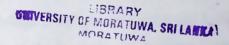


DEVELOPMENT OF CABLE STAYED BRIDGES IN SRI LANKA

A thesis submitted for the partial fulfillment of the Degree of Master of Engineering in Structural Engineering Design





Submitted by T.T.Vasanthakumar September 2009



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Abstract

The up gradation of infrastructure facility is very important for the economic advancement of a country. The transportation sector plays an important role in rapid development of rural economy which contributes a lot to the country. The rural roads and bridges are to be upgraded to achieve this target. A large number of bridges which are the costly items are required at least for light traffic to improve the rural road network and link roads. So, it is useful to introduce some cable stayed bridges for vehicular traffic that could be designed and constructed with the available local experts.

It is necessary to make sure that an accurate analysis and design techniques are applied when a cable stayed bridge is designed for vehicular traffic. Three dimensional computer model is used in this study to apply the relevant loadings and load combinations to structurally and dynamically analyse the structure. The output of this analysis gives the necessary information for the structural design. The final structure could be designed with some reasonable engineering judgement without any approximate analysis.

The bailey bridge components such as deck plates, transoms, panels, bracings and other accessories are used in this modeling. The assembling detail of deck is available in the bailey manual. The technique for constructing the bridge with local expertise is also considered.

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Road Development Authority

74

ii

DECLARATION

I, T.T. Vasanthakumar, hereby declare that the content of this thesis is the original work carried out by me. Whenever others' work is included in this thesis, it is appropriately acknowledged as a reference.

Signature

Masorothe

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09.10.2009

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Date

Contents

Abstract			i
Acknowl	edgem	ents	ii
Declaration			iii
Contents			V
List of Fi	gures		vi
List of Ta	ables		vii
Chapter	1.0	Introduction	1
	1.1	General	1
	1.2	Objectives	1
	1.3	Methodology	2
	1.4	The main findings of the project	2
	1.5	The main findings of the project	2
Chapter	2.0	Literature Review	5
	2.1	Historical Development	5
	2.2	Stay Cable Arrangement	6
	2.3	Multiple span bridges	8
	2.4	Number of cable planes	8
	2.5	Stay design	9
	2.6	Stay Types	9
	2.7	Pylon	11
	2.8	Pylon Geometry	12
	2.9	Deck Section	12
	2.10	Wind Induced Behaviour	13
?	2.11	Summary	15

Chapter	3.0	Development of a Cable Stayed Bridge for Vehicular Traffic	17
	3.1	General	17
	3.2	Suitable Locations	19
Chapter	4.0	Computer Modeling of Cable Stayed Bridges	29
	4.1	The Modeling techniques	29
	4.2	Three Dimensional Modelling	29
	4.3	The specified loads on the bridge	30
	4.4	The method of analysis	30
	4.5	Summary	30
Chapter	5.0	Results and Analysis of the Study	33
	5.1	Analysis of Structure only for self weight without stay cables	33
	5.2	Analysis of the structure for different loadings with stay cables	33
Chapter	6.0	Conclusions and Future Work	34
	6.1	Conclusions	34
	6.2	Future Work	34
Reference	es		35
Appendix A Input & Output of computer analysis			36

P. Calle



List of Figures

Figure 1.1	Cable Stayed Foot Bridge across Beira Lake	4
Figure 2.1	Alternative stay cable arrangements	16
Figure 3.1	Single panel with section properties	20
Figure 3.2	Single panel with node & member number	21
Figure 3.3	The isometric view of panel	22
Figure 3.4	The bridge girder assembly / construction	23
Figure 3.5	Strength of standard panel	24
Figure 3.6	Strength of super panel	25
Figure 3.7	Front and End Elevation of Pylon	26
Figure 3.8	Bed Profile of Mahawali Ganga close to Peradeniya	27
Figure 3.9	Bed Profile at Molkawa, Kalutara	28
Figure 4.1	3D view of the structure	29
Figure 4.2	2D view of the structure	30

List of Tables

Table 3.1	Compact 200 bridges utilizing standard panel trusses with 1050 system steel decked roadways span construction for British loadings	18
Table 3.2	The weight of the major components of a Bailey Bridge	19
Table 41	The detail of the load cases	28
Table 4.1	The summary of results for the optimum configuration	31