

**LEMBAR
HASIL PENILAIAN SEJAWAT SEBIDANG ATAU PEER REVIEW
KARYA ILMIAH : PROSIDING**

Judul (Artikel)	:	Distribution Model 1-D of Concentration on Chemical Oxygen Demand in Waste Stabilization Ponds. Penulis : Sunarsih, Dwi. P. Sasongko, Sutrisno		
Jumlah Penulis	:	3 orang		
Status Pengusul	:	Penulis pertama/ penulis kedua / penulis korespondensi		
Identitas Jurnal Ilmiah	:	a.	Nama Prosiding	: Advanced Science Letters,
	:	b.	Nomor ISSN/ISBN	: 19366612, 19367317
	:	c.	Volume,nomor, bulan tahun	: Volume 23, Number 3 pp. 2383-2385(3). March 2017,
	:	d.	Penerbit	: American Scientific Publishers
	:	e.	DOI artikel (jika ada)	: https://doi.org/10.1166/asl.2017.8722
	:	f.	Alamat web prosiding	:
URL JURNAL : https://www.ingentaconnect.com/content/asp/asl/2017/00000023/00000003/art00214				
URL ARTIKEL : http://eprints.undip.ac.id/65314				

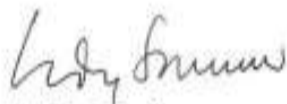
Kategori Publikasi Prosiding : Procedia/Prosiding Internasional Terindeks
 (beri ✓ pada kategori yang tepat) Prosiding Internasional
 Prosiding Nasional

Hasil Penilaian *Peer Review* :

Komponen Yang Dinilai	Nilai Reviewer		Nilai Rata-rata
	Reviewer I	Reviewer II	
a. Kelengkapan unsur isi prosiding (10%)	1,78	1,3	1,55
b. Ruang lingkup dan kedalaman pembahasan (30%)	3,78	4	3,89
c. Kecukupan dan kemutakhiran data/informasi dan metodologi (30%)	4,22	4	4,11
d. Kelengkapan unsur dan kualitas penerbit (30%)	4,67	4,6	4,66
Total = (60%)x.....=	8,67	8,4	8,53

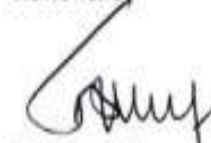
Semarang, 24 – 9 - 2018

Reviewer II



Prof. Dr. Edy Soewono
NIP. 195206261980031003
Unit kerja : FMIPA ITB

Reviewer I



Prof. Dr. Widowati, M.Si.
NIP. 196902141994032002
Unit Kerja FSM Undip

**LEMBAR
HASIL PENILAIAN SEJAWAT SEBIDANG ATAU PEER REVIEW
KARYA ILMIAH : PROSIDING**

Judul (Artikel)	:	Distribution Model 1-D of Concentration on Chemical Oxygen Demand in Waste Stabilization Ponds. Penulis : Sunarsih, Dwi. P. Sasongko, Sutrisno		
Jumlah Penulis	:	3 orang		
Status Pengusul	:	Penulis pertama/penulis kedua/penulis korespondensi		
Identitas Jurnal Ilmiah	:	a.	Nama Prosiding	: Advanced Science Letters,
	:	b.	Nomor ISSN/ISBN	: 19366612, 19367317
	:	c.	Volume,nomor, bulan tahun	: Volume 23, Number 3 pp. 2383-2385(3). March 2017,
	:	d.	Penerbit	: American Scientific Publishers
	:	e.	DOI artikel (jika ada)	: https://doi.org/10.1166/asl.2017.8722
	:	f.	Alamat web prosiding	:
URL JURNAL : https://www.ingentaconnect.com/content/asp/asl/2017/00000023/00000003/art00214				
URL ARTIKEL : http://eprints.undip.ac.id/65314				

Kategori Publikasi Prosiding : Procedia/Prosiding Internasional Terindeks
(beri ✓ pada kategori yang tepat) Prosiding Internasional
 Prosiding Nasional

Hasil Penilaian *Peer Review* :

Komponen Yang Dinilai	Nilai Maksimal Jurnal Ilmiah			Nilai Akhir Yang Diperoleh
	Procedia <input checked="" type="checkbox"/>	Prosiding Internasional <input type="checkbox"/>	Prosiding Nasional <input type="checkbox"/>	
a. Kelengkapan unsur isi prosiding (10%)	2,00			1,78
b. Ruang lingkup dan kedalaman pembahasan (30%)	6,00			3,78
c. Kecukupan dan kemutakhiran data/informasi dan metodologi (30%)	6,00			4,22
d. Kelengkapan unsur dan kualitas terbitan/jurnal (30%)	6,00			4,67
Total = (100%)	20,00			14,447

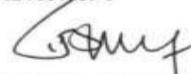
Nilai Pengusul = 60% x 14,447 = 8,67

Catatan penilaian artikel oleh Reviewer:

Unsur isi papaper cukup baik, kedalaman pembahasan dan diskusi tentang model yang digunakan kurang, data dan metodologi cukup. Terdapat 5 referensi yang kedaluwarsa (lebih dari 10 tahun terakhir) dari sebanyak 13 referensi yang digunakan. Unsur dan penerbit kurang baik.

Semarang, 15 – 8- 2018

Reviewer I



Prof. Dr. Widowati, MSi
NIP. 196902141994032002
Unit kerja : Departemen
Matematika , FSM UNDIP

**LEMBAR
HASIL PENILAIAN SEJAWAT SEBIDANG ATAU PEER REVIEW
KARYA ILMIAH : PROSIDING
(BUKTI ARTIKEL C- 22)**

Judul (Artikel)	:	Distribution Model 1-D of Concentration on Chemical Oxygen Demand in Waste Stabilization Ponds. Penulis : Sunarsih , Dwi. P. Sasongko, Sutrisno		
Jumlah Penulis	:	3 orang		
Status Pengusul	:	Penulis pertama/ penulis kedua / penulis korespondensi		
Identitas Jurnal Ilmiah	:	a.	Nama Prosiding	: Advanced Science Letters,
	:	b.	Nomor ISSN/ISBN	: 19366612, 19367317
	:	c.	Volume, nomor, bulan tahun	: Volume 23, Number 3 pp. 2383-2385(3). March 2017,
	:	d.	Penerbit	: American Scientific Publishers
	:	e.	DOI artikel (jika ada)	: https://doi.org/10.1166/asl.2017.8722
	:	f.	Alamat web prosiding	:
URL JURNAL : https://www.ingentaconnect.com/content/asp/asl/2017/00000023/00000003/art00214				
URL ARTIKEL : http://eprints.undip.ac.id/65314				

Kategori Publikasi Prosiding : Procedia/Prosiding Internasional Terindeks
(beri ✓ pada kategori yang tepat) Prosiding Internasional
 Prosiding Nasional

Hasil Penilaian *Peer Review* :

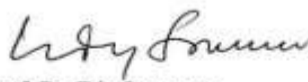
Komponen Yang Dinilai	Nilai Maksimal Jurnal Ilmiah			Nilai Akhir Yang Diperoleh
	Procedia <input checked="" type="checkbox"/>	Prosiding Internasional <input type="checkbox"/>	Prosiding Nasional <input type="checkbox"/>	
a. Kelengkapan unsur isi prosiding (10%)	2,00			1,3
b. Ruang lingkup dan kedalaman pembahasan (30%)	6,00			4
c. Kecukupan dan kemutakhiran data/informasi dan metodologi (30%)	6,00			4
d. Kelengkapan unsur dan kualitas terbitan/jurnal (30%)	6,00			4,6
Total = (100%)	20,00			13,9
Nilai Pengusul = 60% x 13,9 = 8,4				

Catatan penilaian artikel oleh Reviewer:

Konten artikel cukup tajam sesuai dengan judul, makalah mengkaji model dinamik COD pada aliran WWTP. Penyelesaian numerik dilakukan dengan finite difference Dufort Frankel. Konklusi masih belum cukup tajam. Makalah dipublikasikan di journal international terindeks di scopus.

Bandung, 31/5 2018

Reviewer II


Prof. Dr. Edy Soewono
NIP. 195206261980031003
Unit kerja : FMIPA ITB



Document details

< Back to results | < Previous 29 of 34 Next >

📄 Export 📄 Download 🖨️ Print ✉️ E-mail 📄 Save to PDF ☆ Add to List More... >

View at Publisher

Advanced Science Letters
Volume 23, Issue 3, March 2017, Pages 2383-2385

Distribution model 1-D of concentration on chemical oxygen Demand in waste stabilization ponds (Article)

Sunarsih^{a,b}, Sasongko, D.P.^{b,c}, Sutrisno^a

^a

Department of Mathematics, Faculty of Science and Mathematics, Diponegoro University, Semarang, 50275, Indonesia

^b Diponegoro University, Semarang, 50241, Indonesia

^c Department of Physics, Faculty of Science and Mathematics, Diponegoro University, Semarang, 50275, Indonesia

Abstract

View references (13)

This paper presents solution of Chemical Oxygen Demand (COD) concentration distribution model on the surface waste stabilization ponds based on the advection–diffusion mechanism. This model is represented in second-order partial differential equations. The purpose of this paper is investigate the COD distribution design in waste stabilization ponds using field data obtained. Collection of field data was carried out in the Waste Water Treatment Plant (WWTP) Sewon, Bantul, D. I. Yogyakarta. Numerical method used for solution this model is finite difference method with Dufort Frankel scheme. The initial step in this method is process discretization by the finite difference schemes are used. The discrete equation will be substituted into the partial differential equations. Furthermore, the calculation will be completed with the help of MATLAB program. The results show that there was a mass transfer of pollutants each time followed by an increase and decrease in mass. This shows that there is a advection and diffusion process in waste stabilization ponds. © 2017 American Scientific Publishers. All rights reserved.

SciVal Topic Prominence ⓘ

Topic: Stabilization ponds | Pond | Stabilization

Prominence percentile: 81.889 ⓘ

Author keywords

Advection–Diffusion Chemical Oxygen Demand Dufort Frankel Finite Difference Waste Stabilization Ponds
WWTP Sewon

ISSN: 19366612

Source Type: Journal

Original language: English

DOI: 10.1166/asl.2017.8722

Document Type: Article

Publisher: American Scientific Publishers

References (13)

View in search results format >

All | Export 🖨️ Print ✉️ E-mail 📄 Save to PDF Create bibliography

Metrics ⓘ View all metrics >

1 Citation in Scopus
42nd percentile

0.26 Field-Weighted
Citation Impact



PlumX Metrics

Usage, Captures, Mentions,
Social Media and Citations
beyond Scopus.

Cited by 1 document

Numerical Solution of a 3-D
Advection–Dispersion Model for
Dissolved Oxygen Distribution in
Facultative Ponds

Sunarsih , Sasongko, D.P. ,
Sutrisno
(2018) *E3S Web of Conferences*

View details of this citation

Inform me when this document
is cited in Scopus:

Set citation alert >

Set citation feed >

Related documents

Numerical solution of
distribution model 2-D of
concentration on chemical
oxygen demand in waste
stabilization ponds

Sunarsih , Farikhin , Rya, H.
(2017) *Advanced Science Letters*

Numerical simulation of
advection-diffusion on flow in
waste stabilization ponds (1-
dimension) with finite difference
method forward time central
space scheme

Putri, G.A. , Sunarsih , Hariyanto,
S.
(2018) *Environmental
Engineering Research*



Source details

Advanced Science Letters

Scopus coverage years: from 2010 to 2017

(coverage discontinued in Scopus)

Publisher: American Scientific Publishers

ISSN: 1936-6612 E-ISSN: 1936-7317

Subject area:

Energy: General Energy

Environmental Science: General Environmental Science

Engineering: General Engineering

Social Sciences: Education

Social Sciences: Health (social science)

Mathematics: General Mathematics

View all ▾

CiteScore 2016

0.21

SJR 2018

0.117

SNIP 2018

0.280[View all documents >](#)[Set document alert](#)[Save to source list](#)[CiteScore](#)[CiteScore rank & trend](#)[CiteScore presets](#)[Scopus content coverage](#)

CiteScore 2016 ▾

Calculated using data from 31 May, 2017

CiteScore rank ⓘ

$$0.21 = \frac{\text{Citation Count 2016}}{\text{Documents 2013 - 2015}^*} = \frac{455 \text{ Citations} >}{2,166 \text{ Documents} >}$$

*CiteScore includes all available document types

[View CiteScore methodology >](#)[CiteScore FAQ >](#)

Metrics displaying this icon are compiled according to Snowball Metrics ↗, a collaboration between industry and academia.

Category	Rank	Percentile
Energy		
General Energy	#42/58	27th
Environmental Science	#148/185	19th
General Environmental Science		

[View CiteScore trends >](#)[Add CiteScore to your site ↗](#)

About Scopus

[What is Scopus](#)[Content coverage](#)[Scopus blog](#)[Scopus API](#)[Privacy matters](#)

Language

[日本語に切り替える](#)[切换到简体中文](#)[切换到繁體中文](#)[Русский язык](#)

Customer Service

[Help](#)[Contact us](#)

VOLUME 23 • NUMBER 3

MARCH 2017

www.aspbs.com/science

Advanced

SCIENCE

A Journal Dedicated to All Aspects
of Scientific Research

LETTERS

Editor-in-Chief: Dr. Hari Singh Nalwa, USA

Special Sections on

The International Workshop on Intelligent Information Technology (2WINTECH 2016)

Cheonan, Korea, October 20–22, 2016

GUEST EDITOR: Sok Pal Cho

First International Conference on Healthcare and Technical Research (ICHTR 2015)

Manipal, India, 22–24 December, 2015

GUEST EDITORS: N. Udupa, B. Satish Shenoy, Raghu Radhakrishnan, Manthan D. Janodia,
Shilpee Chaudhary, Raviraj Anand Devkar, Prateek Jain, and Samvit Menon

**The 2016 International Conference on Cyber-Society and Smart Computing—Communication
(The CyberSoc 2016), Indonesia, 24–25 September 2016**

GUEST EDITORS: Ford Lumban Gaol, Benfano Soewito, and Fanny Hutagalung

**International Conference on Energy, Environment and Information System (ICENIS) 2016
October 11–12, 2016 in Semarang, Indonesia**

GUEST EDITORS: Purwanto, Sudarmadji, Rene Van Berkel, Wan Maznah Wan Omar,
and Ferry Jie



AMERICAN
SCIENTIFIC
PUBLISHERS

4. **Step 4 – Confirming the Submission:** Author should final check the uploaded abstract or manuscript documents in this step. To submit the manuscript to ICENIS 2016, click Finish Submission button after the uploaded documents are correct. The corresponding author or the principal contact will receive an acknowledgement by email and will be able to view the submission's progress through the editorial process by logging in to the journal web address site.

After this submission, Author who submit the abstract or manuscript will get a confirmation email about the submission. Therefore, Author is able to track his submission status at anytime by logging in to the online submission interface. The submission tracking includes status of manuscript review and editorial process.

GUIDELINES FOR PREPARING ABSTRACT PAPER

Fulltext paper of abstract should be prepared using MS Word document according to **the following template:**

- **Paper Template in MS Word file (.doc)**

GUIDELINES FOR UPLOADING ABSTRACT PAPER

- **Please prepare your Abstract paper according to the template.**
- **Guidelines for Abstract Paper Submission by online:**
 1. Please login using username and password created during abstract submission in the conference website (<http://icenis.org>)
 2. Click on "Active" in the Author section.
 3. Click on the Title of your paper
 4. You will bring to Step 3 (Upload Submission). In the "Upload submission file" click on button "Choose file", and **don't forget to click button "Upload"**
 5. Upload supplementary file (if any), if not, just click Next.
 6. Click "Finish Submission" on the Step 5 (Confirmation).
 7. If you face any problems for uploading your full paper, we welcome you to send it via email (icenis2016@live.undip.ac.id). Please save it with file name with format as follows: **Abstract_PaperID_1stname of author_Institution.doc** (e.g.: **Abstract_024_John_UNDIP.doc**)
 8. However, we prefer you uploading your abstract paper in your account using your username and password as created before. **Please do not make a new account for your easy administration!!**
 9. **Abstract paper(s) must be uploaded in our website or received by: August 18th at 11:59 pm**

PREPARING GUIDELINES FOR FULLTEXT PAPER

Fulltext paper of accepted abstract should be prepared using MS Word document according to **this instruction:**

GUIDELINES FOR UPLOADING FULLTEXT PAPERS

- **Please prepare your fulltext paper according to the template as follows (please download here):**<https://goo.gl/6pdOjZ>
- **Guidelines for Fulltext Paper Submission by online:**
 1. Please login using username and password created during abstract submission in the conference website (<http://econference.undip.ac.id/index.php/icenis/icenis/login>)
 2. Click on "Active" in the Author section.
 3. Click on the Title of your paper
 4. You will bring to Step 3 (Upload Submission). In the "Upload submission file" click on button "Choose file", and **don't forget to click button "Upload"**
 5. Upload supplementary file (if any), if not, just click Next.
 6. Click "Finish Submission" on the Step 5 (Confirmation).
 7. If you face any problems for uploading your full paper, we welcome you to send it via email (icenis@live.undip.ac.id). Please save it with file name with format as follows: **PaperID_1st name of author_Institution.doc**
 8. However, we prefer you uploading your full paper in your account using your username and password as created before. **Please do not make a new account for your easy administration!!**
 9. All of full paper must be uploaded in our website or received by: **August 9th at 11:59 pm**
 10. More than this due time, we do apologize that we cannot recognize your paper involve in our selection for publishing in *ALS Proceeding*. Otherwise, we would publish them in our ISBN registered regular proceeding.
 11. This selection step is conducted in accordance with regulation in our committee which is a full authority of scientific committee.

Post presentation in our conference, we would put further in reviewing for selected papers.

IMPORTANT DATES

The important dates of this conference are:

- Abstract Submission date : July 3, 2016
- Abstract acceptance notification : July 6, 2016
- Full paper submission deadline : July 15, 2016
- Registration Payment Deadline : July 10, 2016
- Conference Day : October 11- 12, 2016

KEYNOTE SPEAKERS AND ORGANIZING COMMITTEE

KEYNOTE SPEAKER

1. PROF. DR. WAN MAZNAH WAN OMAR (USM MALAYSIA)
2. PROF. SUDHARTO P. HADI, PH.D. (UNDIP INDONESIA)
3. PROF. SHAHBAZ KHAN, PH.D.
(UNESCO REGIONAL SCIENCE BUREAU FOR ASIA AND PACIFIC)
4. DR. ENG. KHOIRUL ANWAR (JAIST JAPAN)
5. PROF. DR. PURWANTO (UNDIP INDONESIA)
6. PROF. DR. WOLFGANG NELLEN (KASSEL UNIVERSITY, GERMANY)
7. PROF. SANG JIP OH, PH.D.
(KANGWON NATIONAL UNIVERSITY KOREA)*

ORGANIZING COMMITTEE

CHAIRMAN : DR. SURYONO

CO-CHAIRMAN : DR. HENNA RYA SUNOKO

Aims and Scope
Editorial Board
Instructions for Authors
Contact Information
Subscription Information
Copyright Transfer Agreement
Indexed/Abstracted
Cover Library
Contents

Advanced Science Letters

ISSN: 1936-6612 (Print); EISSN: 1936-7317 (Online)
 Copyright © 2000-2020 American Scientific Publishers. All Rights Reserved.

EDITORIAL BOARD

EDITOR-IN-CHIEF

Professor Ahmad Umar

Department of Chemistry, College of Science and Arts
 Promising Centre for Sensors and Electronic Devices (PCSED)
 Najran University, P.O. Box: 1988, Najran 11001, Kingdom of Saudi Arabia
 Phone: +966-534-574-597
 Fax: +966-7-5442-135
 Email: advsci.asp@gmail.com

ASIAN EDITOR

Dr. Katsuhiko Ariga, PhD

Advanced Materials Laboratory
 National Institute for Materials Science
 1-1 Namiki, Tsukuba, Ibaraki 305-0044, JAPAN

ASSOCIATE EDITORS

Diederik Aerts (Quantum theory, Cognition, Evolution theory)
 Brussels Free University, Belgium.

Yakir Aharonov (Physics, Quantum Physics)
 School of Physics and **Astronomy, Israel.**

Peter C. Aichelburg (Gravitation)
 University of **Vienna, Austria.**

Jim Al-Khalili (Foundations of Physics, Nuclear Reaction Theory)
University of Surrey, UK.

Jake Blanchard (Engineering Physics, Nuclear Engineering)
 University of Wisconsin–Madison, **USA.**

Simon Baron-Cohen (Cognitive Neuroscience)
 University of Cambridge, UK.

Franz X. Bogner (Cognitive Achievement)
 University of Bayreuth, Germany.

John Borneman (Anthropology)
 Princeton University, USA.

John Casti (Complexity Science)
 Internationales Institut für Angewandte Systemanalyse, Austria.

Masud Chaichian (High Energy Physics, String Theory)
 University of Helsinki, Finland.

Sergey V. Chervon (Gravitation, Cosmology, Astrophysics)
 Ulyanovsk State Pedagogical University, Russia

Kevin Davey (Philosophy of Science)
 University of Chicago, Chicago, USA.

Tania Dey (Colloids/Polymers/Nanohybrids)
 Canada.

Roland Eils (Bioinformatics)
 Deutsches Krebsforschungszentrum Heidelberg, Germany.

Thomas Görnitz (Quantum theory, Cosmology)
 University of Frankfurt, Germany.

Bert Gordijn (Nanoethics, Neuroethics, Bioethics)
 Radboud University Nijmegen, The Netherlands.

Ji-Huan He (Textile Engineering, Functional Materials)
 Soochow University, Suzhou, China.

Nongyue He (Biosensors/Biomaterials)
 China.

Irving P. Herman (Materials and Solid State Physics)
 Columbia University, USA.

Dipankar Home (Foundations of Quantum Mechanics)
 Bose Institute, Kolkata, India.

Jucundus Jacobeit (Climate, Global Change Ecology)
 University of Augsburg, Germany.

Yuriy A. Knirel (Bioorganic Chemistry)
 N. D. Zelinsky Institute of Organic Chemistry, Russia.

Arthur Konnerth (Neurophysiology, Molecular Mechanisms)
 University of Munich, Germany.

G. A. Kourouklis (Physics Solid State Physics)
 Aristotle University Thessaloniki, Greece.



- Peter Krammer** (Genetics)
Deutsches Krebsforschungszentrum Heidelberg, Germany.
- Andrew F. Laine** (Biomedical Engineering)
Columbia University, USA.
- Minbo Lan** (Organic Functional Materials)
China.
- Martha Lux-Steiner** (Physics, Materials Science)
Hahn-Meitner-Institut Berlin, Germany.
- Klaus Mainzer** (Complex Systems, Computational Mind, Philosophy of Science)
University of Augsburg, Germany.
- JoAnn E. Manson** (Medicine, Cardiovascular Disease)
Harvard University, USA.
- Mark P. Mattson** (Neuroscience)
National Institute on Aging, Baltimore, USA.
- Lucio Mayer** (Astrophysics, Cosmology)
ETH Zürich, Switzerland.
- Karl Menten** (Radioastronomy)
Max-Planck-Institut für Radioastronomie, Germany.
- Yoshiko Miura** (Biomaterials/Biosensors)
Japan.
- Fred M. Mueller** (Solid State Physics)
Los Alamos National Laboratory, USA.
- Garth Nicolson** (Illness Research, Cancer Cell Biology)
The Institute for Molecular Medicine, Huntington Beach, USA.
- Nina Papavasiliou** (DNA Mutators, Microbial Virulence, Antiviral Defence, Adaptive Immunity, Surface Receptor Variation)
The Rockefeller University, New York, USA.
- Panos Photinos** (Physics)
Southern Oregon University, USA.
- Zhiyong Qian** (Biomedical Engineering, Biomaterials, Drug Delivery)
Sichuan University, CHINA.
- Reinhard Schlickeiser** (Astrophysics, Plasma Theory and Space Science)
Ruhr-Universität Bochum, Germany.
- Surinder Singh** (Sensors/Nanotechnology)
USA.
- Suprakash Sinha Ray** (Composites/Polymer Science)
South Africa.
- Koen Steemers** (Architecture, Environmental Building Performance)
University of Cambridge, UK.
- Shinsuke Tanabe** (Environmental Chemistry and Ecotoxicology)
Ehime University, Japan.
- James R. Thompson** (Solid State Physics)
The University of Tennessee, USA.
- Uwe Ulbrich** (Climat, Meteorology)
Freie Universität Berlin, Germany.
- Ahmad Umar** (Advanced Materials)
Najran University, Saudi Arabia.
- Frans de Waal** (Animal Behavior and Cognition)
Emory University, USA.

EDITORIAL BOARD

- Filippo Aureli**, Liverpool John Moores University, UK
- Marcel Ausloos**, Université de Liège, Belgium
- Martin Bojowald**, Pennsylvania State University, USA
- Sougato Bose**, University College, London, UK
- Jacopo Buongiorno**, MIT, USA
- Paul Cordopatis**, University of Patras, Greece
- Maria Luisa Dalla Chiara**, University of Firenze, Italy
- Dionysios Demetriou Dionysiou**, University of Cincinnati, USA
- Simon Eidelman**, Budker Institute of Nuclear Physics, Russia
- Norbert Frischauf**, QASAR Technologies, Vienna, Austria
- Toshi Futamase**, Tohoku University, Japan
- Leonid Gavrilov**, University of Chicago, USA
- Vincent G. Harris**, Northeastern University, USA
- Mae-Wan Ho**, Open University, UK
- Keith Hutchison**, University of Melbourne, Australia
- David Jishivashvili**, Georgian Technical University, Georgia
- George Khushf**, University of South Carolina, USA
- Sergei Kulik**, M.V.Lomonosov Moscow State University, Russia
- Harald Kunstmann**, Institute for Meteorology and Climate Research, Forschungszentrum Karlsruhe, Germany
- Alexander Lebedev**, Laboratory of Semiconductor Devices Physics, Russia
- James Lindesay**, Howard University, USA
- Michael Lipkind**, Kimron Veterinary Institute, Israel
- Nigel Mason**, Open University, UK
- John Joe McFadden**, University of Surrey, UK
- B. S. Murty**, Indian Institute of Technology Madras, Chennai, India

A Kriging Method for Mapping Underground Mine Air Pollution

pp. 2329-2332(4)

Authors: *Susanto, Arif; Purwanto, Purwanto; Sunoko, Henna R; Setiani, Onny*

Detecting the Reduction of Total Suspended Solid in Domestic Wastewater Through Addition the EM₄

pp. 2333-2335(3)

Authors: *Sumiyati, Sri; Purwanto, .; Sudarno, .*

Analysis of Management System of Solid Waste: Cases Study at Hasanuddin University-Campus

pp. 2336-2339(4)

Authors: *Timan, Amar Sharaf Eldin Khair; Rukmana, Didi; Nurdin, Nurjannah*

Development of Supply Chain Management Agribusiness Using Collaborative, Planning, Forecasting and Replenishment Concept

pp. 2340-2343(4)

Authors: *Bukhori, Saiful; Retnani, Windi Eka Yulia*

A Multiple-Objective Ant Colony Algorithm for Optimizing Disaster Relief Logistics

pp. 2344-2347(4)

Authors: *Batmetan, Johan Reimon; Santoso, Alb. Joko; Pranowo, .*

Optimation of the Agricultural Land with Potential Mapping Based on the Characteristics of the Land

pp. 2348-2350(3)

Authors: *Retnani, Windi Eka Yulia; Bukhori, Saiful*

Implementation of Dangerous Gas Detection Equipment Co Security on Cars Using Fuzzy Logic Smartphone with Information and Data Logger

pp. 2351-2353(3)

Authors: *Widodo, Slamet; Supani, Ahyar*

Model and Prototype Application Performance Measurement Based on Collaboration of Higher Education Standards

pp. 2354-2357(4)

Authors: *Akbar, R. Reza El; Anshary, Muhammad Adi Khairul*

Evaluation of Community-Based Environmental Sanitation Program Implementation in Bima Municipality

pp. 2358-2360(3)

Authors: *Budiman, Arif; Sunoko, Henna Rya; Setiani, Onny*

Total Organic Matter Profile in Shrimp-Seaweeds Polyculture System

pp. 2361-2363(3)

Author: *Izzati, Munifatul*

Drying Kinetics of Paddy in Fluidized Bed with Immersed Heating Element

pp. 2364-2366(3)

Authors: *Suherman, Suherman; Djaeni, Muhammad; Kumoro, Andri Cahyo*

Technical and Economic Analysis of Organic Rankine Cycle System Using Low-Temperature Source to Generate Electricity in Ship

pp. 2367-2369(3)

Authors: *Faisal, Akram; Nugroho, Taufik Fajar; Busse, Wolfgang*

Modeling of Photon Absorption Based Colour Dye for High Performance of Dye-Sensitized Solar Cells (DSSCs)

pp. 2370-2372(3)

Authors: *Suseno, Jatmiko Endro; Wardaya, Asep Yoyo; Khumaeni, Ali*

Clustering Based Optimal Sizing and Placement of PV-DG Using Neural Network

pp. 2373-2375(3)

Authors: *Sulistyowati, Riny; Riawan, Dedet Candra; Ashari, Mochamad*

Clean Coal Technology Using Dens Medium Cyclone and Magnetite

pp. 2376-2378(3)

Author: *Pujotomo, Isworo*

Study Analysis of Solar Energy Potential Map in West Sumbawa

pp. 2379-2382(4)

Author: *Suyanto, Heri*

Distribution Model 1-D of Concentration on Chemical Oxygen

Demandin Waste Stabilization Ponds

pp. 2383-2385(3)

Authors: *Sunarsih, .; Sasongko, Dwi P; Sutrisno, .*

Detergent Concentrate and Carwash Water Residue Purity Using Charcoal, Rock, and Sand as Filter

pp. 2386-2388(3)

Authors: *Husna, Iksiroh El; Rizal, U. D. Yan El; Sunoko, Henna R*



Analysis of Management System of Solid Waste: Cases Study at Hasanuddin University-Campus

Amar Sharaf Eldin Khair Timan^{1,*}, DidiRukmana², and NurjannahNurdin³

¹Department of Geography, Omdurman Islamic University, Republic of Sudan

²Department of Agribusiness, Faculty of Agriculture, Hasanuddin University, Indonesia

³Department of Marine Science and Fisheries Hasanuddin University, Indonesia

Solid waste is becoming a global problem and causing a major challenge in the world today. The study aims to assist in creating clean University environment condition and to clarify the seriousness in managing of solid waste due to solid waste caused some negative effect on the environment which may result in the occurrence of some environmental problems if proper management is not implemented. The study used some methods and approaches which includes SPSS to display the data, further observation, GPS and GIS to obtain different maps. The result reveals that in the area of study there are large amount of solid waste including inorganic, organic and hazardous solid waste. In the system of waste transportation, it is indicated that there is an incompatibility between the daily production of solid waste and the transport capacity. The daily production of solid waste is 23.67 Kg/day while the capacity is 14,800.15 Kg. the capacity of waste disposal is big to accommodate the daily production of solid waste.

Keywords: Solid Waste, Management System, University.

IP: 5.10.31.151 On: Sun, 31 May 2020 01:41:23
Delivered by Ingenta

1. INTRODUCTION

Solid waste is unwanted or the useless solid materials generated from combined residential, industrial and commercial activities in a given area. It may be categorized according to its origin (domestic, industrial, commercial, construction or institutional) according to its contents (organic material, glass, metal, plastic paper etc.).¹

Management of solid waste (MSW) can reduces or eliminates adverse impacts on the environment and human health and supports economic development and improved quality of life. A number of processes are involved in effectively managing waste for a municipality. These include monitoring, collection, transport, processing, recycling and disposal.²

Solid-waste management is a major challenge in urban areas throughout the world. Without an effective and efficient solid-waste management program, the waste generated from various human activities, both industrial and domestic, can result in health hazards and have a negative impact on the environment. Understanding the waste generated, the availability of resources, and the environmental conditions of a particular society are important to developing an appropriate waste-management system.³

Management of solid waste (MSW) can reduces or eliminates adverse impacts on the environment and human health and supports economic development and improved quality of life. A number of processes are involved in effectively managing waste for a municipality. These include monitoring, collection, transport, processing, recycling and disposal.⁴

There are considerable number of reasons for the selection of this topic and choosing Hasanuddin University. With regard to selection of the topic it has been seen that solid waste management is becoming a global problem and causing a major challenge in the world today. The collection of solid waste is one of the problems faced by the population and the environment contributed through the increase of the population that leads to accumulation of solid waste quantities.

Hasanuddin University (UNHAS) is being chosen to carry out the research because the University is the being seen as the World-class University and the largest in Eastern Indonesia. Also the University is committed to become evergreen in Indonesia in terms of reducing carbon emission with 26% by 2020. According to these reasons, Hasanuddin University would have no solid waste in its environments and would have good solid waste management systems.

The main purpose of the study assist to make the university environment clean (create clean environment conditions), through analysis the system of management and clarifying the seriousness of solid waste.

*Author to whom correspondence should be addressed.

AMERICAN
SCIENTIFIC
PUBLISHERSCopyright © 2017 American Scientific Publishers
All rights reserved
Printed in the United States of America*Advanced Science Letters*
Vol. 23, 2367–2369, 2017

Technical and Economic Analysis of Organic Rankine Cycle System Using Low-Temperature Source to Generate Electricity in Ship

Akram Faisal^{1,2,*}, Taufik Fajar Nugroho¹, and Wolfgang Busse²¹*Department of Marine Engineering, Institut Teknologi Sepuluh Nopember, Surabaya 60111, Indonesia*²*Department of Maritime Studies, Hochschule Wismar, Wismar 23966, Germany*

Increasing requirements on the economic efficiency and environmental compliance of sea transportation are drawing a larger attention on emission, energy efficiency and fuel consumption of seagoing ships. Waste Heat Recovery (WHR) is one of the solutions to meet these requirements. WHR systems utilizing high temperature sources such as exhaust gas boilers are state of the art and installation in cooling water system is not yet utilized for WHR. One opportunity is the installation of an Organic Rankine Cycle (ORC) system to recover the low-temperature waste heat emitted by the ship machinery plant. The authors have analysed the technical and economic feasibility of an ORC installation in the jacket cooling water system of a 7900 kW main engine on a container ship. The system uses R-134a as refrigerant and consists of four main components. Fuel saving potentials and necessary investment costs have been contrasted in order to determine the return on investment. Objective was to quantify the amount of electrical power which can be generated at typical loads of the main engine. The results show that the ORC system would provide an average electrical power of 57,69 kW in the load range 77,5–100% of the main engine. The investment costs would return over a period of 10 years.

Keywords: Break-Even Point, Economic Analysis, Organic Rankine Cycle, Waste Heat Recovery, Jacket Water Cooling System.

1. INTRODUCTION

Sea transportation is playing a dominant role in world trade. The number and the size of seagoing ships is continuously growing.¹ In line with this development, the installed machinery power onboard ships are ever further increasing, which is raising the importance of fuel saving, energy management and emission control measures. It certainly triggered other related issues concerning the environment that was caused by the emission of ships exhaust gas. IMO (International Maritime Organization) has estimated exhaust emission from ship formed in greenhouse gases (GHG) CO₂ that by 2050 would be reaching 2800 Mt compared to 2015 which only 700 Mt, if there was no treatment to reduce this emissions.² IMO has introduced regulations aiming at the reduction of greenhouse gasses, mainly CO₂ and improve the energy efficiency of shipping. One way to improve efficiency onboard ship is the installation of Waste Heat Recovery (WHR) system. While WHR systems for high-temperature heat recovery such as exhaust gas heat utilization are already in place, low attention is paid so far for the utilization of low-temperature waste heat, for example heat from ship machinery cooling systems. The Organic Rankine Cycle (ORC) provides the

technical opportunity to recover such heat potentials, which can be used to generate electrical power, thus saving fuel and reducing exhaust gas emissions from diesel generators. The authors have analysed the technical and economic feasibility of an ORC installation in the jacket cooling water system of a 7900 kW main engine on a container ship. The system uses R-134a as refrigerant and consists of evaporator, condenser, pump and steam turbine to generate the electricity.³ However, the installation of ORC systems in ship machinery plants has technical, operational and financial consequences which have to be duly considered. Objective was to quantify the amount of electrical power which can be generated at typical loads of the main engine, fuel saving potentials and necessary investment costs have been analysed to determine the return on investment.

2. RESEARCH METHOD

Starting with identifying the problem come out with literature study from the previous research and fundamental theories from book, journal, internet and thesis. Collecting the data of engine log book and cooling system drawing from the ship is crucial. After the data has been collected, finding out the important parameters is necessary to do. The ORC system is ready to be

* Author to whom correspondence should be addressed.

THIS PAGE IS SECURE



Handling and Using Waste Cabbage as Feed Additive on Pellet of Calf Starter and It's Effect to Microbiology Quality

Annotate Highlight

Buy Article:

\$106.38 + tax
(Refund Policy)

ADD TO CART

BUY NOW

Authors: Mukodiningsih, S¹; Achmadi, J¹; Wahyono, F¹; Utama, C. S¹; Putri, O. N¹; Solikhah, S. S¹; Ohh, S. J²

Source: Advanced Science Letters, Volume 23, Number 3, March 2017, pp. 2589-2590(2)

Publisher: American Scientific Publishers

DOI: <https://doi.org/10.1166/asl.2017.8723>

...
Abstract

References

Citations

Supplementary Data

Article Media

Metrics

Suggestions

Waste cabbage is by product of cabbage's outer shells that have been sorted with number about 5–10% wet basis from produce of cabbage. Therefore, if the waste cabbage is not handled optimally, it can cause environmental pollution. Waste cabbage naturally content *Lactobacillus sp.* The fermentation is one method that can increase number of *Lactobacillus sp.* in the waste cabbage. *Lactobacillus sp.* is a probiotic bacterium as lactic acid bacteria that can suppress gram negative bacteria populations and it can replace antibiotics. On the other hand, the reticulo-rumen completely develops both physically and metabolically at birth, which is optimal in 2–6 weeks age. Feeding calf starter (CS) after birth can promote rumen development. However, young calves tend to easily diarrhea caused by *Escherichia coli* from environment and cause death. Giving antibiotic can suppress *Escherichia coli*, but it has negative effect. For this, the aim of this research was to examine microbiology quality pellets calf starter that added fermented waste cabbage (FWC). The research used completely randomized design with 4 treatments and 5 replications (T0: 100% calf starter+0% FWC, T1: 100% calf starter+2% FWC, T2: 100% calf starter+4% FWC, T3: 100% calf starter+6% FWC). The materials of calf starter were corn, soybean meal, rice bran, molasses, mineral mix and materials in fermented waste cabbage were cabbage waste, sugar and salt. The parameters measured were total bacteria and lactic acid bacteria. The data were analyzed with descriptive analyze. The results showed that the more addition of fermented waste cabbage, the higher the count of total bacteria and lactic acid bacteria (T0: 0.33×10^6 cfu/g; T1: 0.6×10^6 cfu/g; T2: 0.63×10^6 cfu/g; T3: 0.8×10^7 cfu/g).

Keywords: Calf Starter; Fermented Waste Cabbage; Total Bacteria and Lactic Acid Bacteria

Document Type: Research Article

Affiliations: 1: Faculty of Animal and Agriculture Science, Diponegoro University, Semarang 50275, Indonesia 2: Kangwon National University, **Chuncheon, South Korea**



MINISTRY OF RESEARCH, TECHNOLOGY AND HIGHER EDUCATION
DIPONEGORO UNIVERSITY
SCHOOL OF POSTGRADUATE STUDIES



CERTIFICATE

Number : 969/UN7.P/HK/2016

This is to certify that :

SUNARSIH

Has participated as

PRESENTER

in the "1st International Conference on Energy, Environment, and Information System (ICENIS) 2016",
School of Postgraduate Studies, Diponegoro University, Semarang Indonesia,
October 11th - 12th, 2016

Dean,

Prof. Dr. Ir. Purwanto, DEA
NIP. 196112281986031004



Chair of Organizing Committee,

Dr. Saryono, M.Si.
NIP. 197306301998021001