

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

Judul Karya Ilmiah	:	Experimental Study of Additives on Viscosity biodiesel at Low Temperature
Jumlah Penulis	:	2
Status Pengusul	:	Penulis ke-1
Identitas Prosiding	:	a. Judul Prosiding : IOP Conference Series: Materials Science and Engineering Vol 88 7th International Conference on Cooling & Heating Technologies (ICCHT 2014)
	b. ISBN/ISSN	: 1757-899X (Online), 1757-8981 (Print)
	c. Thn Terbit, Tempat Pelaks.	: 2015, Malaysia
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	e. Alamat Repository/Web	: https://iopscience.iop.org/article/10.1088/1757-899X/88/1/012070
	Alamat Artikel	: https://iopscience.iop.org/article/10.1088/1757-899X/88/1/012070/pdf
	f. Terindeks di (jika ada)	: Scopus
Kategori Publikasi Makalah (beri ✓ pada kategori yang tepat)	:	<input checked="" type="checkbox"/> Prosiding Forum Ilmiah Internasional <input type="checkbox"/> Prosiding Forum Ilmiah Nasional

Hasil Penilaian *Peer Review* :

Komponen Yang Dinilai	Nilai Maksimal Prosiding		Nilai Akhir Yang Diperoleh
	Internasional	Nasional	
a. Kelengkapan unsur isi prosiding (10%)	3		2,8
b. Ruang lingkup dan kedalaman pembahasan (30%)	9		8,2
c. Kecukupan dan kemutahiran data/informasi dan metodologi (30%)	9		8,2
d. Kelengkapan unsur dan kualitas terbitan /prosiding (30%)	9		8,6
Total = (100%)	30		27,8
Nilai Pengusul = 60% x 27,8 = 16,68			

Catatan Penilaian Paper oleh Reviewer :

1. Kesesuaian dan kelengkapan unsur isi prosiding:

Artikel terdiri dari: Title, Abstract, Introduction, Experimental Method, Results and Discussion, Conclusion, References dan ditulis sesuai dengan Guide for Author. Substansi artikel merupakan salah satu bidang fokus Teknik Mesin.

2. Ruang lingkup dan kedalaman pembahasan:

Artikel membahas tentang penelitian untuk menurunkan viskositas biodiesel dengan aditif viscoplex dan dietil eter. Penelitian dilakukan dengan memvariasikan temperatur dan konsentrasi aditif di dalam biodiesel. Pembahasan lebih banyak secara deskripsi dan belum ada komparasi dengan peneliti lain

3. Kecukupan dan kemutahiran data/infrmasi dan metodologi:

Jumlah referensi dalam 10 tahun terakhir sebanyak 6 dari 6 artikel (100 %). Tingkat kebaruan sangat baik. Metode penelitian dituliskan cukup lengkap disertai dengan set-up peralatan yang baik.

4. Kelengkapan unsur dan kualitas terbitan:

Jurnal diterbitkan oleh IOP Publishing. Seminar diselenggarakan oleh Mechanical Engineering Technical Division the Institution of Engineers, Malaysia, masuk dalam kategori jurnal terindeks SCOPUS dengan Impact Factor = 0.169. Peserta dari 10 Negara : Korea (10), Malaysia (39, Singapore (1), Belanda (3), Indonesia (7), Irak (1), Thailand (1), Filipina (3), Cina (2) dan India (1). Kualitas terbitan cukup baik dan konsisten serta dilengkapi dengan petunjuk penulisan yang jelas. Nilai similaritas artikel berdasarkan Turnitin sebesar 12%.

Semarang,
Reviewer 1

Prof. Dr. Widayat, ST., MT.

NIP. 197209061998031001

Unit Kerja : Fakultas Teknik Universitas Diponegoro
Bidang Ilmu : Teknik Kimia

**LEMBAR
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Hasil Penilaian *Peer Review* :

Komponen Yang Dinilai	Nilai Maksimal Prosiding		Nilai Akhir Yang Diperoleh
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c. Kecukupan dan kemutahiran data/informasi dan metodologi (30%)	9		8,58
d. Kelengkapan unsur dan kualitas terbitan /prosiding (30%)	9		8,92
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Nilai Pengusul = 60% x 28,83			= 17,30

Catatan Penilaian artikel oleh Reviewer :

1. Kesesuaian dan kelengkapan unsur isi prosiding:

Artikel ditulis sesuai dengan kaidah penulisan suatu artikel ilmiah pada prosiding.

2. Ruang lingkup dan kedalaman pembahasan:

Ruang lingkup cukup jelas. Pembahasan cukup.

3. Kecukupan dan kemutahiran data/informasi dan metodologi:

Data cukup. Metodologi cukup jelas.

4. Kelengkapan unsur dan kualitas terbitan:

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Surakarta, 12 Maret 2020
Reviewer 2

Prof. Dr. Ir. Suyitno, S.T., M.T.
NIP. 197403262000031001

Unit Kerja : Fakultas Teknik Universitas Sebelas Maret
Bidang Ilmu : Teknik Mesin



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Volume 88, Issue 1, 21 September 2015, Article number 012070

7th International Conference on Cooling and Heating Technologies, ICCHT 2014; Grand Dorsett

Subang Hotel|Jalan SS 12/1 Subang Jaya, Selangor Darul Ehsan; Malaysia; 4 November

2014 through 6 November 2014; Code 116710

Experimental study of additives on viscosity biodiesel at low temperature (Conference Paper) ([Open Access](#))

Fajar, B.^a Sukarno^b

^aDepartment of Mechanical Engineering, Diponegoro University, Jl.Prof.Sudarto SH, Tembalang, Central Java, Semarang, 50275, Indonesia

^bDepartment of Mechanical Engineering, Akademi Teknik Wacana Manunggal, Central Java, Plamongsari Raya, Pucang Gading, Semarang, 502193, Indonesia

Abstract

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An experimental investigation was performed to find out the viscosity of additive and biodiesel fuel mixture in the temperature range from 283 K to 318 K. Solutions to reduce the viscosity of biodiesel is to add the biodiesel with some additive. The viscosity was measured using a Brookfield Rheometer DV-II. The additives were the generic additive (Diethyl Ether/DDE) and the commercial additive Viscoplex 10:330 CFI. Each biodiesel blends had a concentration of the mixture: 0.0; 0.25; 0.5; 0.75; 1.0; and 1.25% vol. Temperature of biodiesel was controlled from 40°C to 0°C. The viscosity of biodiesel and additive mixture at a constant temperature can be approximated by a polynomial equation and at a constant concentration by exponential equation. The optimum mixture is at 0.75% for diethyl ether and 0.5% for viscoplex.

SciVal Topic Prominence

Topic: Biodiesel | Diesel fuels | Cold filter

Prominence percentile: 94.979



Indexed keywords

Engineering controlled terms:

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Gaonkar, N. , Vaidya, R.G.
(2016) 2016 International
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Technologies for Sustainability,
ICEETS 2016

Temperature dependence
viscosity and density of different
biodiesel blends

Kumbár, V. , Skřivánek, A.
(2015) Acta Universitatis
Agriculturae et Silviculturae
Mendelianae Brunensis

Effect of the rapeseed oil methyl
ester component on conventional
diesel fuel properties

Kumbár, V. , Votava, J.
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Flow properties of biodiesel fuel blends at low temperatures
(2007) *Fuel*, 86 (1-2), pp. 143-151. Cited 251 times.
doi: 10.1016/j.fuel.2006.06.005
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- 2 Thomas, T.P., Birney, D.M., Auld, D.L.
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(2012) *Industrial Crops and Products*, 36 (1), pp. 267-270. Cited 19 times.
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- 3 Selim, M.Y.E.
Reducing the viscosity of Jojoba Methyl Ester diesel fuel and effects on diesel engine performance and roughness
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Preliminary investigation of cold flow improvers for palm-derived biodiesel blends
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- 6 Ramírez-Verduzco, L.F., García-Flores, B.E., Rodríguez-Rodríguez, J.E., Del Rayo Jaramillo-Jacob, A.
Prediction of the density and viscosity in biodiesel blends at various temperatures
(2011) *Fuel*, 90 (5), pp. 1751-1761. Cited 80 times.
doi: 10.1016/j.fuel.2010.12.032
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✉ Fajar, B.; Department of Mechanical Engineering, Diponegoro University, Jl.Prof.Sudarto SH, Tembalang, Central Java, Semarang, Indonesia; email:berkahfajar@undip.ac.id
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ICCHT 2014



7th INTERNATIONAL CONFERENCE ON COOLING & HEATING TECHNOLOGIES

"Innovation And Sustainability In Heating & Cooling Technologies"



**4th – 6th November 2014
Grand Dorsett Hotel, Subang, Malaysia**

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- A.D. Pasek, Institut Teknologi Bandung, Indonesia
- Y.S. Indartono, Institut Teknologi Bandung, Indonesia

Conference Programme

Monday, 3rd November 2014

14:00 - 18:00 Registration

Tuesday, 4th November 2014

08:00 - 09:00 Registration

09:00 - 09:30 **Opening Address**
by Y.Bhg. Dato' Ir. Lim Chow Hock
President
The Institution of Engineers, Malaysia

09:30 - 09:35 Tour of the Exhibition Booths by Guest of Honour and Guests

09:35 - 10:00 Coffee break

10:00 - 10:30 **Plenary 1**
Chairman: Ir. Fam Yew Hin

On Generating Counter-Rotating Streamwise Vortices
Professor S.H. Winoto
National University of Singapore, Singapore

10:30 - 11:00 **Plenary 2**
Chairman: Ir. Fam Yew Hin

Mechanical Engineering Education and its Challenges
Y.Bhg Datuk Ir. Prof. Dr Ow Chee Sheng
Universiti Teknologi MARA

11:00 - 13:00 **Parallel Sessions**
Session 1: Theoretical Analysis, CFD, Modelling (Subang 1, Mezzanine Floor)
Chairman: Dr. Chuah Keng Hoo

Adaptive Flux-based Nodeless Variable Finite Element Formulation with Error Estimation for Thermal-Structural analysis (ANA042TH)
Suthee Traivivatana
Chulalongkorn University, Thailand

Double Droplets Simultaneous Impact on Liquid Film (ANA095CH)
Yali Guo
Dalian University of Technology, China

Large Eddy Simulation of Natural Ventilation for Idealized Terrace Houses Due to the Effect of Setback Distance (ANA060MY)
Tuan Liyana Tuan Ab Rashid
Universiti Teknologi MARA

Natural Convection Heat Transfer in Vertical Triangular Sub-Channel in Zirconia-Water Nanofluid (ANA061ID)
Nathanael P Tandian
Institut Teknologi Bandung, National Nuclear Energy Agency, Indonesia

Numerical Modelling of Multi-Pass Solar Dryer filled with Granite Pebbles for Thermal Storage Enhancement (*ANA065MY*)

MW Kareem
Universiti Teknologi PETRONAS

The Theoretical Analysis of the Fog Removal in the LNG Ambient Vaporizer (*ANA100KR*)

Tae Jin Lee
Gyeongsang National University, Korea

Sensitivity Study of Bubble Diameter for Prediction of Flow Pattern in Homogeneous Bubble Column Regime (*ANA010MY*)

M. Pourtousi
University of Malaya

Solidification of Cu-Water nanofluid in a Trapezoidal Cavity: A CFD study (*ANA084MY*)

R.K. Sharma
University of Malaya

Session 2: Industry Applications (Subang 2, Mezzanine Floor)

Chairman: Dr. Savithry K. Thangaraju

A Study on the Structural Characteristics and Shape of Outfitting Equipment Support in 300,000 DWT Crude Oil Tanker (*IND037KR*)

Kwang-Woon Jeong
Gyeongsang National University, Korea

Experimental Analysis and FEM Simulation of Loop Heat Pipe charged with Diamond Nanofluid for Desktop PC Cooling (*IND036MY*)

P. Gunnasegaran
Universiti Tenaga Nasional

A Study on the Compensation Margin on Welding Joint of Large Steel Plates in Shipyards (*IND038KR*)

Jeong-Tae Kim
Gyeongsang National University, Korea

Design Of Radial Turbo-Expander For Organic Rankine Cycle System (*IND024ID*)

Maulana Arifin
Center for Electric Power and Mechatronics – LIP
Institut Teknologi Bandung, Indonesia

Study of Indonesian Low Rank Coal Utilization on Modified Fixed Bed Gasification for Combined Cycle Power Plant (*IND074ID*)

Toto Hardianto
Institut Teknologi Bandung, Indonesia

Temperature Distribution and Stress Analysis of a Thermal Heat sink Undergoing Thermal Loading in a Mobile Computer (*IND082MY*)

Albinus E. Xavier
The University of Nottingham, Malaysia

Analysis of the Impact on Water-based Fire Extinguishing Pipe on the Earthquake (*IND051KR*)

Jeong- Kyoon Lee
Incheon National University, Korea

13:00 - 14:00 Lunch

14:00 - 15:30 ***Session 3: HVAC, Refrigeration, Heat Pump***

(Subang 1, Mezzanine Floor)

Chairman: Professor Maogang He

A Study on the Ventilation Method for a Factory Exposed to High Temperature (REF040KR)

Yeong-Sik Kim

Gyeongsang National University, Korea

A PID De-tuned Method for Multivariable Systems Applied at HVAC Pplant (REF001MY)

Abu Bakar Ghazali

Universiti Tenaga Nasional

ACMV Energy Analysis for Academic Building: A Case Study (REF049MY)

Tee Boon Tuan

Universiti Teknikal Malaysia Melaka

Theoretical Study of New Combined Absorption-Ejector Refrigeration System (REF008MY)

Ali Najah Al-Shamani

Universiti Kebangsaan Malaysia

Thermal Environmental Case Study of an Existing Underfloor Air Distribution (UFAD) System in a High-Rise Building in the Tropics (REF080MY)

Poh Kai Sin

University of Malaya

Applications of Jet Ejectors for Efficient Refrigeration and Modelling of Multi Phase Multi Fluid Flow in Ejectors (REF016IM)

D Konar

IIT Kharagpur, India

Session 4: Material Engineering

(Subang 2, Mezzanine Floor)

Chairman: Dr. Abreeza Manap

A Study on the Surface Shape and Roughness of Aluminum Alloy for Heat Exchanger by Ball Endmilling (MAT012KR)

Eunju Lee

Department of Korea Polytechnics, Changwon, Korea

Heat-Assisted Machining for Material Removal Improvement (MAT044MY)

A.B Mohd Hadzley

Universiti Teknikal Malaysia Melaka

Physical Properties Variation of Graphene and Multi Wall Carbon Nanotubes by Planetary Ball Mill and Heat Treatment (MAT098KR)

Gunwoo Jo

Gyeongsang National University, Korea

The Empirical Correlations for Natural Convection Heat Transfer Al₂O₃ and ZrO₂ Nanofluid in Vertical Sub-channel (MAT076ID)

Ketut Kamajaya

National Nuclear Energy Agency, Indonesia

Investigation on Stability and Density of Methanol based TiO₂ Nanofluids (MAT109MY)

R.M. Mostafizur

University of Malaya

An Experimental Study of Thermal Performance of GN and MWCNTs-based Aqueous Nanofluids with Surfactants SDS and SDBS (*MAT027KR*)

A.K.M Mahmudul Haque
Gyeongsang National University, Korea

15:30 - 16:00 Coffee break

16:00 - 17:00 ***Session 5: HVAC, Refrigeration, Heat Pump (Subang 1, Mezzanine Floor)***
Chairman: Professor Maogang He

Effects of Air Outlets Geometry on Predicted Human Comfort inside Rooms: CFD vs. ADPI (*REF053EG*)

Essam E. Khalil
Cairo University, Egypt

An Integrated Solar assisted Heat Pump System for Space Cooling, Water Heating and Air Drying (*REF092MY*)

Sany Izan Ihsan
International Islamic University Malaysia

Performance Evaluation of KTE-1000BA by Controlling Evaporator Pressure (*REF067KR*)

Wook Jin Kim
KTENG Co, Korea

Study on the Performance Characteristics with Design Parameters of Geothermal Heat Pump System (*REF075KR*)

Myoung-kuk Ji
Solar Energy & System Co. Ltd, Korea

Session 6: Material Engineering (Subang 2, Mezzanine Floor)

Chairman: Dr. Abreeza Manap

Thermal Characteristics Of Non-Edible Oils As Phase Change Materials Candidate To The Application Of Air Conditioning Chilled Water System (*MAT031ID*)

Muhammad Irsyad
Lampung University, Indonesia

Effect of Pervaporation Plate Thickness on the Rate of Methanol Evaporation in a Passive Vapor-Feed Direct Methanol Fuel Cell (*MAT106MY*)

U.A. Hasran
Universiti Kebangsaan Malaysia

Effect of Surface Tension on SiO₂ –Methanol Nanofluids (*MAT107MY*)

M.H.U. Bhuiyan
University of Malaya

Simulation and Experimental Study on Effect of Phase Change Material Thickness to Reduce Temperature of Photovoltaic Panel (*MAT013ID*)

Y.S Indartono
Institut Teknologi Bandung, Indonesia

Wednesday, 5th November 2014

09:00 - 09:30 **Plenary 3**

Chairman: Ir. Dr. Kannan Munisamy, Universiti Tenaga Nasional

Thermodynamic Losses in Multi-effect Process

Prof. Shengqiang Shen

Dalian University of Technology, China

09:30 - 10:00 **Plenary 4**

Chairman: Ir. Dr. Kannan Munisamy, Universiti Tenaga Nasional

Research Trends of Cooling and Heating Technologies

Prof. Hanshik Chung

Gyeongsang National University, Korea

10:00 - 10:30 Coffee Break

10:30 - 13:00 **Parallel Sessions**

**Session 7: Theoretical Analysis, CFD, Modelling
(Subang 1, Mezzanine Floor)**

Chairman:

**Wavelet Transform of Acoustic Signal from a Ranque-Hilsch Vortex Tube
(ANA034MY)**

Yusman bin Istihat

Universiti Teknologi MARA

**New Vehicle Bumper Design for Pedestrian Protection during Impact
(ANA103MY)**

Hatam Samaka

Universiti Tenaga Nasional

A Study on the Air flow Outside Ambient Vaporizer Fin (ANA039KR)

Geum-Seok Oh

Gyeongsang National University, Korea

CFD Analysis of the Anti-Surge Effects by Water Hammering (ANA094KR)

Tae-oh Kim

Gyeongsang University, Korea

Geometric Optimization of Thermo-electric Coolers Using Simulated Annealing (ANA083MY)

Doan V. K. Khanh

Universiti Teknologi PETRONAS

**Indoor Airflow Simulation inside Lecture Room: A CFD Approach
(ANA059MY)**

Tee Boon Tuan

Universiti Teknikal Malaysia Melaka

Study of Heat Transfer due to Turbulent Flow of Nanofluids through Rib-groove Channel (ANA099MY)

Ali Najah Al-Shamani

Universiti Kebangsaan Malaysia

**Theoretical Model of Static Semi-ellipsoidal Droplet on a Horizontal Surface
(ANA101CH)**

Shi Chen

Dalian University of Technology, China

CFD Analysis of LNG Vaporizer with Tube Bundle Distance (*ANA017KR*)

Sin-il Lee

Gyeongsang University, Korea

***Session 8: Energy Efficiency, Efficient Cooling, Efficient Heating
(Subang 2, Mezzanine Floor)***

Chairman: Dr. Chong Perk Lin, INTI International University, Malaysia

A Study of the Heat Transfer Coefficient of as Mini Channel Evaporator with R-134a as Refrigerant (*EEN047PH*)

Elmer B. Dollera

Xavier University, Philippines

Experimental Investigation and Flow Process Computer Simulation of the Single Mini Channel Condenser for Vapor Compression Refrigeration System (*EEN054PH*)

Leonel L. Pabilona

Mindanao University of Science and Technology, Philippines

Experimental Investigation of Shell-side Steam Pressure Drop in Crossflow in a Horizontal Falling-film tube Bundle (*EEN096CH*)

S.Q. Shen

Dalian University of Technology, China

Optimizing the Operational Parameters of a Spherical Sterilizer for the Treatment of Oil Palm Fresh Fruit Bunch (*EEN086MY*)

K H Chuah

INTI International University

Experimental Study on Submerged Steam Jet for Side Hole Nozzle (*EEN056CH*)

D T Chong

Xi'an Jiaotong University, China

Numerical Investigation to Study Effect of Radiation on Thermal Performance of Radiator for Onan Cooling Configuration of Transformer (*EEN088IN*)

Vipul Chandak

Crompton Greaves Ltd., Mumbai, India

Experimental Investigation on Design Enhancement of Axial Fan Using Fixed Guide Vane (*EEN006MY*)

Kannan M. Munisamy

Universiti Tenaga Nasional

Heat Transfer, Erosion and Acid Condensation Characteristics for Novel H-Type Finned Oval Tube (*EEN058CH*)

Guihua Tang

Xi'an Jiaotong University, China

Experimental Investigations on Fixed Guide Vane Application with Varying Rotor Blade Pitch Angles (*EEN110MY*)

Kannan M. Munisamy

Universiti Tenaga Nasional

13:00 - 14:00 Lunch

***Session 9: Renewable Energy, Fuel Cell, Low Carbon Technologies
(Subang 1, Mezzanine Floor)***

Chairman: Prof. Dr. Ir. Aryadi Suwono, Institut Technologi Bandung, Indonesia

A Computation ANN Model for Quantifying the Global Solar Radiation: A Case Study of Al-Aqabah-Jordan (*REN091MY*)

M.A. Alghoul
Universiti Kebangsaan Malaysia

A Study on the Performance of the Split Reaction Water Turbine with Guide Ribs (*REN035PH*)

Deuel H. Allen
MSU-Iligan Institute of Technology Iligan City, Philippines

Characteristics of Electricity Production by Metallic and Non-metallic Anodes Immersed in Mud Sediment using Sediment Microbial Fuel (*REN087KR*)

Niamul Haquea
Gyeongsang National University, Korea

Cooling Channel Designs for Air-cooled PEM Fuel Cell Application using Numerical Approach (*REN002MY*)

Wan Ahmad Najmi bin Wan Mohamed
Universiti Teknologi MARA

Study of Solar Driven Silica gel-Water based Adsorption Chiller (*REN019MY*)

Khairul Habib
Universiti Teknologi PETRONAS

Temperature Dependences on Various Types of Photovoltaic (PV) Panel (*REN004MY*)

Ivan Adidharma Audwinto
Universiti Kebangsaan Malaysia

Session 10: Theoretical Analysis, CFD, Modelling (Subang 2, Mezzanine Floor)

Chairman: Dr. Chan Hoy Yen, UKM, Malaysia

Effect of Attack and Cone Angels on Air Flow Characteristics for Staggered Wing Shaped Tubes Bundle (*ANA102EG*)

Mohamed atia
Zagazig University Egypt

Thermal Comfort Investigation on a Naturally Ventilated Two-storey Residential House in Malaysia (*ANA085MY*)

N A Malek
Universiti Tenaga Nasional

Modeling of the Pores Form Influence on the Hydraulic Resistance of Membranes and their Permeability (*ANA097*)

Zhanat Umarova
South Kazakhstan State University

Effect of Temperature on the Melt Filling during Injection Moulding Process (*ANA033MY*)

M S Rusdi
Universiti Sains Malaysia

Numerical Investigation of Jet Impingement of Water on a Flat Plate Surface (*ANA062MY*)

Husam A. Hasan
Universiti Kebangsaan Malaysia

15:30 - 16:00 Coffee Break

16:00 - 17:00 ***Session 11: Renewable Energy, Fuel Cell, Low Carbon Technologies (Subang 1, Mezzanine Floor)***
Chairman: Dr. Abdulwehab, INTI International University, Malaysia

Viscosity Model for Predicting the Power Output from Ocean Salinity and Temperature Energy Conversion System (OSTEC) Part 2: Computer Simulation (REN015MY)

S.K. Lee
Universiti Malaysia Sabah

Feasibility Study on Pliant Media Drying using Fluidized Bed Dryer (REN057MY)

Jamal Hazri Zakaria
Universiti Tun Hussein Onn Malaysia

Performance Analysis of Solar-Wind-Diesel-Battery Hybrid Energy System for KLIA Sepang Station of Malaysia (REN108MY)

S.K.A. Shezan
University of Malaya

Experimental Study Of Additives On Viscosity Biodiesel At Low Temperature (REN055ID)

Berkah Fajar
Diponegoro University, Indonesia

Session 12: Energy Efficiency, Efficient Cooling, Efficient Heating (Subang 2, Mezzanine Floor)

Chairman: Dr. Chong Perk Lin, INTI International University, Malaysia

A Study of Condensation Heat Transfer Correlation (EEN046KR)

Yun-jae Ju
KTENG Co, Korea

Review of Nanofluids for Improvement the Efficiency for Solar Collectors (EEN070MY)

Husam A. Hasan
Universiti Kebangsaan Malaysia

19:30 - 22:00 Awards Presentation
Closing Ceremony
Banquet

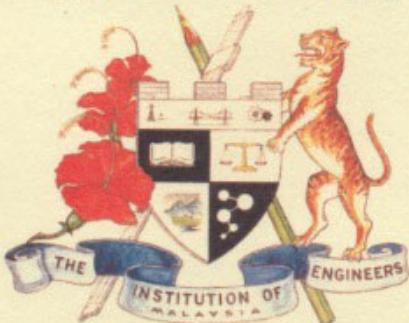
Thursday, 6th November 2014

07:30 - 18:30 Heritage Visit to Malacca

THE INSTITUTION OF ENGINEERS MALAYSIA

Established

May 1959



Certificate of Appreciation

to

Berkah Fajar

for presenting a paper entitled

**Experimental Study Of Additives On Viscosity
Biodiesel At Low Temperature**

at 7th International Conference on Cooling & Heating
Technologies 2014 (ICCHT 2014)

held on 4 – 6 November 2014
at Dorsett Grand Subang
Selangor Darul Ehsan, Malaysia

.....
Ir. Fam Yew Hin
Organising Chairman
ICCHT 2014