

# **LAWWENCE JAY SCHMERZLER, P.E.**

*Professor Emeritus*

## *Background Information*

I left college and volunteered to serve in any engine room of any ship that needed to leave. I was assigned and served on the U.S. Malabar (a quadruple expansion steam engine which had been built as WWI ended for Rockefeller as an oil tanker and subsequently put in storage since 1919).

I received accelerated training at the Coast Guard Training Station in New London, Connecticut. I received a Marine Engineering degree there for steam, diesel, and electrical engines. I then shipped out to England, France, Italy, and North Africa on turbo and tripple-expanse engines. After this, the war was over in Europe, and I volunteered to serve in the Pacific region, where I and 36 other marine engineers, along with me, were to work on Nordberg Diesel engines. The need for these engineers, however, no longer existed as the war was over. We all had taken one months training.

I was directed to serve on a diesel advanced development ship that had various advanced engineering equipment, such as: variable pitched propellers that could go from full astern to full ahead, and advanced refrigeration equipment. The ship had just completed a run to South America, with a full complement of Coast Guard engineers, and had to dump the cargo because of malfunction of the refrigeration equipment. I was responsible for a subsequent successful voyage, also to South America. It was powered by a Nordberg Diesel Engine.

After graduation from the University of Texas, with a mechanical engineering degree, I subsequently worked for a U.S. steel division in Kansas City, MO.; it was an oil well supply company. I worked on improvement of oil-field engines operating on diesel, natural gas and kerosene. I also taught internal combustion engines and design at Kansas City Junior College in the evenings.

Subsequently, I was employed by U.S. Boch in the laboratory on development of fuel injection equipment. I also worked for Hamilton Standard Division of United Aircraft on propeller transmission gear.

Then I worked at Newark College of Engineering (now NJIT) teaching internal combustion engines. I received my Masters Degree from NCE. At this time, I also patented a number of invention, which include:

1. Heat Pumps
2. Desalinization Equipment
3. Exercising Machine

I also consulted with a number of organizations on secret projects, which include the following companies:

1. Westinghouse
2. General Instrument (Thermal Electric Division)
3. Western Electric
4. Hydrometrics

Under General Instrument, I had U.S. Secret Clearance for evaluating the latest developments on energy conversion. I was hired as Director of Engineering (ThermoElectric Division), after doing consulting work for them.

As a member of Consultant Services I worked as an expert witness on many cases. In all these, only one case was lost.

1. Performance of high production hamburger heating equipment
2. Defects in modern apartment heating systems due to catalytic action between some of the components of the system.

While teaching at NJIT, I taught (during my summer vacations) Western Electric field engineers air-conditioning and ventilation.

After serving in various lower level positions, I became President of:

1. National Society of Inventors
2. AAUP - New Jersey (American Association of University Professors)

At NJIT:

1. I was Chairman of the Faculty Council at NJIT
2. Elected "Secretary of the Faculty"
3. Appointed to sit on the Patent Committee

## **PROFESSOR LAWRENCE JAY SCHMERZLER, EMERITUS**

Professional Engineer

Professor Schmerzler, P.E. is a Fellow in The American Society of Mechanical Engineers (ASME) and Emeritus Professor of Mechanical Engineering at the New Jersey Institute of Technology. He is an Inventor and Forensic Engineer who has served with distinction in both industry and higher education.

His Teaching, Industrial, Forensic, and Consulting work has encompassed: supervision of Internal Combustion Engines (I.C.E.) Test and Development Labs; supervision of Mechanical Engineering (ME) Laboratories; Supervisor of ME Department Thermal Area Courses; Basic and Advanced Energy Conversion; Desalination; Steam, Diesel, and Electrical Power; Cogeneration; I.C.E. Test and Development; Jet Engine and Rocket Engine Fuel Controls; Pollution Control of Internal Combustion Engines; Refrigeration; Fuel Injection Systems; Carburetors; development of a Hybrid Gasoline-Electric Auto; utilization of Mixed-Fission Products; Energy Conservation in Paper-making Operations; and Matrix Heat exchangers.

### **Professional Organization Activities have included:**

- President of the National Society of Inventors (NSI)
- President of the American Association of University Professors (AAUP), New Jersey (NJ) State Conference
- Chairman of the Executive Committee of the American Society of Mechanical Engineers (ASME) North Jersey Section
- Chairman of ASME Region II History and Heritage Committee
- New Jersey State Legislative Coordinator for ASME
- Chairman of the American Society for Engineering Education, Mechanical Engineering Division of the Mid-Atlantic Region
- Chairman of the ASME Mechanical Engineering Department Advisors of the North-East Region
- Member of the ASME National Nominating Committee
- Member of ASME Sloan Project Advisory Committee
- Member of the Executive Committee of the Entrepreneurs Forum
- Member of the Governing Board of the Professional Staff Association at the New Jersey Institute of Technology (NJIT)
- Secretary of the Faculty at NJIT
- Chairman of the Faculty Council at NJIT
- Secretary of the N.J. Engineer's Committee for Student Guidance
- Chairman of the NET Mechanical Engineering Department Long Range Planning Committee
- Chairman of the North Jersey Industry Fund Drive for ASME

### **His Honors, Awards, and Citations include:**

- The ASME Centennial Medallion for Contributions to Engineering
- The National Science Foundation (NSF) Fellowship in Energy Conversion
- The NSF Research Grant for Faculty Research in Industry Program ,
- The NJIT Van Houten Alumni Award for Teaching Excellence
- The AAUP-NJSC Award for Outstanding Service to Higher Education
- Fellow in the American Society of Mechanical Engineers
- Membership in Pi Tau Sigma and the Sigma XI Research Society
- Eight Patents

He is a graduate of: The University of Texas in Austin with a BS in Mechanical Engineering; NJIT with an MS in Mechanical Engineering; and the U.S. Maritime School at Fort Trumbull as a Marine Engineer.