

CONTENTS

Dye Wastewaters: Alternatives for Biological Waste Treatment. by <i>D. W. Weeter and A. G. Hodgson</i>	1
Resource Utilization Alternatives for Scrap Tires. by <i>T. A. Gray and D. Jeon</i>	10
Ozone-Ultraviolet Treatment of Coke Oven and Blast Furnace Effluents for Destruction of Ferricyanides. by <i>R. Prober, P. B. Melnyk and L. A. Mansfield</i>	17
Activated Sludge Plant Effluent Polishing. by <i>W. A. Parsons</i>	24
The Vacuum Filtration and Incineration of Sewage Sludge Using Crushed Coal as a Conditioning Agent. by <i>R. L. Pitzer, R. F. Wukasch and D. B. Wells</i>	29
Extraction of Metals and Phosphorus from Incinerated Municipal Sewage Sludge. by <i>R. C. Gabler, Jr. and D. L. Neylan</i>	39
Physical-Chemical Treatment of Penta Wood Treating Plant Wastewater. by <i>J. Ball and C. M. Rou</i>	50
✓ Total Dissolved Solids Effects on Biological Treatment. by <i>M. R. Hockenbury, D. Burstein and E. S. Jamro</i>	56
Staging Aeration for High-Efficiency Treatment of Aromatic Acids Plant Wastewater. by <i>C. M. Lau</i>	63
Wastewater Treatment for the Small Wood Preserver. by <i>E. H. Teer and L. V. Russell</i>	75
Industrial Wastewater Recycling with Ultrafiltration and Reverse Osmosis. by <i>C. X. Lopez and R. Johnston</i>	81
An Integrated Physical-Biological Treatment Plant for Nitrogenous Fertilizer Wastes. by <i>R. N. Chakrabarty, B. B. Bhalerao and S. R. Alagarsamy</i>	92
Evaluation of Chromium Removal from a Highly Variable Wastewater Stream. by <i>H. J. Campbell, Jr., N. C. Scrivner, K. Batzar and R. F. White</i>	102
Clay Beds for Storing Solid Industrial Wastes—A Survey. by <i>R. L. Sanks and E. F. Gloyna</i>	116
Thermal Regeneration of Activated Carbon. by <i>L. Hemphill, V. Ramaiah and M. Valentine</i>	127
Removal of Copper and Cadmium by Metabolically Controlled Activated Sludge. by <i>J. D. Casey and Y. C. Wu</i>	141
Evaluation of Interaction Kinetics and Equilibria for Heavy Metal-Sludge Systems. by <i>R. D. Neufeld, J. Gutierrez and R. A. Novak</i>	153
Application and Determination of Surface-Active Agents Part I: Cationic Surfactants. by <i>L. K. Wang, R. G. Ross and M. H. Wang</i>	165
Establishment of Industrial Effluent Limitations in Pretreatment Requirements. by <i>J. P. Chu and P. E. Gerwert</i>	177
Physiochemical Treatment of Tannery Wastewater by Electrocoagulation. by <i>E. R. Rarnirez, L. K. Barber and O. A. Clemens</i>	183
Physiochemical Treatment of a High-Strength Leachate. by <i>V. B. Bjorkman and D. S. Mavinic</i>	189

Enhancement of Oil Refinery Activated Sludge by Addition of Powdered Activated Carbon, by <i>M. K. Stenstrom and C. G. Grieves</i>	196
Effects of Chloride on Nitrification Rates in Activated Sludge Systems, by <i>D. O. Hill and S. R. Gelman</i>	206
Shock Load Response of Activated Sludge Operated at Constant Recycle Sludge Concentration, by <i>M. M. Saleh and A. F. Gaudy, Jr.</i>	214
Polymerization and Dyeing Wastewater Characteristics and their Treatability, by <i>P. Y. Yang and M. B. Pescod</i>	227
Removal of Arsenic and Boron from Geothermal Brines, by <i>D. C. Christensen and J. A. McNeese</i>	242
Food Processing Waste Treatment by Anaerobic Digestion, by <i>L. van den Berg and C. P. Lentz</i>	252
Plant-Soil Assimilative Capacity for Organic Solvent Constituents in Industrial Wastes, by <i>D. Pal, M. R. Overcash and P. W. Westerman</i>	259
Land Disposal of Chemical Sludge, by <i>N. Scambilis and J. Novak</i>	272
Characterization of the Impact of Colored Wastewaters on Free-Flowing Streams, by <i>A. J. Anthony</i>	288
Industrial Wastewater Ozonation, by <i>D. M. Hardisty and H. M. Rosen</i>	294
Microbiology of Dairy Waste Activated Sludge Separation Problems, by <i>W. O. Pipes</i>	303
Evaluation of an Air Stripping-Ozone Contactor System, by <i>J. J. McCarthy, W. F. Cowen and E. S. K. Chian</i>	310
Phosphorus Removal in a Pilot-Scale Trickling Filter System by Low-Level Lime Addition to Raw Wastewater, by <i>R. D. Miller, R. S. Ryczak and A. Ostrofsky</i>	325
✓ Field Investigations of Trace Metals in Ground Water from Fly Ash Disposal, by <i>T. L. Theis, J. D. Westrick, C. L. Hsu and J. J. Marley</i>	332
Complexation of Heavy Metals by Ligands in Industrial Wastewater—Measurement and Effect on Metals Removal, by <i>M. L. Crosser and H. E. Allen</i>	345
Removal of Complex Copper-Ammonia Ions from Aqueous Wastes with Fly Ash, by <i>T. Y. J. Chu, G. R. Steiner and C. L. McEntyre</i>	359
Pyrolysis of Industrial Wastes, by <i>R. Srinivasaraghavan, T. E. Wilson and M. J. Stark</i>	377
✓ Anaerobic Wastewater Treatment in a Two-Stage Reactor of a New Design, by <i>J. Norrman and B. Frostell</i>	387
Waste Activated Sludge Thickening by Countercurrent Flotation, by <i>J. T. Albert</i>	396
A Comparison of Ozone and Hydrogen Peroxide in the Emergency Oxidation of a Refinery Wastewater, by <i>N. C. Burbank, Jr., R. Matsumoto and G. Inouye</i>	402
The Removal of Boron from Incinerator Quench Water: Hydrous Metallic Oxides Versus an Ion-Specific Resin, by <i>Y. H. Chang and N. C. Burbank, Jr.</i>	415
Characterization and Disposal of Paint Sludge, by <i>J. L. Pinsky and D. W. Weeter</i>	428
Status of the U.S. Environmental Protection Agency Program to Control Toxic Industrial Wastes, by <i>S. T. Davis, A.P. Wright and H. A. Coates</i>	438
Treatment of Wastewater from Torpedo Refueling Facilities, by <i>M. A. Kessick, W. G. Characklis and W. Elvey</i>	442
Pretreatment of a Biorefractory Herbicide Waste Stream to Enhance Biodegradability, by <i>W. A. Myers, J. H. Mayes and A. J. Englande, Jr.</i>	450
Soluble COD Removal in a Fluidized-Bed Biological Reactor, by <i>J. E. Butts, J. E. La Padula and K. A. Sanderson</i>	454

Ion Exchange Selectively Removes Heavy Metals from Mixed Plating Wastes, by <i>A. R. Yeats</i>	467
The Effects of Lime Neutralization of Acid Mine Drainage on Stream Ecology, by <i>E. E. Herricks and J. Cairns, Jr.</i>	477
Evaluation of Alternatives for Disposal of Wire Screen Manufacturing Waste, by <i>M. L. Goldman, M. D. LaGrega and K. F. Theiss</i>	487
The Occurrence of Purple Sulfur Bacteria in Anaerobic Lagoons—Theory and Appli- cation, by <i>P. N. McFarlane and H. Melcer</i>	497
The Destruction of Chlorinated Hydrocarbons Including PCBs in a Cement Kiln, by <i>W. A. Neff, D. J. Skinner and L. P. MacDonald</i>	507
Analysis of Wastewaters from High-BTU Coal Gasification Plants, by <i>R. G. Luthy,</i> <i>M. J. Massey and R. W. Dunlap</i>	518
Resource Recovery and Source Control via Activated Carbon Adsorption with Inplace Nondestructive Regeneration , by <i>C. S. Parmele and R. D. Fox</i>	537
Control of Water Problems in a Steel Mill's Blast Furnace Gas Wash Recirculation System, by <i>G. R. Brower, P. A. Luther and S. J. Ryckman</i>	549
Specific Conductance as a Measure of Treatability of Landfill Leachate in Algal Lagoons, by <i>P. A. Walker and D. D. Adrian</i>	558
Field Testing for Oxygen Transfer and Mixing in Static Mixer® Aeration Systems, by <i>R. G. Gilbert and D. Libby</i>	567
Textile Dye Process Waste Treatment with Refuse Considerations, by <i>L. E. Shriver and</i> <i>R. R. Dague</i>	581
Algal Contribution to BOD Reduction in an Industrial Waste Stabilization Pond, by <i>E. M. Davis, J. D. Martin, V. D. Dutcher and J. K. Petros</i>	593
Precoat Filtration of Waste Activated Sludge, by <i>R. E. Komoski, J. C. Puckett and</i> <i>J. B. Childers</i>	603
Single-Cell Activated Sludge Using Fill-and-Draw for a Combined Industrial/Domestic Waste Treatment Plant, by <i>J. E. Rea, Jr.</i>	611
Successful Pretreatment and Deep-Well Injection of Chemical Plant Wastewater, by <i>R. S. Dugas and P. E. Reed</i>	617
Sulfex®—A New Process Technology for Removal of Heavy Metals from Waste Streams, by <i>M. C. Scott</i>	622
Reverse Osmosis Provides Reusable Water from Electronics Wastes, by <i>M. D. Beasley,</i> <i>L. Luttinger and C. Caprio</i>	630
Thermal Discharge Field Studies, by <i>M. Crum</i>	639
Mercury (II) Removal from Aqueous Solution Using Ion Exchange and Carbon Adsorption, by <i>K. W. Fife, J. D. Williams and H. G. Folster</i>	643
The Coagulation of Disperse Dyes, by <i>T. Crowe, C. R. O'Melia and L. Little</i>	655
Treatability Studies and Design Considerations for a Textile Mill Wastewater, by <i>M. M. Ghosh, F. E. Woodard and O. J. Sproul</i>	663
Correlation of Oxygen Demand and Total Organic Carbon Tests on Wastewaters from Ammunition Plants, by <i>M. Roth and J. M. Murphy, Jr.</i>	674
✓ Anaerobic Fermentation of Animal Wastes: A Kinetic Design Evaluation, by <i>G. R. Morris, W. J. Jewell and R. C. Loehr</i>	689
Adsorption of Nonionic Surfactants by Activated Carbon and Clay, by <i>J. B. Carberry</i> <i>and A. T. Geyer, III</i>	701

Development of a Treatment Design for Oily Wastewater from Tankers, by A. B. Sadler, Jr., J. S. Pierce, Jr. and C. E. Parker	709
Techniques for Continuous Neutralization of Strong Acid Wastes, by R. W. Okey, K. Y. Chen and A. Z. Sycip	716
Feasibility of Zero Aromatic Hydrocarbon Discharge from a Styrene Monomer Facility, by D. E. Bruderly, J. D. Crane and J. D. Rigenbach	726
The Feasibility of Using Nitrifying Bacteria to Assist the Regeneration of Clinoptilolite, by M. J. Semmens	733
Nitrogen Removal from Digested Sludge Supernatant Liquor Using Attached and Suspended Growth Systems, by T. B. S. Prakasam, W. E. Robinson and C. Lue-Hing.	745
Net Sludge Yields Obtained During Single-Stage Nitrification Studies at Chicago's West-Southwest Treatment Plant, by A. W. Obayashi, B. Washington and C. Lue-Hing	759
Having Your Cake and "Treating It, Too": A Case History of the Treatment of Bakery Wastes, by A. M. Pavilcius	770
Laboratory Investigation of Fill-and-Draw Biological Reactors for the Treatment of High-Strength Wastes, by R. W. Dennis and R. L. Irvine	776
Removal of Phenolic Compounds in Coal Gasification Wastewaters Using a Dynamic Membrane Filtration Process, by S. L. Klemetson and M. D. Scharbow	786
Management of Organic Materials in Landfills, by N. A. Curry	797
Alkalinity Destruction in the Activated Sludge Process, by R. W. Benninger and J. H. Sherrard.	802
A Method for the Evaluation of Bentonites as Soil Sealants for the Control of Highly Contaminated Industrial Wastes, by J. Hughes	814
Application of Ion Exchange to Acid Mine Drainage Treatment, by R. C. Wilmoth, R. B. Scott and E. F. Harris	820
Lime Neutralization of Low-Acidity Wastewater, by C. R. Bettler.	830
Heavy Metal Removal Processes for Plating Rinse Waters, by R. E. Wing and W. E. Rayford.	838
Cementation Treatment of Copper in Wastewater, by J. W. Patterson and W. A. Jancuk	853
The Significance of Accidental Aircraft Fueling/Defueling Spills as Sources of Pollution, by V. J. Ciccone, A. P. Graves and W. J. McNamara	866
Treatment of Wastewater Containing Nitroglycerin and Nitrated Esters, by R. P. Carnahan and L. Smith	876
Improved Biological Treatment of Food Processing Wastes with Two-Stage ABF Process, by B. W. Hemphill and R. G. Dunnahoe.	888
Waste Treatment of Chemical Cleaning Wastes in the Power Industry, by J. E. Brennan and G. R. Mace	899
Presence of Trace Organics in the Delaware River and their Discharge by Municipal and Industrial Sources, by F. B. DeWalle and E. S. K. Chian	908
Removal of Heavy Metals from a Fatty Acid Wastewater with a Completely Mixed Anaerobic Filter, by E. S. K. Chian and F. B. DeWalle.	920
Wastewater Characteristics and Treatment Technology for the Liquification of Coal Using the H-Coal Process, by E. J. Reap, G. M. Davis, J. H. Koon and M. J. Duffy	929
Land Disposal of Meat Packing Wastewater Case History, by D. O. Dencker, P. J. Landwehr and G. M. Sallwasser	944
Evaluation of Oxygen Transfer Coefficients of Complex Wastewaters, by S. J. Bass and G. L. Shell	953

✓ Power Plant Wastewater Treatment Design and Operation, by <i>F. X. Browne and D. Wyness</i>	968
Treatment of Two Textile Dye House Wastewaters, by <i>G. M. Davis, J. H. Koon and C. E. Adams, Jr.</i>	981
Evaluation of Additives for Improving Scrubber Sludge Characteristics for Disposal, by <i>T. Y. J. Chu, R. J. Ruane, D. Y. G. Chen, D. W. Weeter and B. D. Marks</i>	998
The Effectiveness of Land Treatment for Removal of Heavy Metals, by <i>R. S. Reimers, A. J. Englande, P. A. Krenkel, R. A. Danforth, D. B. Leftwich and C. P. Lo</i>	1013
Custom Designs Cut Effluent Treatment Costs. Case Histories at Chevron U.S.A., Inc., by <i>B. T. Davies and R. W. Vose</i>	1035
Ten-Year Index	1061