Project Background:
The Die-Casting Machine was originally purchased by the Michigan Tech Foundry for $3,000 with the intent to expand its operation capabilities. When received from the original production facility, the machine only had 45 hours, however was inoperable and in poor condition.

The AVNET H-35E is a Hydraulic Fully Automatic High Speed Hot Chamber Die Casting Machine built in 1983. It is capable of processing both Lead and Zinc parts with weights of 38oz for Lead and 24oz for Zinc. The Machine occupies about 22 ft² and weighs 3540 pounds with a clamping force of 36.8 tons.

Objectives:
- Repair and update safety features
- Restore machine to original operating condition
- Optimize layout location within foundry
- Develop standardized work instructions for operation and maintenance including a lockout procedure

Conclusions:
- Machine fully installed and operational
- Upgraded safety features
- Ready for die development and part testing

Documentation:
- Operational Safety Manual
- Maintenance Manual
- Lockout Procedure

Special Thanks:
- Pat Quimby, MTU Facilities, Scott Wagner, John Irwin, Joe Riska Chemtool

Project Cost Comparison:
- Total Renovation Cost: $6,973 Installed
  - Original Machine: $3,000
  - MTU Facilities: $2,813
  - Parts: $1,160
- Used Machine Cost Quote: $17,813 Installed

Updates, Repairs and Install:
- Temperature control system
- Machine guarding
- Mobilization of control panel
- Control logic switches and wiring
- Fluid flushes and filter replacement
- Hydraulic directional valves
- Shot cylinder rebuild
- Die cooling water system
- Air flow control valves
- Anchoring of machine
- Natural gas, water, air and electrical supply

Temperature Control Update

Mobilization of Control Panel