ABSTRACT

Pile foundation has a vital function in the operation of a fixed offshore structure. This is because of pile foundation to sustain the entire burden of keeping the structure stable. If within the period of its operation are given the addition platform structure then it is possible to experience the structure slope. It is therefore necessary precautions to provide buoyancy tank to the structure of the foot platform. It reviewed in this study is the value of unity pile axial load and check the structure. Scripted by an additional structure above the deck so that the load is uneven load distribution on the jacket leg, especially on PL1 (B1) and PL4 (A1). Load the input of 30 tonnes on PL1 and PL4 so that the total load of 60 tons. The structure was then given buoyancy tank to provide upward lift force so as to restore the original value of pile axial load. There are two models of buoyancy tank installation, horizontal and vertical models. From the results obtained, the model horizontally at a depth of 10.9 m is the best for structure because it provides a uniform lift. To pair the buoyancy tank used clamp connection. Local stress that occurs in horizontal mode connection is a minimum of 3.79 x 10^-6 MPa and a maximum of 168 MPa.