

1. Record Nr.	UNINA9910231249103321
Autore	Sperling Marcos von
Titolo	Activated sludge and aerobic biofilm reactors // Marcos von Sperling, Department of Sanitary and Environmental Engineering, Federal University of Minas Gerais, Brazil
Pubbl/distr/stampa	London : , : IWA Publishing, , 2007
ISBN	1-68015-588-1 1-78040-212-0
Descrizione fisica	1 online resource (338 p.)
Collana	Biological wastewater treatment series ; ; volume 5
Disciplina	628.35
Soggetti	Sewage - Purification
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	<p>""Cover""; ""Copyright""; ""Contents""; ""Preface""; ""The authors""; ""1. Activated sludge process and main variants""; ""1.1 Introduction""; ""1.2 Variants of the activated sludge process""; ""2. Principles of organic matter removal in continuous-flow activated sludge systems""; ""2.1 Preliminaries""; ""2.2 Sludge age in activated sludge systems""; ""2.3 Suspended solids concentration in the reactor""; ""2.4 Calculation of the reactor volume""; ""2.5 Substrate removal""; ""2.6 Soluble BOD and total BOD in the effluent""; ""2.7 Sludge digestion in the reactor""; ""2.8 Recirculation of the activated sludge""; ""2.9 Production and removal of excess sludge""; ""2.10 Oxygen requirements""; ""2.11 Nutrient requirements""; ""2.12 Influence of the temperature""; ""2.13 Functional relations with the sludge age""; ""3. Design of continuous-flow activated sludge reactors for organic matter removal""; ""3.1 Selection of the sludge age""; ""3.2 Design parameters""; ""3.3 Physical configuration of the reactor""; ""3.4 Design details""; ""4. Design of activated sludge sedimentation tanks""; ""4.1 Types of sedimentation tanks""; ""4.2 Determination of the surface area required for secondary sedimentation tanks""; ""4.3 Design details in secondary sedimentation tanks""; ""4.4 Design of primary sedimentation tanks""; ""5. Design example of an activated sludge system for organic matter removal""; ""5.1 Introduction""; ""5.2 Model parameters and coefficients""; ""5.3</p>

Design of the conventional activated sludge system"; "5.4 Summary of the design"; "6. Principles of biological nutrient removal"; "6.1 Introduction"; "6.2 Nitrogen in raw sewage and main transformations in the treatment process"; "6.3 Principles of nitrification"; "6.4 Principles of biological denitrification"; "6.5 Principles of biological phosphorus removal"; "7. Design of continuous-flow systems for biological nutrient removal"; "7.1 Biological nitrogen removal"; "7.2 Biological removal of nitrogen and phosphorus"; "8. Intermittent operation systems (sequencing batch reactors)"; "8.1 Introduction"; "8.2 Principles of the process"; "8.3 Process variants"; "8.4 Design criteria for sequencing batch reactors"; "8.5 Design methodology for sequencing batch reactors"; "8.6 Design example of a sequencing batch reactor"; "9. Activated sludge for the post-treatment of the effluents from anaerobic reactors"; "9.1 Design criteria and parameters"; "9.2 Design example of an activated sludge system for the post-treatment of the effluent from a UASB reactor"; "10. Biological selectors"; "10.1 Introduction"; "10.2 Types of selectors"; "11. Process control"; "11.1 Introduction"; "11.2 Basic concepts of process control"; "11.3 Dissolved oxygen control"; "11.4 Solids control"; "11.5 Monitoring the system"; "12. Identification and correction of operational problems"
