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Scale Prototype to Estimate the Resistance to Lateral Displacement Buried Pipes and submerged in non-Cohesive Soils

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Abstract : Recent studies related to submarine pipelines under high pressure, temperature and buried, forces us to make bibliographical and documentary research to make us of references applicable to our problem. This paper presents an experimental methodology to the implementation of results obtained in a scale model, bibliography soil mechanics and finite element simulation. The model consists of a tank of 0.60 x 0.90 x 0.60 basis equipped high side windows, tires and digital hardware devices for measuring different variables to be applied to the model, where the mechanical properties of the soil are determined, simulation of drag a pipeline buried in a non-cohesive seafloor of the Gulf of Mexico, estimate the failure surface and application of each of the variables for the determination of mechanical elements.

Keywords : static friction coefficient, maximum passive force resistant soil, normal, tangential stress
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