

Aims and Scope \_\_\_\_

International Journal of Science and Engineering (IJSE) aims to be the principal international journal for publication of high quality, original papers in the branches of science and engineering. Papers showing how research results can be used in science and engineering design, and accounts of experimental or theoretical research work bringing new perspectives to established principles, highlighting unsolved problems or indicating directions for future research, are particularly welcome. Contributions that deal with new developments in plant or processes and that can be given quantitative expression are encouraged.

The journal publishes regular special issues focusing on specific topics scholarly open access, peerreviewed, interdisciplinary, half yearly and fully refereed journal focusing on theories, methods and applications in science and engineering.

The journal covers all areas of Science and Engineering, publishing refereed original research articles and technical notes. The journal reviews papers within approximately two months of submission and publishes accepted articles on either in the internet and printed paper half yearly upon receiving the final versions.

Peer Review Process \_\_

All submitted articles should report original, previously unpublished research results, experimental or theoretical, and will be peer-reviewed. Articles submitted to the journal should meet these criteria and must not be under consideration for publication elsewhere. Manuscripts should follow the style of the journal and are subject to both review and editing.

IJSE Journal [ISSN: 2086-5023], half yearly publication, Commencement 2010 Publisher: Department of Chemical Engineering, University of Diponegoro, Jl. Prof. Sudarto SH No. 1 Tembalang Semarang, Central Java, Indonesia

Copyright 2013, IJSE Journal, ISSN: 2086-5023

i



#### Editorial Team \_

- 1. Assoc. Prof. Dr. Budiyono, Department of Chemical Engineering, Diponegoro University Semarang, Central Java, Indonesia
- 2. Dr. Tutuk Djoko Kusworo, Departement of Chemical Engineering, Faculty of Engineering, University of Diponegoro Semarang Central Java, Indonesia
- 3. Prof. Dr. Ir. Sunarso MS, Faculty of Animal Agriculture, University of Diponegoro Semarang Central Java, Indonesia

International Advisory Scientific Committee \_

Prof. Dr. Ahmad Fauzi Ismail, Advanced Membrane Research Unit, University Technology of Malaysia, Malaysia

Assoc. Prof. Dr. Amir Mansourizadeh, Chemical Engineering Department, Islamic Azad University, Gachsaran, Islamic Republic of Iran

Dr. Abdul Halim, FKKSA, University of Technology Malaysia, Malaysia

Prof. Gundavarapu Mallikarjuna Rao, Department of Computer Science and Engineering, Gokaraju Rangaraju College of Engineering and Technology Hyderabad, India

Dr. Muttanagoud N Kalasad, Dr. M.N. Kalasad Assistant Professor Department of Physics SDM College of Engg & Tech. Dharwad - Karnataka INDIA

Assoc. Prof. Abd-El-Hamid Bensafi, Abou Bekr Belkaid University of Tlemcen, Algeria Prof. Dr. Abdullah M. Busyairi, Department of Chemical Engineering, University of Diponegoro, Semarang, Central Java, Indonesia

Assoc. Prof. Jing Liu, Graduate School of Environment and Energy Engineering, Waseda University, Tokyo, Japan

Dr. Enya Listiani Dewi, The Agency for Assessment and Application of Technology, Indonesia

Dr. Ho Soon Min, Faculty of Applied Sciences, INTI International University, Negeri Sembilan, Malaysia

Abubaker Mohamed Ali, Hohai University, College of Water Conservancy and Hydro-Power Water Engineering, Sudan

Assoc. Prof. Muhammad Arifur Rahman, Department of Physics Jahangirnagar University Dhaka, Bangladesh

IJSE Journal [ISSN: 2086-5023], half yearly publication, Commencement 2010
Publisher: Department of Chemical Engineering, University of Diponegoro,
JI. Prof. Sudarto SH No. 1 Tembalang Semarang, Central Java, Indonesia
Copyright 2013, IJSE Journal, ISSN: 2086-5023



#### Preface \_\_\_\_

International Journal of Science and Engineering (IJSE) [ISSN: 2086-5023] Volume 5 Number 1 Year 2013 aims to be the communication media of all scienteist in science and engineering field for publishing high quality and original papers. In this issue, we highlight some articles related agriculture science and engineering i.e. : Distribution of Coral Reef and Seagrass Ecosystems's Inorganic Carbon in the Waters of Beras Basah Bontang, East Kalimantan; Effect of H3PO4 Concentration and Particle Size of the Eggshell Used in Laying Hens Fed on Bone and Blood; Physiological Process of Acacia mangium Willd. Plant of Six Months Old Attacked by Black Spots Disease in PT Itci Hutani Manunggal Terunen; Nitrogen Retention and Productive Performance of Crossbred Native Chicken Due to Feeding Effect of Kayambang (Salvinia molesta); The Growth of Root Rot Disease on Pepper Seed Applied by Trichoderma Harzianum Inoculum; and Dissolved Oxygen Availability on Traditional Pond Using Silvofishery Pattern in Mahakam Delta. In addition, we also highligted articles in process and information engineering i.e. Experimental Analysis for Factors Affecting the Repeatability of Plastics Injection Molding Tests on the Self-developed Apparatus; Simulation of Traffic Flow Model with Traffic Controller Boundary; Simulation of Traffic Flow Model with Traffic Controller Boundary; and An Enhanced Feedback-Base Downlink Packet Scheduling Algorithm for Mobile TV in WIMAX Networks.

Website address of IJSE journal is: http://www.ijsejournal.com, while website address for Online Submission System is: http://ejournal.undip.ac.id/index.php/ijse. The journal publishes regular special issues focusing on specific topics scholarly open access, peer-reviewed, interdisciplinary, three monthly and fully refereed journal focusing on theories, methods and applications in science and engineering. However, Authors may pay some processing fees once their articles has been accepted. The research articles submitted to the IJSE journal will be peer-reviewed by at least two reviewers. Accepted research articles will be available online (free download). Language used in this journal is English.

Editor would like to appreciate all researchers, academicians, industrial practitioners focused on science and engineering to contribute to this online journal. Papers showing how research results can be used in science and engineering design, and accounts of experimental or theoretical research work bringing new perspectives to established principles, highlighting unsolved problems or indicating directions for future research, are particularly welcome for further edition. Contributions that deal with new developments in plant or processes and that can be given quantitative expression are encouraged.

> IJSE Journal [ISSN:2086-5023], Commencement 2010 Publisher: Department of Chemical Engineering, University of Diponegoro, JI. Prof. Sudarto SH No. 1 Tembalang Semarang, Central Java, Indonesia Copyright 2013, IJSE Journal, ISSN: 2086-5023



#### Table of Contents

1.	Cover	0
2.	Aims and Scopes, Peer Review Process	i
3.	Editorial Boards	ii
4.	Preface	iii
5.	Table of Contents	iv
6.	Distribution of Coral Reef and Seagrass Ecosystems's Inorganic Carbon in	1-5
	the Waters of Beras Basah Bontang, East Kalimantan. Irwan Ramadhan	
	Ritonga, S. Supriharyono, Boedi Hendrarto	
7.	Experimental Analysis for Factors Affecting the Repeatability of Plastics	6-11
	Injection Molding Tests on the Self-developed Apparatus. Yugang Huang,	
	Duxin Li, Yuejun Liu	
8.	Effect of H3PO4 Concentration and Particle Size of the Eggshell Used in	12-14
	Laying Hens Fed on Bone and Blood. S. Kismiati, T. Yuwanto, Z. Zuprizal,	
9.	S. Supadmo.	15 10
	Physiological Process of Acacia mangium Willd. Plant of Six Months Old Attacked by Black Spots Disease in PT Itci Hutani Manunggal Terunen.	15-18
	Helda Syahfari, Ach. Arieffin Bratawinata, Maman Sutisna, Djumali Mardji.	
10.		19-24
	Nitrogen Retention and Productive Performance of Crossbred Native	17-24
	Chicken Due to Feeding Effect of Kayambang (Salvinia molesta). Binti Ma'rifah, Umiyati Atmomarsono, Nyoman Suthama.	
11.	Simulation of Traffic Flow Model with Traffic Controller Boundary. Nahid	25-30
	Sultana, Masuma Parvin, Ronobir Sarker, Laek Sazzad Andallah	
12.	Corrosion Behavior of Ni3(Si,Ti) in Hydrochloric Acid Solution. Gadang	31-34
	Priyotomo, Yasuyuki Kaneno	
13.	Dissolved Oxygen Availability on Traditional Pond Using Silvofishery	35-41
	Pattern in Mahakam Delta. Ismail Fahmy Almadi, S Supriharyono, Azis Nur	
14.	Bambang.	42 40
	Effect of Various Types of Herbs on Sensory Properties and Blood Glucosa	42-48
	Response Adan Instant Black Rice. Bernatal Saragih, M Marwati, Hadi Suprapto, Bernaulus Saragih, Maulida Rachmawati	
15.	The Growth of Root Rot Disease on Pepper Seed Applied by Trichoderma	49-54
	Harzianum Inoculum. S. Sofian, B. Hadisutrisno, A. Priyatmojo	47-04
16.	An Enhanced Feedback-Base Downlink Packet Scheduling Algorithm for	55-62
	Mobile TV in WIMAX Networks. Joseph Oyewale, Liu Xiao Juan	55-0Z
17.	Submission Information	63
20.	Authors Guideline	64
20.		04

Copyright 2013, IJSE Journal, ISSN: 2086-5023