

Studying the effect of geometrical parameters on the behavior of offshore piles supporting jacket platforms

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چکیده :

In accordance to the growing demand for energy in the world and by considering Iran rich with hydrocarbon deposits, the researches center of the Iranian Islamic Consultative Assembly has demanded the sanction of maximum utilization of indigenous capabilities law in offshore platform design. From the many methods of oil and gas extraction exploited in offshore conditions, Jacket platforms will be the main emphasis in the presented article. These platforms are constructed by the utilization of elongated piles to attach the deck to the bedrock deep inside the water in order to absorb the stress caused by various loadings. From the many factors affecting the pile's behavior are its geometric properties as in diameter, thickness and its mechanical properties. In addition, the effect of the soil surrounding the pile has to be considered due its nonlinear behavior. A finite elements analysis software (ANSYS) has been utilized to model the given situation

کلید واژه : Pile, Ansys, Soil, offshore, FEM

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