identification of materials suitable for die casting copper
- (2) Fabrication of motor rotor molds
- (3) Supply copper rotor motors for testing in actual compressor systems

### **How are the results likely to be applied:**

The results will be used by HVAC&R motor and compressor manufacturers to assess the technical and economical viability of copper rotor motors.

### **Research subcontractor:**

ThermoTrex Corporation & Buhler Corporation (CDA Program Manager: John Cowie, Ph.D.)

### **Status:**

Project was concluded in the second quarter of 2003 and a final report approved for release. The final report is available to down load at no cost from the ARTI website. For more information, go to <http://www.copper-motor-rotor.org/>.

**Responsible 21CR Subcommittee:** HVAC&R Energy Efficiency