

DESIGN OF A MOBILE BRIDGE

by

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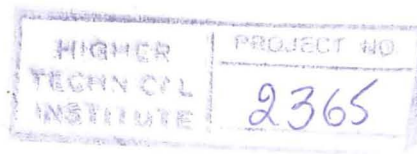
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HTI

ABSTRACT

This project deals with the design of a mobile bridge. It is arranged in the following eighteen chapters.

Chapter 1: Introduction to the problem, terms, conditions and decisions.

Chapter 2: Investigation into mobile bridges.

Chapter 3: Introduction to military bridges.

Chapter 4: Introduction to bridge foundations, reference only to the one kind. Also reference to the factors that influence bridge instability.

Chapter 5: Summary for the construction of S.F.D and B.M.D.

Chapter 6-7: Design of the structure (strength design), calculations for the construction of S.F.D. and B.M.D. of the main members, design of the main members. Calculations for the construction of S.F.D and B.M.D and selection of the small channels.

Chapter 8: Estimation of the maximum deflection of the bridge members using Macalay's method, estimation of the required bridge angle, calculation of the force which is exerted along its length and design of the railings.

Chapter 9: Design of the junctions that will span the two moving parts of the bridge.

Chapter 10: Design and configuration of the 3 layers that will form the continuous deck of the bridge.

Chapter 11: Design of the junctions that will span the bridge on the bridgelayer.

Chapter 12: Estimation of the total bridge weight.

Chapter13-14-15:

Hydraulics - Reference in general to the parts of a hydraulic system, some important information for the hydraulic oil and estimation of the hydraulic pressure required to extend the mobile bridge from it's original position.

Chapter 16: Maintenance and service instructions, instructions to the user.

Chapter 17: Cost analysis of the system.

Chapter 18: Bridge building terminology.

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