



Participation and Presentation Certificate

for

2016 International Conference on Structural and
Civil Engineering (ICSCE 2016)
Hong Kong, September 9-11, 2016

Paper title: A Study on the Properties of Coconut Wood
(*Cocos nucifera* Linn) from South Minahasa
Regency in Indonesia, as Wooden House
Elements

Presenter's name: Rilya Rumbayan (S3004)

Presenter's affiliation: Manado State Polytechnic, Indonesia



Conference Chair

Organization



2016 APCBEES HONG KONG CONFERENCE ABSTRACT



**September 9-11, 2016
The Charterhouse Causeway Bay Hotel, Hong Kong
Hong Kong**

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2016 APCBEES Hong Kong Conference Introductions

Welcome to CBEES 2016 conferences in Hong Kong. The objective of the Hong Kong conference is to provide a platform for researchers, engineers, academicians as well as industrial professionals from all over the world to present their research results and development activities in Structural and Civil Engineering, and Building Materials and Materials Engineering, and Clean Energy Technologies.

2016 International Conference on Structural and Civil Engineering (ICSCE 2016)



* **Paper publishing and index:** **ICSCE 2016** papers will be published in **International Journal of Structural and Civil Engineering Research (IJSCER, ISSN: 2319-6009)**, which will be indexed by: Copernicus, New Jour, Open J-Gate, Research BIB (Japan), Indian Science, Google Scholar.(Quoted from official website)

* **Conference website and email:** <http://www.icsce.org/>; icsce@cbees.net.

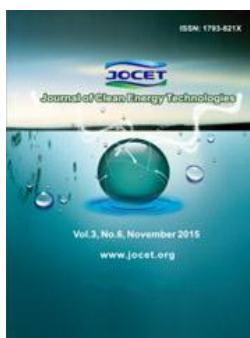
2016 International Conference on Building Materials and Materials Engineering (ICBMM 2016)



* **Paper publishing and index:** **ICBMM 2016** papers will be published in **International Journal of Structural and Civil Engineering Research (IJSCER, ISSN: 2319-6009)**, which will be indexed by: Copernicus, New Jour, Open J-Gate, Research BIB (Japan), Indian Science, Google Scholar.(Quoted from official website)

* **Conference website and email:** <http://www.icbmm.org/>; icbmm@cbees.net.

2016 3rd Journal Conference on Clean Energy Technologies (JCET 2016 3rd)



* **Paper publishing and index:** **JCET 2016** papers will be published in **Journal of Clean Energy Technologies (JOET, ISSN: 1793-821X)**, and distributed at the conference. The journal will be indexed by EI(INSPEC, IET), Engineering & Technology Digital Library, ProQuest, Crossref, Electronic Journals Library, DOAJ, and CAS

* **Conference website and email:** <http://www.jcet.org/3rd/>; jcet03@iacsitp.com

Afternoon, September 10, 2016 (Saturday)

Time: 13:00~18:30

Venue: Unicorn and Phenix, Basement Two

Session Chair: Prof. Barry Jones & Assoc. Prof. Wong Wah Sang

S3004 Presentation 7 (15:00~15:20)

A Study on the Properties of Coconut Wood (*Cocos Nucifera Linn*) from South Minahasa Regency in Indonesia, as Wooden House Elements

Rilya Rumbayan, Donny Taju, Rudolf Mait, and Geertje Kandiyoh

Manado State Polytechnic, Indonesia

Abstract—Coconut wood has been used as an alternative building material for traditional wooden house in North Sulawesi, Indonesia. The performance of coconut wood for building purposes is related to its properties. The objectives of this research are to examine physical and mechanical properties of coconut wood and to identify the strength classes of coconut wood as wooden house elements. This study was conducted with the experimental method by examining its properties including the density, compressive strength parallel to the grain, and bending strength. Based on these properties, the wood strength class was determined by referring to Indonesia National Standard (SNI) 03-3527-1994. The results showed that the density for coconut wood ranged from 0.95 g/cm³ to 1.02 g/cm³. The compression strength ranged from 452.17 kg/cm² to 564.04 kg/cm². The bending strength ranged from 328.22 kg/cm² to 480.13 kg/cm². According to these results, the coconut wood can be classified as I to IV strong classes. The results indicated the possibilities of coconut wood as wooden house elements.

15:20-15:45

Coffee Break

