

**PROCEEDING OF  
OCEAN, MECHANICAL  
AND AEROSPACE  
SCIENCE AND ENGINEERING**

**VOLUME.2**

**OCTOBER 21, 2015**

**ISSN: 2443-1710**

**PUBLISHED BY ISOMAs<sub>e</sub>**



PROCEEDING

---

**The 2<sup>nd</sup> International Conference on Ocean,  
Mechanical & Aerospace -scientists & engineers-**

**OMASE 2015**

**21<sup>th</sup> – 22<sup>nd</sup> October 2015  
Politeknik Negeri Batam,  
Batam, Indonesia**

Organized by:



## **Contents**

### **About OMase**

### **Scope of JOMase**

### **Section III: Marine Engineering**

<b>Title and Authors</b>	<b>Pages</b>
Numerical Analysis of Slamming Intensity of Warship in Territorial Water of Indonesia <i>Teguh Putranto, Aries Sulisetyono</i>	1 - 5
A Corrosivity Study Of Sea Water In Three Locations By The Rust In Impressed Current Cathodic Protection To The Protection Current Of Steel Pipe <i>M. Fitrullah, Fauzie Rachman, P. Tarigan, Wahyudin, Soesaptri O, Suryana, A. Aziza T. Partuti, Yanyan D, Andinnie J, Adhitya Trenggono, Anistasia Milandia</i>	6 - 11
Collision Avoidance Evaluation for Vessels Navigating in the Straits of Malacca <i>M. Rajali Jalali, Adi Maimun, Rahimuddin, Istaz Nusyirwan</i>	12 - 18
Navigational Safety Model In Port Operation <i>Gopal Krishnan, Ab Saman Abd Kader</i>	19 - 22
Design of Lifeboat Releasing System for Ship Board Operation <i>Ab Saman Abd Kader, Gopal Krishnan, Wan Nurulhuda Wan Shamsuri</i>	23 - 28
Construction of Water Treatment Plant (IPA) With a capacity of 50 liters / hour <i>Firda Herlina, Budi Hartadi, Adi Nugroho</i>	29 - 31

### **ISOMase**

---

Qualitative Risk Analysis of Safety and Health in the Construction  
Project of Toll Roads Over The Sea (Nusa Dua-Ngurah Rai-Benoa) 32 - 37

*Wayan Sri Kristinayanti, I Gusti Agung Istri Mas Pertiwi,  
Wayan Dana Ardika*

Ultra Deep Water Subsea Pipeline Design and Assessment

*J.Koto, Abdul Khair.J, Ali Selamat* 38 - 43

---

# **The 2<sup>nd</sup> Conference on Ocean, Mechanical and Aerospace -Science and Engineering-**

**Vol.2: 21 October 2015**

---

## **About OMase**

The Proceeding of Ocean, Mechanical and Aerospace -science and engineering- (POMase) with ISSN: 2443-1710 is an online professional proceeding which is published by the International Society of Ocean, Mechanical and Aerospace -scientists and engineers- (ISOMase), Insha Allah, one volume in a year..

The mission of the POMase is to foster free and extremely rapid scientific communication across the world wide community. The OMase is an original and peer review article that advance the understanding of both science and engineering and its application to the solution of challenges and complex problems in naval architecture, offshore and subsea, machines and control system, aeronautics, satellite and aerospace.

The POMase is particularly concerned with the demonstration of applied science and innovative engineering solutions to solve specific industrial problems. Original contributions providing insight into the use of computational fluid dynamic, heat transfer, thermodynamics, experimental and analytical, application of finite element, structural and impact mechanics, stress and strain localization and globalization, metal forming, behaviour and application of advanced materials in ocean and aerospace engineering, robotics and control, tribology, materials processing and corrosion generally from the core of the journal contents are encouraged.

Articles preferably should focus on the following aspects: new methods or theory or philosophy innovative practices, critical survey or analysis of a subject or topic, new or latest research findings and critical review or evaluation of new discoveries.

The authors are required to confirm that their paper has not been submitted to any other proceeding in English or any other language.

## **ISOMase**

**International Society of Ocean, Mechanical and Aerospace  
-Scientists and Engineers-**

# **The 2<sup>nd</sup> Conference on Ocean, Mechanical and Aerospace -Science and Engineering-**

**Vol.2: 21 October 2015**

---

## **Scope of OMase**

The OMase welcomes participants from academicians, scholars, and practitioners for possible publication from all over the world that meets the general criteria of significance and educational excellence. The scope of the conference is as follows:

- Environment and Safety
- Renewable Energy
- Naval Architecture and Offshore Engineering
- Computational and Experimental Mechanics
- Hydrodynamic and Aerodynamics
- Noise and Vibration
- Aeronautics and Satellite
- Engineering Materials and Corrosion
- Fluids Mechanics Engineering
- Stress and Structural Modeling
- Manufacturing and Industrial Engineering
- Robotics and Control
- Heat Transfer and Thermal
- Power Plant Engineering
- Risk and Reliability
- Case studies and Critical reviews

The International Society of Ocean, Mechanical and Aerospace –science and engineering is inviting you to submit your manuscript(s) to [isomase.org@gmail.com](mailto:isomase.org@gmail.com) for the conference proceeding.

**ISOMase**

**International Society of Ocean, Mechanical and Aerospace  
-Scientists and Engineers-**