

Combined Cycle CT Plant Operating Engineer Third Class

Qualifications

Minimum age - 19

Education - High School Diploma, GED or equivalent and/or completion of the GPILearn Online Training prescribed courses (See links page for course description).

Experience - Two years or One-year time in grade as a Simple Cycle CT Plant Operating Engineer second class

Examination - Written (Oral or Practical when necessary)

Maximum Boiler Size (Unsupervised) HP - 400 BHP / LP - Unlimited BHP

Maximum Refrigeration or Air Conditioning (Unsupervised) - 600 ton

Curriculum at the Minimum:

- Gas Turbine Cycles
- Single and Two Shaft Arrangement
- Exhaust Heat Recovery
- Combined Cycle
- Compressors
- Axial Flow
- Centrifugal Flow
- Compressor Stall at Startup
- Combustion Arrangements
- Turbine Construction
- Blade Cooling
- Turbine Efficiency
- Exhaust Frame Assembly
- Gas Turbine Starting.
- Oil Systems
- Combustion System
- Fuel System
- Oil, Gas and Air Systems
- Cooling
- Sealing
- Atomizing
- Purge
- Primary Air Inlet System
- Environmental Limits
- Heat Transfer
- Natural Circulation
- Forced Circulation
- Typical HRSG Construction
- Economizer
- Evaporator
- Superheater
- Steam Fundamentals
- Superheat, Reheat, Steam Temperature Control

- Multi-pressure HRSG's
- Dampers
- Monitoring Gas Temperatures
- Condensate and Feedwater System and Controls
- Make-up, Boiler Water Chemical Control and Additives
- Basic Electricity
- Basic Refrigeration
- Environmental Concerns
- General Industrial Safety