

FEW OBSERVATIONS ON THE OPTIMAL CONFIGURATION OF SOME COMMON TYPES OF BRIDGES

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1. General

In this paper we will collect together and, where necessary, re-derive some basic leading order estimates of the volumes of the material needed to construct a span of the suspension bridge or a span of a cable stayed bridge (several types of those will be discussed). The parameter analysis of these expressions will be used to make several observations regarding the structural efficiency of these structures in various situations. We will also discuss several ways in which the structural efficiency of cable stayed bridges can be improved.