

Reply to:

July 20, 1995

16

JSC-144

Dear Dr. Saied Shabany (Isfaha Univ of Tech, Iran)

Paper title: Spectral Analysis of Fixed Template Platforms Using Modified ...

Author(s): Saied Shabany

On behalf of the ISOPE-96 Technical Program Committee (TPC), we would like to thank you for your abstract submitted to the *ISOPE-96 Los Angeles Conference*. Upon careful abstract review,

- TPC *did not schedule*, but will reconsider your abstract for presentation, if TPC receives from you:
- Although a TPC member *scheduled* your abstract, it is contingent upon receiving from you:
 - a revised abstract stressing on technical aspects
 - your revised abstract, promising to delete excessive "commercial pitch."
 - an official letter as soon as possible or no later than October 1, 1995 from the president of your organization assuring that your organization guarantees your registration and travel expenses, if accepted after peer review of the manuscript.
 - your advance deposit in the amount of US\$270 as part of your conference registration fee no later than November 1, 1995.

Reason(s) are:

- The abstract content is outside the session scope of ISOPE-96.
- You did not present the previous ISOPE conference papers without proper notice to TPC.
- Your organization did not send authors to our previous conference(s) even after your organization's guarantee of their travel.
- You are an author or co-author to present more than _____ abstract(s). TPC already scheduled your other abstract(s).
- Other reasons _____

You may submit, if you wish, your manuscript directly to the *International Journal of Offshore and Polar Engineering (IJOPE)* for review for possible publication in the Journal without presentation. Journal review is much stricter than that of conference papers. However, good papers always pass the review,

We appreciate your interest in the ISOPE Conference.

Sincerely yours,

Jin S. Chung for
ISOPE-96 LA TPC

IJOPE address:

Prof. Jin S. Chung, Technical Editor
ISOPE, P.O. Box 1107
Golden, Colorado 80402-1107 U.S.A.

NOTSCHED.96

Reply to:

July 20, 1995

Dr. Saied Shabany
Sub-Sea Research & Development Center
Isfahan University of Technology
Isfahan, IRAN

Paper Title: Spectral Analysis of Fixed Template Platforms Using Modified Response Spectra

Paper No. 96- JSC -144

Dear Dr. Shabany,

* See attached letter of condition

On behalf of the ISOPE-96 Technical Program Committee (TPC), I am happy to inform you that your paper is tentatively scheduled on the basis of the abstract review for ISOPE-96, Los Angeles, May 26-31, 1996. The final acceptance for presentation and for inclusion in the Proceedings is contingent upon the favorable review results. *Manuscript preparation must follow the style and format of the enclosed ISOPE Paper Writing/Style Manual.* The manuscript for review should be typed double-spaced within 6,000 words or equivalent in length, including the illustrations and tables.

Mail 3 copies of your manuscript to your session organizer (TPC member) for technical review. Until you receive the reviewer comments and are requested to prepare the final manuscript on the ISOPE conference mat which will be provided later, please keep all the original illustrations, glossy prints and tables in your file. Papers recommended initially by reviewers may be reviewed further for the *International Journal of Offshore and Polar Engineering*.

Send the manuscript for review by:

November 30, 1995 or earlier

Final conference mat deadline for acceptance:

February 28, 1996 or earlier

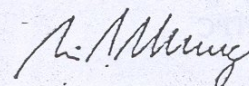
Your session organizer (s.o.) is tentatively myself unless given otherwise below;

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Please include your paper number in every communication, and communicate directly with and submit your manuscript to your s.o. above. If you have any questions, please contact me or TPC.

Sincerely yours,



Dr. Jin S. Chung, Professor
Colorado School of Mines
1500 Illinois Street
Golden, Colorado 80401 USA

Encl. Paper Writing/Style Manual

cc: ISOPE-96 TPC

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Spectral Analysis of Fixed Template Platforms
Using Modified Response Spectra

Saied Shabany
Sub-Sea Research & Development Center
Isfahan University of Technology

Abstract

In recent years, design, fabrication and installation of offshore structures has experienced a remarkable growth in research and development. In Iran, after the imposed war, reconstruction of damaged platforms and construction of new ones has gained great importance.

The design of offshore platforms for deep water application requires an evaluation of their dynamic response to critical environmental and operational loads. In general, the most significant loading arises from hydrodynamic forces induced by sea waves. The wave loads acting on slender structure members due to Water-Structure interaction are usually estimated by well known Morison equation. The non-linear term, related to drag force, in this equation creates problems in solving vibration equations of structure. The objective of this paper is to investigate the validity of a technique to linearize this term and hence developing a modified mode-superposition method to analyse fixed template platforms.

The structure is modelled by a space frame under arbitrary wave with defined time-history. Using an equivalent viscous damping and considering the added-mass concept, the non-linear vibration equations is changed to linear ones. In this approach, indeed, one can remove water around members and instead, define an equivalent damping ratio in each vibration mode of the structure, in consequence of which calculating modal responses and combining them, total response of structure will be determined.

This paper presents first an approval of this method by way of comparing it with accurate numerical solutions for some practical problems, next the proposed algorithm is used to extract some response spectra for modal analysis. It is found that presented method leads to results with adequate precision for engineering purposes.

Address: Subsea R&D Center, Isfahan University of Technology
Isfahan, Iran Tel: (031) -8912516 Fax: (03291)-6334