



Richard E. Cawley, P.E.

Experience and Knowledge Overview

Experience Overview

Richard E. Cawley, Fellow-Life member of the American Society of Heating, Refrigerating, and air-conditioning Engineers Inc., has served as an engineer in the HVAC industry for 46 years. Major Employers were Lennox Industries (28 years) and Trane (11 years). Others include Ed Friedrich of San Antonio, Texas, and Artesian Building Systems of Lafayette, Indiana. Positions have included Chief Engineer, Compressor Design (Lennox), Manager, Heat Pump and Cooling Product Development (Lennox), Manager, Applied Research (Lennox), Director, Technology Development (Trane), and vice-president Engineering and Manufacturing (Artesian). Throughout the years, Mr. Cawley has served on several committees and Task Groups with ASHRAE, ARI, and other industry affiliations. Though officially retired December 1, 2002, he continues to serve in these organizations and consults wherever his years of experience and knowledge can benefit the industry. He is a Registered Professional Engineer and holds 13 U.S. Patents.

Expertise

Industry Service

- Served as member or leader for the preparation of Engineering Standards (ASHRAE, ARI, Z21, ISO)
- Authored and presented numerous papers in Conferences
- Authored parts of Engineering Handbooks, Training Manuals, and Industry Guidelines
- Served on special Task Forces such as ARI Alternate Refrigerant Evaluation Program (AREP) and High Pressure Refrigerant Safety Requirements
- Served on Industry Advisory Boards for universities and other organizations

Technical Knowledge and Skills (Theory and Practice)

- Machine Design (compressors)
 - Ferrous metallurgy (iron and iron carbide properties and processes)
 - Kinetics
 - Kinematics
 - Bearings and lubrication
 - Hermetic motors and controls
 - Hermetic chemistry
 - Strength of materials and material properties
 - Manufacturing tolerances
- System design
 - Refrigeration cycles and analysis
 - Refrigerants
 - General thermodynamics and fluid flow
 - Heat Transfer
 - Psychrometrics
 - Components – principles and balancing
 - Manufacturing tolerances and capabilities
 - Air handling
- Other
 - Principal Investigator for projects for the future (alternate systems and components, etc.)
 - Project monitoring subcommittee work with ARTI, ASHRAE, DOE
 - Advisor to upper management on feasibility and profitability of technologies
 - Designed laboratories including calorimetric, psychrometric, life and reliability testing facilities