

Combined Cycle CT Plant Operating Engineer Second Class

Qualifications

Minimum age - 20

Education - High School Diploma, GED or Equivalent

Experience - Three years

Examination - Written (Oral or Practical when necessary)

Minimum time in previous grade – One Year

Maximum Prime Mover Horsepower (Unsupervised) - 2500

Maximum Boiler Size (Unsupervised) HP - 600 BHP / LP Unlimited BHP

Maximum Refrigeration or Air Conditioning (Unsupervised) – 1000 tons

Objectives:

- Start-Up Prerequisites
- Start-Up Procedure
- Purge Control
- Ignition
- Load Changes
- Governor Control
- Exhaust Temperature Control
- Shutdown Procedure
- Turning Gear
- Operating Hazards
- Mechanical, Thermal, and Combustion
- Monitoring Conditions
- Indications and Logging Information
- Alarms/Annunciators
- Permissive Conditions and Relays
- Protection Devices
- Control Equipment
- Computer Controlled Systems
- 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
- Advanced Electricity

- Advanced Refrigeration
- Basic Steam Turbines
- Environmental Limits
- Generator Electrical Theory
- General Industry Safety