

Contents

<i>Preface to the Third Edition</i>	<i>ix</i>
<i>Preface to the First Edition</i>	<i>xi</i>
<i>Acknowledgements</i>	<i>xiii</i>
<i>Nomenclature</i>	<i>xiv</i>
1. Boilers	1
2. High-Pressure Boilers	119
3. Boiler Auxiliaries	127
4. Boiler Mountings and Accessories	166
5. Boiler Operations, Inspection and Maintenance	214
6. Boiler Control	258
7. Boiler Calculations	276
8. Draught	298
9. Primary Fuels	319
10. Principles of Combustion	351
11. The Chemistry of Combustion	369
12. Coal Pulverization	407
13. Pulverized Coal-Fired Furnaces	426
14. Upgrading PC-Fired Boilers	443
15. Stoker-Fired Boilers	464
16. Fuel Oil and Gas Fired Furnaces	470
17. Low NO _x Burners	486
18. Emission Control	507
19. Dust Collection	550
20. Ash Handling System	590
21. Carryover, Scale and Sludge	606
22. Steam Contamination and its Control	614
23. Prevention of Deposit Formation in Boiler Units	658
24. Characteristics of Steam-Water Flow	674
25. Temperature Conditions and Heat Transfer	680
26. Hydrodynamics of Closed Hydraulic System	688
27. Deaeration and Deoxygenation	695
28. Cooling Water Treatment and Cooling Tower	704
29. Water Treatment and Demineralization	785
30. Reverse Osmosis	850
31. Scaling of Fireside of Heating Surfaces	863
32. Corrosion of Waterside Heating Surfaces	876

33. Corrosion of Fireside Heating Surfaces	899
34. Evaporators	913
35. Superheaters	923
36. Economizers and Air Heaters	958
37. Steam Condensers	974
38. Steam Turbines	1010
39. Cycles for Steam Power Plants	1076
40. Heat Recovery Steam Generators and Combined Cycles	1100
41. Boiler Design	1160
42. Nuclear Steam Generators	1225
43. Energy From Waste	1287
44. NDE and Condition Monitoring	1306
Appendix I	1362
Appendix II	1381
Appendix III	1414
Appendix IV	1435
Appendix V	1448
Appendix VI	1456
Appendix VII	1486
Appendix VIII	1502
Appendix IX	1509
Appendix X	1547
Appendix XI	1562
Appendix XII	1568
Appendix XIII	1593
Appendix XIV	1623
Appendix XV	1637
<i>References</i>	1656
<i>Index</i>	1663