



Steam Turbines and Auxilliaries

Table of Contents:

- 1. Heat Engines, Prime Movers, and Simple Steam Engines**
Discuss the terms used in describing the conversion of heat into mechanical energy, and to describe one such device for accomplishing this.
- 2. Steam Turbines**
Describe the construction and operation of steam turbines.
- 3. Steam Turbine Theory and Construction**
Explain the design and components of a large steam turbine, and perform nozzle and steam velocity calculations
- 4. Steam Turbine Principles and Design**
Describe designs, operating principles and major components of steam turbines.
- 5. Steam Turbine Auxiliaries and Control**
Explain the purpose and design of steam turbine auxiliaries, control, and monitoring equipment.
- 6. Steam Turbine Auxiliaries & Operation**
Describe auxiliary support and control systems for steam turbines and explain start-up and shutdown procedures.
- 7. Steam Condensers**
Discuss condenser principles, performance, operation and auxiliaries.
- 8. Turbine Condenser Systems**
Explain typical designs, components and operating principles of steam turbine condensers.
- 9. Rotating Equipment Maintenance**
Explain specific maintenance procedures for, and typical maintenance problems of, rotating equipment.
- 10. Rotating Equipment Monitoring**
Describe the parameters and methods of turbine monitoring and oil analysis.
- 11. Steam Traps, Water Hammer, Insulation**
Explain the designs and operation of steam trap systems, the causes and prevention of water hammer, and the designs and applications of pipe insulation.