

		Journal of the Japan Society of Naval Architects and Ocean Engineers			
		<i>The Japan Society of Naval Architects and Ocean Engineers</i>			
Available Volumes Japanese				>> Publisher Site	
Author:	<input type="text"/>	ADVANCED	Volume	Page	
Keyword:	<input type="text"/>	<input type="button" value="Search"/>	<input type="text"/>	<input type="text"/>	<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.285-292

[\[PDF \(2856K\)\]](#) [\[References\]](#)

Development of ISUM Element for Rectangular Plate with Cutout

[Kinya Ishibashi](#), [Masahiko Fujikubo](#) and [Tetsuya Yao](#)

(Received February 28, 2006)

Summary: The Idealised Structural Unit Method (ISUM) is known as a simple but efficient method to simulate buckling/plastic collapse behaviour of structural systems. To perform collapse analysis of structures composed of girder webs and plate flanges such as a ship's double bottom structure, it is necessary to develop a new ISUM element which can simulate buckling collapse behaviour of a girder web with a cutout. In the present paper, a series of collapse analyses with conventional FEM is firstly performed changing the size, the shape and the location of a cutout. On the basis of the results of FEM analyses, a new ISUM element which can simulate the buckling collapse behaviours of a rectangular plate with a cutout subjected to thrust in the transverse direction is developed. Through comparison of the calculated results with those by FEM analysis, the applicability and the accuracy of the new ISUM plate element are demonstrated.

[\[PDF \(2856K\)\]](#) [\[References\]](#)

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

[RIS](#)

[BibTeX](#)

To cite this article:

Kinya Ishibashi, Masahiko Fujikubo and Tetsuya Yao: Development of ISUM Element for Rectangular Plate with Cutout, Journal of the Japan Society of Naval Architects and Ocean Engineers, (2006), Vol. 3, pp.285-292.



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

