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

Judul karya ilmiah (paper) : The influence of behavioural prediction factors and intention in improving 3R (reduce, reuse, recycle) household behavior in Tanjung Mas, Semarang, Indonesia

Jumlah Penulis : 4 orang

Status Pengusul : Penulis utama/ ~~Penulis-Pendamping/~~ ~~Penulis-Korespondensi~~

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b. ISBN/ISSN : 977-0-7354-1850-9

c. Tahun Terbit, Tempat Pelaksanaan : 12-13 Desember 2018, Surakarta, Indonesia oleh Universitas Muhammadiyah Surakarta (UMS)

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Hasil Penilaian Peer Review :

Komponen Yang Dinilai	Nilai Reviewer		Nilai Rata-rata
	Reviewer I	Reviewer II	
Kelengkapan dan Kesesuaian unsur isi prosiding (10%)	3	3	3
Ruang lingkup dan kedalaman pembahasan (30%)	8,5	8	8,25
Kecukupan dan kemutahiran data/informasi dan metodologi (30%)	8,5	8,5	8,5
Kelengkapan unsur dan kualitas penerbit (30%)	8,5	8,5	8,5
Total = (100%)	28,5	28	28,25
Nilai Pengusul: (60% x 28,25) = 16,95			

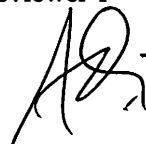
Semarang, 29 November 2019

Reviewer 2



Dr. Ir. Heru Prastawa, DEA
NIP. 196003151987031001
Unit Kerja : Dept T. Industri FT Undip
Bidang Ilmu: Teknik Industri
Jabatan Fungsional: Lektor Kepala

Reviewer 1



Dr. Purnawan Adi Wicaksono, ST, MT
NIP. 19771003 200012 1 001
Unit Kerja : Dept T. Industri FT Undip
Bidang Ilmu: Teknik Industri
Jabatan Fungsional: Lektor Kepala

**LEMBAR
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Komponen Yang Dinilai	Nilai Maksimal Prosiding			Nilai Akhir Yang Diperoleh
	Internasional terindeks Scopus (30)	Internasional (15)	Nasional (10)	
a. Kelengkapan unsur isi prosiding (10%)	3			3
b. Ruang lingkup dan kedalaman pembahasan (30%)	9			8,5
c. Kecukupan dan kemutahiran data/informasi dan metodologi (30%)	9			8,5
d. Kelengkapan unsur dan kualitas terbitan/prosiding(30%)	9			8,5
Total = (100%)	30			28,5
Nilai Pengusul = (60% x 28,5) = 17,1				

Semarang,

Reviewer 1



Dr. Purnawan Adi Wicaksono, ST, MT
 NIP. 19771003 200012 1 001
 Unit Kerja : Dept T. Industri FT Undip
 Bidang Ilmu: Teknik Industri
 Jabatan Fungsional: Lektor Kepala

Catatan Penilaian oleh Reviewer:

- Kelengkapan dan Kesesuaian unsur isi prosiding:** Isi paper sudah lengkap dan sesuai dengan format yang ditentukan meliputi abstract, introduction, literature review, method of research, result and discussion, conclusion, acknowledgement, references.
- Ruang lingkup dan kedalaman pembahasan:** Pembahasan penelitian sudah baik. Terdapat beberapa referensi pembandingan hasil penelitian.
- Kecukupan dan kemutahiran data/informasi dan metodologi:** Jumlah data diambil sudah mencukupi (192 responden) dan metode penelitian sudah tepat.
- Kelengkapan unsur dan kualitas penerbit:** Paper dipublikasikan oleh AIP publisher yang terindeks scopus dengan kualitas penerbit cukup baik.

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 Prosiding Ilmiah Internasional
 Prosiding Ilmiah Nasional
(beri pada kategori yang tepat)

Hasil Penilaian *Peer Review* :

Komponen Yang Dinilai	Nilai Maksimal Prosiding			Nilai Akhir Yang Diperoleh
	Internasional terindeks Scopus (30)	Internasional (15)	Nasional (10)	
a. Kelengkapan unsur isi prosiding (10%)	3			3
b. Ruang lingkup dan kedalaman pembahasan (30%)	9			8
c. Kecukupan dan kemutakhiran data/informasi dan metodologi (30%)	9			8,5
d. Kelengkapan unsur dan kualitas terbitan/prosiding(30%)	9			8,5
Total = (100%)	30			28
Nilai Pengusul = (60% x 28) = 16,8				

Semarang, 29 November 2019

Reviewer 2



Dr. Ir. Heru Prastawa, DEA
NIP. 196003151987031001
Unit Kerja : Dept T. Industri FT Undip
Bidang Ilmu: Teknik Industri
Jabatan Fungsional: Lektor Kepala

Catatan Penilaian oleh Reviewer:

1. **Kelengkapan dan Kesesuaian unsur isi prosiding:** Paper sudah sesuai dengan topik prosiding (Industrial application) dan sesuai dengan bidang riset peneliti (faktor manusia dalam Teknik Industri).
2. **Ruang lingkup dan kedalaman pembahasan:** Pembahasan penelitian cukup baik namun kurang detail.
3. **Kecukupan dan kemutakhiran data/informasi dan metodologi:** Data diambil dengan baik dan cukup jumlah respondennya (192 responden) dengan pendekatan metode Theory of Planned Behavior (TPB) yang tepat.
4. **Kelengkapan unsur dan kualitas penerbit:** Paper dipublikasikan oleh AIP conference proceedings 2114, 030002 (2019) dengan DOI <https://doi.org/10.1063/1.5112406> (terindeks scopus). Kualitas penerbit baik.



Document details



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AIP Conference Proceedings

Volume 2114, 26 June 2019, Article number 030002

5th International Conference on Engineering, Technology, and Industrial Application: Exploring Resources, Process and Design for Sustainable Urban Development, ICETIA 2018; Alila HotelSurakarta, Central Java; Indonesia; 12 December 2018 through 13 December 2018; Code 149010

The influence of behavioral prediction factors and intention in improving 3R (reduce, reuse, recycle) household behavior in Tanjung Mas, Semarang, Indonesia

 (Conference Paper) [\(Open Access\)](#)Susanto, N.^a , Davidesyta, L.^a, Nurkertamanda, D.^a, Putranto, T.T.^b ^aDepartment of Industrial Engineering, Faculty of Engineering, Universitas Diponegoro, Central Java, Semarang, Indonesia^bDepartment of Geotechnical Engineering, Faculty of Engineering, Universitas Diponegoro, Central Java, Semarang, Indonesia

Abstract

[View references \(21\)](#)

The population growth rate of Semarang City has led to an increase of waste volume related to the high volume consumption. Based on data of waste production by the Dinas Lingkungan Hidup (DLH) or Environmental Services of Semarang City (2012 to 2016), households are the largest sector contributed to the volume of waste. In Government Regulation No. 81/2012 on Waste Management of Household, the community must be responsible for the waste. Tambak Lorok in Tanjung Mas area is classified as the area with the worst waste management in Semarang City. Therefore, there is a discourse that the government needs to develop 3R's program to increase community participation. This paper aims at understanding and identifying the determinants that influence the 3R's behavior of the community in Tanjung Mas by using the Theory Planned Behavior (TPB). The results of the present study indicated that attitude has the strongest relationship with the 3R's behavior intention and is the most significant variable. Meanwhile, subjective norm, perception of behavioral control and situational factor are insignificant. The 3R's behavior intention has a strong and significant relationship to 3R's behavior. The government should make a campaign of 3R so that people who have negative attitudes toward 3R can have an awareness and more positive attitude hence the subjective norms for 3R behavior can be established. In addition, the government also needs to provide trainings for waste recycling. © 2019 Author(s).

SciVal Topic Prominence Topic: [Behavior](#) | [Recycling](#) | [Green purchase](#)

Prominence percentile: 99.731



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🔍 Susanto, N.; Department of Industrial Engineering, Faculty of Engineering, Universitas Diponegoro, Central Java, Semarang, Indonesia; email: novie.susanto@ft.undip.ac.id

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Exploring Resources, Process and Design for Sustainable Urban Development

Proceedings of the 5th International
Conference on Engineering, Technology,
and Industrial Application (ICETIA) 2018

Surakarta, Indonesia • 12–13 December 2018

Editors • Anto Budi Listyawan, Nurul Hidayati,
Wisnu Setiawan, Tri Widodo Besar Riyadi,
Hari Prasetyo, Munajat Tri Nugroho and Nur Hidayati



ICETIA

Preface: Exploring Resources, Process and Design for Sustainable Urban Development

International Conference on Engineering, Technology and Industrial Application (ICETIA) has been successfully held annually by the Faculty of Engineering, Universitas Muhammadiyah Surakarta (UMS), Indonesia for 5 years. More than 300 participants attended the 5th ICETIA that conducted on 12-13 December 2018 at Alila Hotel, Surakarta, Central Java, Indonesia.

The annual event was addressed jointly to academics and practitioners and provided a forum for a number of perspectives, based on either theoretical analyses or empirical case studies that foster the dialogue and the exchange of ideas. The theme of the 5th ICETIA 2018 is all about Exploring Resources, Process and Design for Sustainable Urban Development with a focus on the latest research and trends, as well as the future outlook of the field of green process, material, and energy to gear up a global sustainable solution for global warming and climate change. This International Conference provided an excellent international forum for knowledge sharing and research outcomes in theoretical and practical aspects of the green process, material, and energy as well as their industrial applications.

More than 240 papers submitted to this recent conference and finally 126 papers were selected and hosted in parallel session presentation, after a double blinded peer review process. The papers were selected based on five sub-themes that have been organized into the proceedings namely: (i) Sustainable Industrial Process and System Optimization, (ii) Product Design, Material and Building Engineering, (iii) Sustainable Infrastructure and Built Environment, (iv) Preservation, Conservation and Water Management, (v) Green Energy and Computing. It is expected that materials presented in these proceedings contribute constructively to create sustainable product and process beneficial to humans.

Surakarta, Indonesia

22 March 2019

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TIMETABLE OF PROGRAM

Surakarta, 12-13 December 2018

Wednesday, 12th December 2018

Plenary Session (ICETIA and RAPI) AT BALLROOM 2			
08:00 – 08:30: Registration			
08:30 – 08:45: Performed by Al Kindi - the choir group (International Song)			
08:45 – 09:30: Opening Ceremony			
<ul style="list-style-type: none">▪ Recitation of the Qur'an▪ Choirs Indonesia Raya and Mars Muhammadiyah by Al Kindi▪ Welcoming address by the 5th ICETIA and RAPI XVII Chairman▪ Welcoming address by the Dean of Engineering Faculty of Universitas Muhammadiyah Surakarta▪ Opening the conference by the Rector of Universitas Muhammadiyah Surakarta			
09:30 – 09:45: Coffee break and performed by Al Kindi (Javanese Song)			
09:45 – 11:15: Plenary talk (Moderator: Mrs. Purwanti Sri Pudyastuti, MSc)			
1. Water Resources for Coastal Areas and Islands – Alternatives in Subsurface			
by Prof Namsik Park, Ph.D., P.E.			
Dept of Civil Engineering, Dong-A University			
Director, Subsurface Reservoir Research Center Busan, Korea			
2. Understanding Citizen Need and Behavior as the Key in Delivering Sustainable Urban and Transport Innovations			
by Prof Yusak O. Susilo, Ph.D			
Royal Institute of Technology, Stockholm, Sweden			
11.15 – 11.30: Announcements for parallel session and performed by Al Kindi			
11.30 – 12.30: Praying and lunch			
ICETIA Parallel Session 12.30 – 15.40 WIB			
12.30 - 12.40	12.40 – 12.50	12.50 -13.00	13.00 – 13.10
Discussion: 13.10 – 13.30			
13.30 -13.40	13.40 – 13.50	13.50 – 14.00	14.00 – 14.10
Discussion: 14.10 – 14.30			
14.30 - 14.40	14.40 – 14.50	14.50 – 15.00	15.00 – 15.10
Discussion: 15.10 – 15.30			
15.30 - 15.40	15.40 – 15.50	15.50 – 16.00	16.00 – 16.10
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Coffee Break, Certificates Distribution and Closing: 16.30 – 16.45			

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Pin-fin shape and orientation effects on wall heat transfer predictions of gas turbine blade

Marwan Effendy, Yufeng Yao, Jun Yao, and Denis R. Marchant

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Elizaveta Gromova

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Pin-fin Shape and Orientation Effects on Wall Heat Transfer Predictions of Gas Turbine Blade

Marwan Effendy^{1, a)}, Yufeng Yao²⁾, Jun Yao³⁾ and Denis R Marchant⁴⁾

¹*Department of Mechanical Engineering, Universitas Muhammadiyah Surakarta, Pabelan, Kartasura, Surakarta, Indonesia.*

²*Department of Engineering Design and Mathematics, University of the West of England, Coldharbour Lane, Bristol BS16 1QY, United Kingdom.*

³*School of Engineering, University of Lincoln, Brayford Pool, Lincoln LN6 7TS, UK*

⁴*Faculty of Science, Engineering and Computing, Kingston University London, Penrhyn Road, Kingston upon Thames KT1 2EE, United Kingdom.*

a) Corresponding author: Marwan.Effendy@ums.ac.id

Abstract. Turbine blades are often exposed to the ‘hot’ gas environment and thus it is essential to apply effective cooling technique to extend the blade lifetime. In the present work, wall heat transfer characteristics inside a blade trailing-edge coolant passage were investigated by analyzing two baseline configurations experimentally studied by previous researchers. In addition, three new configurations were proposed by varying shape and orientation against an incoming airflow. All these five configurations adopted similar layout with five-row elliptic pin-fins in the main coolant region and one-row fillet circular pin-fin in the exit region. Validation study was started by two baseline configurations by comparing CFD predictions with experimental measurements, followed by wall heat transfer predictions of three newly proposed configurations. It was found that pin-fin shape and its orientation have considerable effects on the wall heat transfer characteristics, and that by rotating the pin-fin against incoming flow, some compromises could be achieved, such as higher heat transfer coefficient and lower pressure loss.

INTRODUCTION

The performance of a gas turbine engine, e.g. the power output and thermal efficiency, could be increased significantly with the increase of mixture gases temperature at the inlet. This results in a turbine operating at temperatures in excess of the melting point of the material that made a blade. To avoid blade deformation or damage and to extend its lifetime, blade cooling techniques need to be used, such as internal and film cooling systems via convection, conduction and transpiration among other approaches. A common practice to enhance heat transfer performance of a blade internal coolant passage is to insert small obstacles, i.e., pin-fins, ribs or other objectives in order to increase surface areas as well as to promote the near-wall turbulence intensity level. In the past, blade coolant passage performance has been studied experimentally and numerically for various configurations of staggered and/or in-line arrangements with cylindrical pin-fins [1][3], elliptical pin-fins [4][5], streamwise elliptical pin-fins [6][7], spanwise elliptical pin-fin [8][9], double in-line ribs array [10][11]. Han and Rallabandi [12] reviewed the latest developments on the turbine blade cooling techniques. A patent proposed by Martin *et al.* [13] also demonstrated a turbine blade design with novel multiple trailing-edge cooling holes, aiming for an effective cooling system solution that can keep the blade metal temperature below the critical value during normal and over-loading operation conditions.

There are wide ranges of pin-fin geometries, such as elliptic, circular, square, aerofoil, drop form, and lancet, which can be used for internal coolant passage. Moreover, some have been investigated numerically and experimentally in term of total pressure drop (friction loss) and wall heat transfer coefficient. It was found that to achieve the efficiency and effectiveness of a blade internal cooling system, it is important to improve the coolant

An Example of A Digital Product Design in Russian Industry

Elizaveta Gromova^{1, a)}

¹*Peter the Great St. Petersburg Polytechnic University, Saint-Petersburg, Russia*

^{a)}Corresponding author: lizaveta-90@yandex.ru

Abstract. The Fourth Industrial Revolution is not the near future, but a reality that introduces strong changes, especially evident in the development of the economy. The creation of a digital economy is a preference for the modern level of Russian industrial development. The purpose of the study is to dissect the current state of Russian industry regarding the development of the digital economy. The methodology of "digital twins" as a new product design paradigm for national industry is offered. Theoretical aspects of this methodology are learned and practical sides are analyzed. The pioneer example of using the concept of "digital twins" in product design - the project "Cortege" in automotive industry is described in detail. The implementation of digital product design is one of the most promising optimization directions provided by the Fourth Industrial Revolution for Russian industry. The value of the present study lies in the collaboration of the fundamentals of the digital industry and the diagnosis of the current state of the level of digitalization in Russia.

INTRODUCTION

The Digital Revolution is a definitely new era in the development of mankind, characterized by the blurring of boundaries between digital, physical and biological technologies. The Fourth Industrial Revolution will lead to the global changes. From the opinion of author [1]: "The nature of the changes taking place is so fundamental that world history did not yet know such an epoch - the time of both great opportunities and potential dangers". They will affect all spheres of economy, society, business, and politics, and will require new forms of organizing the work of the government and the private sector, in particular, new forms of production organization. Author [2] believes that the contemporary production model can be viewed as a structure that is supported by three main resources: innovative management structures and organizations, a base of skills of experienced and authorized people, as well as accessible and intelligent technologies. Agile manufacturing [3-9] becomes peculiarly relevant regarding the formation of the Digital Revolution. This model can solve the most urgent contemporary problems, which consist of uncertainty and rapid changes in business environment. Agile manufacturing is a strategy for achieving a sustainable development through adaptation to all challenges of the environment. One of the key enablers of the model is rapid prototyping [10-12] which is comparatively new class of technology used for building physical models and prototype parts from 3D computer aided design data by the concurrent engineering team. Today, in the age of high technology, the emphasis in global industrial competition begins to relate to the design stage.

The theoretical aspects and practical sides of the new product design paradigm in the context of agile manufacturing have been examined by many scientists. The creation of the digital economy requires the use of advanced manufacturing technologies. Based on the studies carried out by these scholars, it can be argued that this concept has been widely used, both at the theoretical and practical levels. In contrast to the developed countries, it

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The influence of behavioral prediction factors and intention in improving 3R (reduce, reuse, recycle) household behavior in Tanjung Mas, Semarang, Indonesia

Novie Susanto, Lyra Davidesyta, Denny Nurkertamanda, and Thomas Triadi Putranto
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The Influence of Behavioral Prediction Factors and Intention in Improving 3R (Reduce, Reuse, Recycle) Household Behavior in Tanjung Mas, Semarang, Indonesia

Novie Susanto^{1, a)}, Lyra Davidesyta¹, Denny Nurkertamanda¹ and Thomas Triadi Putranto²

¹ Department of Industrial Engineering, Faculty of Engineering, Universitas Diponegoro, Semarang, Central Java, Indonesia

² Department of Geotechnical Engineering, Faculty of Engineering, Universitas Diponegoro, Semarang, Central Java, Indonesia

^{a)} Corresponding authors: novie.susanto@ft.undip.ac.id

Abstract. The population growth rate of Semarang City has led to an increase of waste volume related to the high volume consumption. Based on data of waste production by the *Dinas Lingkungan Hidup* (DLH) or Environmental Services of Semarang City (2012 to 2016), households are the largest sector contributed to the volume of waste. In Government Regulation No. 81/2012 on Waste Management of Household, the community must be responsible for the waste. Tambak Lorok in Tanjung Mas area is classified as the area with the worst waste management in Semarang City. Therefore, there is a discourse that the government needs to develop 3R's program to increase community participation. This paper aims at understanding and identifying the determinants that influence the 3R's behavior of the community in Tanjung Mas by using the Theory Planned Behavior (TPB). The results of the present study indicated that *attitude* has the strongest relationship with the 3R's *behavior intention* and is the most significant variable. Meanwhile, *subjective norm*, *perception of behavioral control* and *situational factor* are insignificant. The 3R's *behavior intention* has a strong and significant relationship to 3R's *behavior*. The government should make a campaign of 3R so that people who have negative attitudes toward 3R can have an awareness and more positive attitude hence the subjective norms for 3R behavior can be established. In addition, the government also needs to provide trainings for waste recycling.

INTRODUCTION

The increasing number of people in a particular area inevitably brings implication for various factors. The impact arising from population growth can be both positive and negative. One of the noticeable negative impacts is the declining of the healthy environmental quality. People seem to be reluctant in working together for creating a healthy environment, precisely in our society, which leads to the decline in environmental quality. It is uncommon for households in our society to carry out activities concerning with waste management and reduction.

Semarang City is currently growing rapidly. Data from the Statistics Center Agency of Semarang (2016) shows that the increasing of population in Semarang City reached 0.47%. The population growth rate is triggered by the strategic location of this city. It can be proven in terms of economies and businesses that are increasingly developed. The population growth also causes the increasing population density in Semarang City. Population density increased from 4,269/km² in 2015 to 4,289/km² in 2016. One of the implications of such a growth is the increasing volume of

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Impact of instant-controlled pressure drop treatment on thermal properties and microbial decontamination of banana flour

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Structural Behavior of Precast Concrete Wall Panels Due to Dynamic Load: A Review

Muhammad Ujianto^{1, 2, a)} Ahmad Zurisman Mohd Ali^{1, b)} and Mochamad Solikin^{2, c)}

¹*Faculty of Civil and Environmental Engineering, Universiti Tun Hussein Onn Malaysia, Malaysia.*

²*Department of Civil Engineering, Universitas Muhammadiyah Surakarta, Surakarta, Central Java, Indonesia.*

^{a)}Corresponding author: ujianto@ums.ac.id

^{b)}zurisman@uthm.edu.my

^{c)}msolikin@ums.ac.id

Abstract. The effect of the earthquake resulted in the destruction of infrastructure, especially residential buildings. The construction of decent housing with an adequate level of security is a demand. Generally, the most severe damage when an earthquake occurs is wall collapse of the houses. The precast panel wall is an alternative solution in answering the needs of post-earthquake housing development, because of the fast construction time and high calculation accuracy. The behavior of structural precast concrete wall panels designed improperly instead of following the standard or regulations will likely encounter a poor performance during an earthquake compared to those designed in accordance with the standards. The purpose of the present study is to compile the findings from previous studies of precast concrete panel walls, especially their performances in handling earthquake load. It reveals that the stability, especially in ductility, affects the performance of precast concrete panel walls. In this study, the walls of precast concrete panels are made in half scale and given dynamic loads to simulate earthquake forces. This review is expected to provide guideline of similar subsequent research.

INTRODUCTION

Concrete is a commonly used as a structure material in buildings and constructions. It has been frequently selected due to the materials of concrete, which are easily obtained, processed, cast, effective in terms of cost, as well as it has a high compressive strength. The main composition of concrete consists of cement, sand, coarse, split and water [1]. To obtain high strength concrete fly ash admixture is often used in concrete. Sodium silicate and sodium hydroxide are used as activator for the geopolymer high strength concrete. [2]

Actually, precast concrete has been used in many countries around the world and has been known to have a very significant property in resisting the possible earthquake loads. The main advantages of using precast concrete in construction are the possibility of increasing the speed of completion of construction, high quality, increasing durability, reducing formwork and field work, and more importantly social and environmental benefits. All these advantages are sometimes collided by the fact that in some places, the precast concrete still can be damaged during an earthquake. Due to the lack of basic information about seismic behavior, the precast concrete structure is often underestimated in high seismic zone. Several countries, including Indonesia, are reconsidering the use of precast concrete as an option in earthquake-resistant structures because it does not have sufficient structural performance in resisting larger earthquakes.

CERTIFICATE

This certificate is awarded to

NOVIE SUSANTO

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