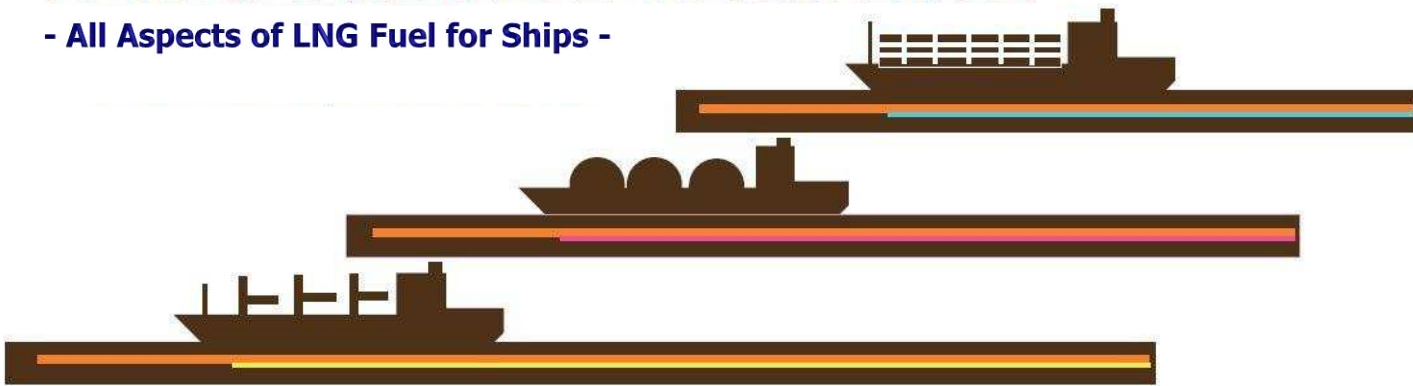


# World NAOE Forum 2012

- All Aspects of LNG Fuel for Ships -



**29 October 2012, 9:00 - 18:00**  
**Hotel Okura Fukuoka, Fukuoka, Japan**

**Organized by**  
**The Japan Society of Naval Architects and Ocean Engineers**

We invite you to attend the World NAOE Forum 2012. The forum aims at to have discussions with global leaders of selected topics. This year we focus on " All Aspects of LNG Fuel for Ships". LNG fuel is the key for emissions reductions from marine transportation and participants will learn the next R&D targets through discussions with world leaders.

## Place

Hotel Okura Fukuoka  
Address: 3-2 Shimokawabata-machi Hakata-ku, Fukuoka 812-0027 Japan  
TEL: 81(92)262-1111 FAX: 81(92)262-7701  
<http://www.okura.com/hotels/fukuoka/index.html>

## Language

The language for the forum is English. No translation services will be available.

## Registration

The registration fees shown below include proceedings, forum banquet and coffee.  
Prior to 15 October: 10,000JPY, Full: 12,000JPY, Student: 3,000JPY  
Please register online on JASNAOE homepage for participation.  
URL: [http://www.jasnaoe.or.jp/en/conference/meetings\\_o.html](http://www.jasnaoe.or.jp/en/conference/meetings_o.html)

## Supporting Organizations (planning)

Ministry of Land, Infrastructure, Transport and Tourism, Japan  
ClassNK, Lloyd's Register, ABS, Bureau Veritas, Det Norske Veritas AS, Germanischer Lloyd

# World NAOE Forum 2012

- All Aspects of LNG Fuel for Ships -

## Program

**9:00 – 9:30** Registration and welcome

**9:30 – 9:35** Opening address

Prof. Takeshi Shinoda, Kyushu University

**9:35 – 9:55** Keynote speech

Mr. Koichi Yoshida, The Ship Equipment Inspection Society of Japan

**9:55 – 11:40** *Gas Fueled Machinery System*

Moderator; Mr. Keijiro Tayama, Japan Internal Combustion Engine Federation

Speaker;

MAN Diesel & Turbo

Mr. Geir Bjorkeli, Rolls Royce Marine

Mr. Masaru Oka, Mitsubishi Heavy Industries, Ltd

**11:40 – 12:10** Poster presentation\*

**12:10 – 13:30** Lunch break

**13:30 – 15:15** *LNG Fueled Ship Design*

Moderator; Mr. Taira Narisawa, ClassNK

Speaker;

Daewoo Shipbuilding & Marine Engineering Co., Ltd

IHI Marine United Inc.

Mr. Toshio Shiji, Kawasaki Heavy Industries, Ltd

**15:15 – 15.45** Coffee break

**15:45 – 17:30** *LNG Fuel Supply*

Moderator; Prof. Koji Takasaki, Kyushu University

Speaker;

Mr. Lars Petter Blikom, Det Norske Veritas AS

Mr. Hajime Mori, Sumitomo Corporation

Mr. Shingo Ikeda, Kawasaki Kisen Kaisha, Ltd. (K-LINE)

**17:30 – 17:35** Closing address

Mr. Yasuo Tanaka, Director, JASNAOE

**18:00 – 20:00** Forum banquet

\*Please refer JASNAOE homepage (<http://www.jasnaoe.or.jp/en/>) for detail information of the poster contest.



## Contact information

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**THE JAPAN SOCIETY OF NAVAL ARCHITECTS  
AND OCEAN ENGINEERS**

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Tel: +81-3-3438-2014,2015 Fax: +81-3-3438-2016

E-mail: office@jasnaoe.or.jp

## **World NAOE Forum 2012**

*All Aspects of LNG Fuel for Ships*

**29 October 2012, 9:00 – 18:00**

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### **Prospectus**

In the marine industry, energy efficiency has continued to improve since the 1970 oil crisis through advancements in shipbuilding and cooperation among the ship-machinery industry, academia, and research institutes. Further technical improvements, however, are necessary to address contemporary global environmental issues and world maritime clusters need to cooperate to achieve emissions reductions from marine transportation.

To address this challenge, the Japan Society of Naval Architects and Ocean Engineers (JASNAOE) organized the first World NAOE Forum last year under the main theme of “Technical Challenges for Ship Energy Efficiency toward 2020.” Many insightful presentations were made and led to lively discussions and significant results. Participants shared with one another and discovered new challenges.

This year, we will focus on LNG fuel and its potential impact. In the theme of “All Aspects of LNG Fuel for Ships,” the below topics will be tabled. For each topic, experts will make presentations, and following each presentation, discussions will be held with the entire audience.

- **Gas Fueled Machinery System**

LNG gas driven machinery and its related machinery

The agenda will include the following:

1. Performance of LNG fuel driven machinery
2. Countermeasures to load fluctuation
3. LNG evaporation method

- **LNG Fueled Ship Design**

LNG Fueled ship concept, LNG tank on board, and related rules and regulations



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(IGF Code)

The agenda will include the following:

1. Plant system selection
2. Structural criteria and arrangement of LNG tank
3. Design for LNG fuel supply line

▪ **LNG Fuel Supply**

LNG fuel supply-chain, LNG fuel price, supply system to vessels, etc.

The agenda will include the following:

1. Criteria for fuel supply system
2. Vessel fleet operation in environmental regulations
3. LNG fuel price variance and price trend
4. Requirement for LNG fuel supply to vessels

Through these topics, we hope to make propositions clear and find a way for practical usage of LNG fuel in the future.

Steering committee chairman

Takeshi Shinoda, Kyushu University

Steering committee vice-chairman

Shigehiro Mori, Oshima Shipbuilding Co. Ltd.

Yasuo Tanaka, NYK Line



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