

1. Record Nr.	UNINA9911006972203321
Autore	Spellman Frank R.
Titolo	The science of wastewater // Frank R. Spellman
Pubbl/distr/stampa	DEStech Publications
ISBN	1-5231-1641-2
Disciplina	628.3
Soggetti	Sewage - Purification
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Machine generated contents note: ; pt. I Basic Wastewater Science -- ; 1. Wastewater Math Operations -- ; 1.1. Introduction -- ; 1.2. Calculation Steps -- ; 1.3. Table of Equivalents, Formulae and Symbols -- ; 1.4. Basic Wastewater Math Operations -- ; 1.5. Chemical Dosage Calculations -- ; 1.6. Complex Conversions -- ; 1.7. Mass Balance and Measuring Plant Performance -- ; 2. Wastewater Hydraulics -- ; 2.1. Basic Wastewater Hydraulics -- ; 2.2. References and Recommended Reading -- ; 3. Wastewater Chemistry -- ; 3.1. Setting the Stage -- ; 3.2. Chemistry Concepts and Definitions -- ; 3.3. Chemistry Fundamentals -- ; 3.4. Water Solutions -- ; 3.5. Water Constituents -- ; 3.6. Common Water Measurements -- ; 3.7. References and Recommended Reading -- ; 4. Wastewater and Electrical Interface -- ; 4.1. Fundamentals of Electricity -- ; 4.2. Nature of Electricity -- ; 4.3. The Structure of Matter -- ; 4.4. Conductors, Semiconductors, and Insulators -- ; 4.5. Static Electricity -- ; 4.6. Magnetism -- ; 4.7. Difference in Potential -- ; 4.8. Current Flow -- ; 4.9. Resistance -- ; 4.10. Battery-Supplied Electricity -- ; 4.11. Simple Electric Circuit -- ; 4.12. Ohm's Law -- ; 4.13. Electrical Power -- ; 4.14. Electrical Energy -- ; 4.15. Series D-C Circuit Characteristics -- ; 4.16. Ground -- ; 4.17. Parallel D-C Circuits -- ; 4.18. Parallel Circuit Characteristics -- ; 4.19. Series-Parallel Circuits -- ; 4.20. Conductors -- ; 4.21. Electromagnetism -- ; 4.22. A-C Theory -- ; 4.23. Practical Electrical Applications -- ; pt. II Applied Wastewater Math Operations -- ; 5. Preliminary Treatment Calculations -- ; 5.1. Preliminary Treatment -- ; 6. Primary Sedimentation Calculations -- ; 6.1. Primary Sedimentation

-- ; 7. Treatment Ponds -- ; 7.1. Wastewater Treatment Ponds -- ; 8. Trickling Filters -- ; 8.1. Trickling Filters -- ; 9. Rotating Biological Contractors -- ; 9.1. Rotating Biological Contractors -- ; 10. Activated Sludge (Biosolids) -- ; 10.1. Activated Sludge (Biosolids) -- ; 11. Mass Balance -- ; 11.1. Mass Balance: Settling Tank Suspended Solids -- ; 12. Chemical Dosing -- ; 12.1. Chemical Dosing -- ; 13. Chemical Solutions -- ; 13.1. Chemical Solutions -- ; 14. Process Residuals -- ; 14.1. Process Residuals -- ; 15. Biosolids Thickening -- ; 15.1. Biosolids Thickening -- ; 16. Centrifuge Thickening Calculations -- ; 16.1. Introduction -- ; 16.2. Thickening Calculations -- ; 17. Biosolids Digestion/Stabilization -- ; 17.1. Introduction -- ; 17.2. Aerobic Digestion Process Control Calculations -- ; 17.3. Anaerobic Digestion Process Control Calculation -- ; 18. Biosolids Dewatering and Disposal -- ; 18.1. Introduction -- ; 18.2. Pressure Filtration Calculations -- ; 19. Sand Drying Beds -- ; 19.1. Introduction -- ; 19.2. Sand Drying Beds Process Control Calculations -- ; 20. Biosolids Disposal -- ; 20.1. Introduction -- ; 20.2. Land Application Calculations -- ; 21. Biosolids to Compost -- ; 21.1. Biosolids to Compost -- ; 22. Wastewater Laboratory Calculations -- ; 22.1. Basic Laboratory Calculations -- ; 22.2. Composite Sampling Calculation -- ; 22.3. Biochemical Oxygen Demand Calculations -- ; 22.4. Moles and Molarity -- ; 22.5. Settleability (Activated Biosolids Solids) -- ; 23. Wastewater Calculations and Solutions -- ; 23.1. Introduction -- ; 23.2. Wastewater Collection and Preliminary Treatment -- ; 23.3. Additional Wastewater Collection and Practice Calculations -- ; 23.4. Primary Treatment (Sedimentation) -- ; 23.5. Trickling Filters -- ; 23.6. Rotating Biological Contractors -- ; 23.7. General RBC Calculations -- ; 23.8. Activated Sludge -- ; 23.9. General Activated Sludge Calculations -- ; 23.10. Waste Treatment Ponds -- ; 23.11. General Wastewater Treatment Pond Calculations -- ; 23.12. Chemical Dosage -- ; 23.13. General Chemical Dosage Calculation -- ; 23.14. Sludge Production and Thickening -- ; 23.15. General Sludge Production and Thickening Calculations -- ; 23.16. Wastewater Sludge Digestion -- ; 23.17. General Digester Calculations -- ; 23.18. Sludge Dewatering -- ; 23.19. General Sludge Dewatering Calculations -- ; 24. Wastewater Math Practice Problems -- ; 24.1. Introduction -- ; 24.2. Practice Problems -- ; 24.3. References and Recommended Reading.
