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Design and Fabrication of Bascule Bridge Case Study on Vashi Bridge

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Abstract: *During the fast paced civilization and development throughout the world and an increased rate of trade shares among states and countries, various air and sea routes are being discovered quite frequently. In order to optimize the transportation process intricate routes are being used which at time require a ship or boat to cross a special movable bridge connecting two land masses. In time such as these, there comes a need for special movable bridges, for example bascule bridge; A bascule bridge (sometimes referred to as a drawbridge)is a movable bridge with a counterweight that continuously balances a span, or leaf, throughout its upward swings to provide clearance for boat or ship traffic. It may be single or double leafed. This research is focused on designing a bascule bridge by taking the Pamban Bridge, the bridge that connects the town of Rameshwaram on Pamban Island to mainland India, as reference and conducting a study on the stress and strain acting on the bridge along with the total deformation analysis. A comparative study is also conducted between stainless steel and structural steel used for it's construction and the various parameters found for both the materials to decide which material is safe for the construction..*

Keywords: Bascule Bridge, Clearance, Stress, Strain

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