

 <b>Journal of the Japan Society of Naval Architects and Ocean Engineers</b> <i>The Japan Society of Naval Architects and Ocean Engineers</i>	
<a href="#">Available Volumes</a>   <a href="#">Japanese</a>	<a href="#">&gt;&gt; Publisher Site</a>
Author: <input type="text"/> <a href="#">ADVANCED</a>	Volume <input type="text"/> Page <input type="text"/>
Keyword: <input type="text"/> <input type="button" value="Search"/>	<input type="button" value="Go"/>



[TOP](#) > [Available Volumes](#) > [Table of Contents](#) > Abstract

ONLINE ISSN : 1881-1760

PRINT ISSN : 1880-3717

**Journal of the Japan Society of Naval Architects and Ocean Engineers**

Vol. 3 (2006) pp.167-175

[\[PDF \(910K\)\]](#) [\[References\]](#)

## Study on Coastal Cargo Ship Consisting of Unit Modules -Vertical Motions of Units and Connecting Forces in Oblique Waves-

[Kimio Saito](#), [Prasodjo Bubi S.](#), [Yasushi Higo](#), [Hisashi Nobukawa](#), [Katsuya Maeda](#),  
[Akihiko Matsuda](#) and [Mitsunori Uchida](#)

(Received February 27, 2006)

**Summary:** This paper discusses the elastic responses of a Coastal Cargo Ship (CCS) consisting of unit modules with advance forward speed in oblique waves. We introduce a simple way of connecting the units but with enough capability to link the modular part of ship as a unity. The flexible connection consists of male and female rubber fenders and additional pre-tensioned ropes. This kind of connection system is proposed to be used at inner sea with relatively calm waters wherein the modular ship can move at a moderate speed. The modules are assumed to be rigid compared to the connections. The computations are performed to investigate the vertical elastic responses of four-modules connected end-to-end by assuming that in the simple hinge, flexible rubber connections between adjacent modules, no gaps are found. A simple method is presented to study the hydroelasticity and rope tension forces of the modular ship with forward speed in oblique waves. The experiments for a three-dimensional model at  $F_n=0.16$  in oblique waves have been performed to evaluate the effectiveness of the calculation method. In the experiments, deflections of each part were measured using calibrated potentiometers. Force transducers were used to measure the rope connection force between the modules.

[\[PDF \(910K\)\]](#) [\[References\]](#)

Download Meta of Article [\[Help\]](#)

[RIS](#)

[BibTeX](#)

Kimio Saito, Prasadjo Bubi S., Yasushi Higo, Hisashi Nobukawa, Katsuya Maeda, Akihiko Matsuda and Mitsunori Uchida: Study on Coastal Cargo Ship Consisting of Unit Modules : - Vertical Motions of Units and Connecting Forces in Oblique Waves- , Journal of the Japan Society of Naval Architects and Ocean Engineers, (2006), Vol. 3, pp.167-175 .

Copyright (c) 2006 The Japan Society of Naval Architects and Ocean Engineers

---



---

[Japan Science and Technology Information Aggregator, Electronic](#)

