

## MANUAL ON WATER

(Fourth Edition)

Sponsored by Committee D-19 on Water AMERICAN SOCIETY FOR TESTING AND MATERIALS

ASTM SPECIAL TECHNICAL PUBLICATION 442A C. E. Hamilton Dow Chemical Company editor

04-442010-16





## Contents

Introduction	1
Chapter 1-Water Sources and Supply	3
Chapter 2-Uses of Industrial Water	18
Chapter 3-Production and Preservation of Ultrapure Water	28
Chapter 4-Effects of Composition on Industrial Use	38
Chapter 5-Treatment of Process Water and Waste Water	46
Chapter 6-Technology of Industrial Water Reuse	84
Chapter 7-Self-Purification and Other Natural Quality Recovery	
Mechanisms	97
Chapter 8-Thermal Loading of Water Supplies	107
Chapter 9-Sampling and Flow Measurement of Water	118
Chapter 10-Water Quality Monitoring	145
Chapter 11-Analysis of Water and Waste Water	177
Chapter 12-Sensory Examination of Water	254
Chapter 13-Sampling and Identification of Deposits in Steam and	
Water Systems	276
Chapter 14—Chemical Analysis of Deposits	307
Chapter 15-Sediment in Streams and Other Water Bodies	319
Chapter 16-Radioactive Nuclides in Water	327
Chapter 17-Nuclear Water Technology	352
Chapter 18-Practices for Measurement of Radioactivity	387
Appendix-Reference Tables and Curves	443
Index	459