

Civil and Environmental Engineering Reports

2011
Number

6

ISSN 2080-5187

Prace
z Inżynierii
Lądowej
i Środowiska



University of
Zielona Góra
Press, Poland

CIVIL AND ENVIRONMENTAL ENGINEERING REPORTS

Civil and Environmental Engineering Reports (CEER) is a scientific journal published semi-annually by the University of Zielona Góra.

Kindly welcome are papers that are written in English and concerned with the research problems in civil and environmental engineering.

Papers are selected for publication through the review process. The authors will receive one copy of CEER.

Templates for manuscript preparation are available on the website www.ceer.uz.zgora.pl

EDITORIAL BOARD

Mieczysław KUCZMA – Editor-in-Chief

Andrzej GREINERT – Associate Editor

Piotr ALIAWDIN (Poland)

Tadeusz BILIŃSKI (Poland)

Leszek DEMKOWICZ (USA)

Michał DRAB (Poland)

Józef GIL (Poland)

Andrzej JEŃDRCZAK (Poland)

Cezary KABALA (Poland)

Piotr KONDERLA (Poland)

Zygmunt LIPNICKI (Poland)

Peter OSTERRIEDER (Germany)

Marlena PIONTEK (Poland)

Gwidon SZEFER (Poland)

Romuald ŚWITKA (Poland)

Bernhard WEIGAND (Germany)

Krzysztof WILMAŃSKI (Germany)

Czesław WOŹNIAK (Poland)

Bernd ZASTRAU (Germany)

Zofia ŻAKOWSKA (Poland)

List of the reviewers cooperating with CEER is on the website www.ceer.uz.zgora.pl

Address of the editorial office

CEER

University of Zielona Góra

Institute of Building Engineering

ul. Z. Szafrana 1

65-516 Zielona Góra, Poland

E-mail: ceer@uz.zgora.pl

Internet: www.ceer.uz.zgora.pl

ISSN 2080-5187

© Copyright by the University of Zielona Góra, Poland, 2011.

All rights reserved.

Nakład – 300 egz.

Druk – Oficyna Wydawnicza Uniwersytetu Zielonogórskiego, ul. Podgórna 50, 65-246 Zielona Góra

www.ow.uz.zgora.pl

Civil and Environmental Engineering Reports

2 0 1 1
Number

6



University of
Zielona Góra
Press, Poland

CONTENTS

Sylwia MYSZOGRAJ, Omar QTEISHAT POTENTIAL AND LIMITATIONS OF WASTEWATER REUSE IN THE HASHEMITE KINGDOM OF JORDAN	5
Karolina MIELCZAREK, Jolanta BOHDZIEWICZ, Anna KWARCIAK-KOZŁOWSKA MODELING PERFORMANCE IN REVERSE OSMOSIS WASTEWATER TREATMENT POST-TRIAL COKE IN THE INTEGRATED SYSTEMS BASED ON THE ASSUMPTIONS OF THE RELAXATION MODEL	19
Sławomira BERING, Jacek MAZUR, Krzysztof TARNOWSKI THE QUANTITY AND QUALITY OF INDUSTRIAL WASTEWATER FROM LAUNDRY ON EXAMPLE OF "FLIEGEL TEXTILSERVICE" COMPANY IN NOWE CZARNOWO	33
Anna KWARCIAK-KOZŁOWSKA, Jolanta BOHDZIEWICZ, Karolina MIELCZAREK, Aleksandra KRZYWICKA TREATMENT OF MEAT INDUSTRY WASTEWATER USING COAGULATION AND FENTON'S REAGENT	45
Monika SUCHOWSKA-KISELEWICZ THE METHODS TO INTENSIFY WASTE DECOMPOSITION	59
Izabela KRUPIŃSKA POTASSIUM PERMANGANATE AS AN OXIDIZING AND FLOCCULATING AGENT IN GROUNDWATER TREATMENT	75
Sławomira BERING, Jacek MAZUR, Krzysztof TARNOWSKI THE POSSIBILITIES OF SLUDGE MANAGEMENT, GENERATED IN THE INDUSTRIAL – LAUNDRY WASTEWATER TREATMENT PROCESS IN THE FLIEGEL TEXTILSERVICE LAUNDRY IN NOWE CZARNOWO	89
Zbigniew DĄBEK REDUCTION OF POLLUTANT CONCENTRATIONS IN THE PLANT SYSTEMS WITH THE INERT FILTER BED. PART I: BIOLOGICAL ABSORPTION OF NITROGEN AND PHOSPHORUS IN NITROPHYTES IN MICRO - CULTIVATIONS FERTILIZED WITH DOMESTIC WASTEWATER	99
Mariusz MAŁKOWSKI, Paweł WOLSKI, Lidia WOLNY DEWATERABILITY OF THERMAL CONDITIONED SEWAGE SLUDGE AFTER ANAEROBIC STABILIZATION	109
Mariusz BARAŃSKI, Iwona ZAWIEJA, Lidia WOLNY IMPACT OF ULTRASONIC FIELD STRENGTH ON THE STRUCTURE CHANGES OF DISINTEGRATED EXCESS SLUDGE	117

January BIEN', Marcin MILCZAREK, Ewa NECZAJ, Małgorzata WORWAŁG, Tomasz OKWIET, Mariusz KOWALCZYK	
COMPOSTING PROCESS AS AN ALTERNATIVE METHOD FOR THE DISPOSAL OF SEWAGE SLUDGE AND ORGANIC FRACTION OF MUNICIPAL SOLID WASTE	127
Maria WŁODARCZYK-MAKUŁA	
DEGRADATION OF PAHS IN SEWAGE SLUDGE DURING FERMENTATION PROCESS	137
Małgorzata WORWAŁG, Ewa NECZAJ, Anna GROSSER, Dorota KRZEMIŃSKA	
METHANE PRODUCTION FROM FAT-RICH MATERIALS	147
Marlena PIONTEK, Katarzyna ŁUSZCZYŃSKA, Krzysztof SOLARZ	
THE OCCURENCE OF MITES (ACARI) ON WALLS INFESTED WITH MOULDS IN DWELLING HOUSES	163
Beata NOWOGOŃSKA	
RELIABILITY OF A BUILDING DETERMINED BY THE DURABILITY OF ITS COMPONENTS	173
Sławomir ŁOTYSZ	
PROFESSOR WAŁAW ŻENCZYKOWSKI AND UNDONE REFORM OF POLAND'S HOUSING INDUSTRY	181