



SUGGESTED STUDY OUTLINE FOR
2ND CLASS STATIONARY ENGINEER EXAM

Neighborhood and Business Development
City Hall Room 121B, 30 Church Street
Rochester, New York 14614-1290

1. Boiler Bursting Pressure, Maximum Allowable Working Pressure, Factor of Safety
2. Hydrostatic Test
3. Safety Valves, Blowdown/Blowback, Accumulation Test
4. Conditions of Boiler Water
5. Sodium Zeolite Water Softener
6. Radiant & Convection Super Heaters
7. Feedwater Economizer: Parallel Flow & Counter Flow
8. Combustion Air Pre-heater: Tubular & Regenerative
9. Steam Turbine Types
10. Centrifugal Pump Types
11. How to Rate Centrifugal Pumps
12. Conversion of Vacuum to Absolute Pressure
13. Conversion of Centigrade to Fahrenheit & Vice Versa
14. Feedwater Regulators: 1, 2 & 3 Element
15. Water Column, Gage Glass & Try Cocks
16. Differences Between a Tube and a Flue
17. Specific Gravity
18. Specific Heat
19. Deaerator Heater
20. Actual Evaporation, Equivalent Evaporation, Factor of Evaporation
21. Compound Gage
22. Opacity
23. Bottom Blowdown & Continuous Blowdown
24. Soot Blowers
25. Absolute Zero
26. Measurements of Water Including Weight & Volume



SUGGESTED STUDY OUTLINE FOR
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(CONTINUED)

27. Latent Heat of Vaporization, Variation with Pressure/Temperature
28. Total Heat, Variation with Pressure/Temperature, Variation Boiling Point with Pressure
29. Specific Volume & Density for Liquid & Vapor (Steam Tables)
30. What Superheating Does to Steam
31. Why Factor of Safety is Changed.
32. Tensile Strength
33. Elastic Limit
34. Perfect, Complete & Incomplete Combustion
35. Heating Values including Coal, #2 Oil, #6 Oil and Natural Gas
36. Flue Gas Analyzation: O₂, CO₂ and CO
37. Principle of Synchronous Motor
38. Positive Displacement Rotary Pumps
39. Oil in Boiler Water
40. Conversion of Gage Pressure to Absolute Pressure and Vice Versa
41. Non-Return Valve, Gate Valve, Globe Valve and Check Valve
42. Boiler Horsepower
43. Liquid Boiling Point/Boiling Temperature
44. Combustion; Time, Temperature & Turbulence