Progress in Water Technology

(Incorporating Advances in Water Pollution Research)

TREATMENT OF DOMESTIC AND INDUSTRIAL WASTEWATERS IN LARGE PLANTS

CONTENTS

S. H. JENKINS: Editorial	1
L. B. WOOD and M. L. RICHARDSON: Catchment quality control	1
B. T. LYNAM, R. M. LINTON and K. KIRK: Implementing pretreatment requirements in the United States: A Study of four public agencies treating domestic and industrial wastewater	13
W. F. GARBER: Industrial waste control procedures in the city of Los Angeles, California, U.S.A.	23
W. F. GARBER: Evaluating the toxicity of effluents	57
L. H. THOMPSON: Trade effluent control in London	69
B. J. BORNE and J. A. HOBSON: Predicting safe concentrations of volatile organic substances in discharges to sewers	77
L. B. WOOD and A. G. COCKBURN: An equitable approach to pollution control with particular reference to the Thames Estuary	83
L. B. WOOD, P. F. BURROWS and M. R. WHITELAND: Scheme for remedying the effects of storm sewage overflows to the tidal River Thames	93
G. A. AL-NAKSHABANDI, Z. HAMEED, A. ABDULHADI and B. SALEEM: Preliminary investigations into the effects of refinery waste water, and the single effect of its major pollutants on commercially interesting crops	109
K. R. IMHOFF: Which plant expansion is the most urgent one in a river system and how to develop a priority list	119
G. W. ANNEN: Economical considerations on local or centralized wastewater treatment systems	123
H. FLECKSEDER: Preliminary studies on combined or separate treatment (as experienced with effluents from industries processing wood)	129
W. FLÖGL: Comparison of costs of four modifications of the activated sludge process: an example case	139
N. REUS and H. RÜFFER: Waste water from a chemical-pharmaceutical works	153
M. SEZGIN, D. JENKINS and J. C. PALM: Floc size, filament length and settling properties of prototype activated sludge plants	171
M. J. D. WHITE, E. J. TOMLINSON and B. CHAMBERS: The effect of plant configuration on sludge bulking	183
T. E. WILSON, G. LUKASIK and D. OGLE: Treatment of a filamentous industrial waste in a municipal step aeration plant	189
H. RESCH: Investigations on the performance of upflow final settling tanks in activated sludge plants	201

S. MATSUI and N. FURUYA: Activated sludge control in the secondary settling basin using the sludge settling analyzer	213
H. B. TENCH: The second stage treatment of biologically treated coal carbonising wastes in admixture with sewage	221
C. W. RANDALL and P. H. KING: Full-scale physical-chemical-biological treatment of textile wastewaters	231
H. R. OAKLEY: Operational experience with aerated lagoons	239
H. C. BLERSCH: Conventional biological filters at ultra-high loadings as main process stage for a strong mixed waste	243
W. STALZER: The Wulkatal treatment plant—combined treatment of food processing wastes by a lowly loaded activated sludge process	251
H. KROISS: Liquid waste reduction technology for industries demonstrated by the treatment of sugar beet waste water	263
P. RANTALA: A design study of biochemical combined wastewater treatment plant	271
M. J. D. WHITE, C. F. LOCKYEAR and E. J. TOMLINSON: Design date for gravity thickeners	279
D. KANSY: Comparative investigations of different methods to concentrate waste activated sludge	287
F. ABOSAMRA: Evolution of primary sludge during thickening	297
Ch. DIMOVSKI: Anaerobic sludge digestion process with prolonged digestion time for the solid substances and shortened for the sludge liquor	307
G. P. NOONE and C. E. BRADE: Low cost of provision of anaerobic digestion	315
N. J. MELAS: The prairie plan—The first decade, the second decade—the United States' largest recycling system	331
W. J. DICKENS: Sludge disposal practices in Thames Water Authority	341
E. W. HENDRIKX: The treatment of industrial waste-water sludge from a biological purification plant with complete N—removal	351
E. I. CLARK: Experimental studies on the dewatering of mixed sewage sludges	359
H. BRECHTEL: Waste water treatment plant at Wuppertal-Buchenhofen for 1,200,000 population equivalents	369
H. HRUSCHKA: Waste treatment by precipitation with lime - a cost and efficiency analysis	383
J. L. VOSSER: The treatment of mixed industrial and domestic sewage using chemical and biological treatment at Davyhulme advanced wastewater treatment pilot plant	395
J. L. VOSSER: Chemically aided settlement of crude sewage	411
J. D. TOBBER. Chemically alucu settlement of clude sewage	411

A. NETZER, J. McNUTT and W. B. DOLLAR: Treatment of combined domestic and industrial wastewater in Garland, Texas	427
P. LACROIX, D. DU CLARY and B. HOYAUX: Feasibility study of treatment processes - Case study of a large town: Marseilles	433
S. D. MYERS and C. M. AINGER: A comparison of lime assisted sedimentation and conventional treatment at a large municipal works to reduce need for industrial effluent controls	the 447
S. D. MYERS, M. J. KNEEN and R. BARNARD: Coliform reduction in domestic sewage by lime treatment prior to marine disposal	455
D. L. FORD and W. W. ECKENFELDER: Design and economics of powdered activated carbon in the activated sludge process	459
G. RINCKE and L. G. GNIOSDORSCH: Intensified biological waste water treatment city of Frankfurt am Main	483
J. F. ANDREWS, P. E. SORENSEN and M. TRUETT GARRETT: Control of nitrification in the oxygen activated sludge process	497
J. LA COUR JANSEN and J. CHR. BEHRENS: Periodic parameter variation in a full scale treatment plant with alternating operation	521
G. ARUESTE: Advanced municipal wastewater treatment by a single stage activated sludge system	533
N. MATSCHÉ: Influencing parameters on the nitrification - denitrification performance of a single stage activated sludge plant	551
M. GOLSTEIN: Hydraulic losses in biological reactors with circulating flows	565
J. L. BARNARD and P. J. PYBUS: The design of two plants for biological removal of nutrients	593
V. E. A. BAENENS: The new industrial waste water treatment plant at the chemical works of DSM (Netherlands): Design and practical experience	599
A. F. E. SIMS: Odour control with hydrogen peroxide	609
H. ENGELHARDT, W. G. HALTRICH and M. WOLLNIK: Odours emitted by BASF AG's activated sludge plant treating chemical works effluent in Ludwigshafen/Rhine	621
S. SCHLEGEL: On the reduction of odour emissions by covering surface aeration tanks	633
R. A. R. DRAKE and P. A. BANKS: Thames Water Authority riverside wastewater treatment works—Trade effluent treatment plant operating problems and their resolution	643
W. F. GARBER: Odors and their control in sewers and treatment facilities	657
A. BAUER: Development trends in construction and chemical engineering of biological waste water treatment plants taking Hoechst AG as an example	665

O. C. COLLINS and M. D. ELDER: Experience in operating the deep shaft	0.000
activated sludge process	671
G. KUGEL: Trends in liquid sludge management in the Niers region	685
Discussions and replies	693
Subject index	763