

## عنوان مقاله:

Evaluation of environmental parameters in Floatover installation in mating stage using Design of Experiment methods

## محل انتشار:

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## خلاصه مقاله:

This paper appraises the environmental parameters affecting the Floatover installation method. While this method demands extensive logistics, hardware, and planning from the first stage till the last, Environmental parameters are the main sources of creating external forces. Comprehension of the environmental features and their influence plays a significant role. In this paper, the application of the Design of experiments (DoE) in the offshore installation is examined. This methodology involves the mathematical procedures of designing experiments that allow a precise and effective evaluation of response features using the least number of analyses. By using response surface methodology and Taguchi design, which are methods of DoE, the significance of each parameter is assessed and a function is developed that holds the response with respect to the input environmental parameters. The magnitude of the impact forces acting on the leg mating unit is chosen as the response. Hydrodynamic time domain analysis based on these methods was done. This study was performed for a semi heavy weight topside and a typical T-shaped barge with six degrees of freedom for the Persian Gulf region.

## کلمات کلیدی:

Floatover, Offshore Installation, Design of Experiments, Response Surface Methodology, Taguchi Method, Leg Mating Unit

## لینک ثابت مقاله در پایگاه سیویلیکا:

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