

**HOLGER LUKAS, P.E., C.C.P.**

**EDUCATION**

BS Marine Engineering - U.S. Merchant Marine Academy, 1966  
Licensed Professional Engineer  
Certified Cogeneration Professional

**MEMBERSHIPS**

- American Society of Mechanical Engineers - Past Chair, Board of Directors of ASME International Gas Turbine Institute
- Cogeneration Institute of the Association of Energy Engineers
- American Society of Heating & Air Conditioning Engineers
- National Society of Professional Engineers
- Past Chair, ASME Performance Test Committee 3 "Fuels"
- Former Member of Society of Naval Architects and Marine Engineers (SNAME)
- Former Member American Society for Testing and Materials (ASTM)
- Former Member of National Association of Corrosion Engineers (NACE)

**LICENSES AND CERTIFICATES**

US Coast Guard License as Second Assistant Engineer of Steam Vessels any Horsepower  
US Coast Guard License as Third Assistant Engineer of Motor Vessels any Horsepower  
Licensed Professional Engineer -- State of Minnesota  
Licensed Professional Engineer -- State of New York  
Certified Cogeneration Professional

**FIELDS OF COMPETENCE**

Forensic Engineering  
Failure Analysis  
Mechanical Design and Design Analysis  
Fuels & Fuel, Lubrication, and Cooling Systems Engineering  
Gas Turbine Application Engineering  
Propulsion & Power Systems Maintenance & Operation  
Cogeneration & Power Plant Design  
Steam Turbine System Engineering  
Dispute Resolution

**CAREER HISTORY**

**USCG** - licensed Marine Engineer, sea duty

**United Technologies Corp.** - Turbo Power & Marine System - Gas Turbine Engineer responsible for testing ancillary equipment of aircraft derivative industrial gas turbines and for design of lube oil and fuel oil systems.

**Brown Boveri Turbomachinery** (and predecessor companies) - Gas Turbine Design, Fuel Systems, and Senior Mechanical Systems Engineer responsible for design, development, commissioning, purchase specifications, and trouble shooting of fuel, lubrication, and cooling systems.

Experience included distillate oil, natural gas, and crude and residual oil.

**Encotech, Inc.** with assignments including:

- Failure Analysis and Forensic Engineering
- Fuel Oil Treatment Plant Design and Commissioning
- Corrosion Testing of Materials for Recuperative Heat Exchanges
- Cogeneration Feasibility Studies
- Cogeneration Plant Design, Startup and Commissioning
- Gas Turbine & Diesel Cycle Engine Failure Investigations
- Power Plant Cycle Efficiency Studies

**Independent Consultant** with assignments including:

Failure analysis and cause and origin investigations

- Gas Turbines
- Steam Turbines
- Hydro Turbines
- Medium Speed Diesels
- Generators
- Compressors
- Lube Oil Systems

Scope of damage assessment

Due Diligence investigations of new gas turbines

Expert witness services

Member of Dispute Resolution Board (DRB) of a 800MWe combined cycle plant

Adjudicator on Long Time Service Contract for two 170 MW gas turbines

Languages - Fluent in German and Spanish. Knowledge of French.