

عنوان مقاله:

Seismic Rehabilitation of Pile and Deck Quays Using Structural Fuse (Case Study of a South Pars Petrochemical Port Quay)

محل انتشار:

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نویسندگان:

Omid Shabankareh - *M.Sc in Structural Engineering, Islamic Azad University of Qeshm*

Mohammad Javad Ketabdari - *Associate Professor, Faculty of Marine Techology, Amir Kabir University*

Mohammad Ali Shabankareh - *M.Sc in Structural Engineering, Lecturer in Islamic Azad University of Qeshm*

خلاصه مقاله:

Growing developments in huge oil and gas extraction resources form one hand and strategic issues on the other hand leads to higher importance of south coasts of iran in the region, therefore, the necessity of constructing quays and other marine structures in these regions is a brief issue. Quays are specific type of marine structures and several code criteria from reliable codes for marine structures should be regarded in the design of these structures. The most important constraints which always dominant in the design of structures are their strength against input loads and the cost benefits of the design. Advances have been achieved in the science concerned with the construction and the relation of the loads caused by the earthquake in design of structures in seismic areas such as our country. This makes the structures earthquake resistant design regulations to be completed over the time. Updating the seismic design codes could cause a change in dominant attitude in design of structures. In this research effort, two quay structures pile system, which are utilizing in one of the southern coast of Iran (South Pars Petrochemical Port), and had been designed by the regulations of their build time, are investigated. The quays are evaluated using current codes for performace based design and rehabilitation designs through adding a structural system have been presented. For this, numerical simulation of the quays by finite element modelling is performed using SAP2000 software and numerical analysis is completed. Also, a comparison has been made between the structures' behaviour .after the addition of new design and the intact one using the nonlinear analysis results

کلمات کلیدی:

Seismic Rehabilitation, Quay, Pile and Deck, Nonlinear Behavior, Sturcture Fuse

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