ABSTRACT

Title: I study practical of costs of prevention of labor risks in construction of bridges.

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One of the most important aspects when executing a work is the security and the prevention of the labor risks. The accidents in the sector of the construction occupy the first positions in any statistic of labor sinister in Spain. You have an accident them, you lower labor and unfortunately, deaths are too high in our country. For it, it is necessary a combined effort on the part of all the establishments of this sector to reduce labor risks and in consequence, to reduce the labor sinister.

In this thesis it is sought to approach this aspect, but referred to a concrete topic, like it is the execution of bridges through different construction procedures. The development and the evolution of these procedures has been very remarkable in the last decades, but not so much as regards security and prevention of labor risks. For it, it is sought to make a study of labor risks, measures to adopt to mitigate or to eliminate these risks and an economic valuation of these collective protection measures.

In the first place and by way of introduction a description of the different types of bridges has been made, together with its more habitual constructive procedures and a brief historical evolution. With it is sought to have it a first introductory idea to the topic of bridges. Later on and in a series of chapters the different phases of construction of bridges are detailed, as well as the most important elements, like they are foundations, piles and equipment.

In the following chapter one of the most important tasks is approached that is the study in detail of different procedures of construction of bridges, with it one will have a detailed knowledge of the different activities of each process of construction of bridges and it will be of great help to evaluate labor risks, as well as to be able to establish the appropriate collective protection measures.

A tool is developed that makes an approximate calculation of the prevention of the risks in the bridges, considering the different elements that conform them as they are the layings of foundations, batteries, stirrups, board and the individual measures of protection, provisional facilities and accesses and deflections.

The tool in form of Excel leaf is versatile being able to analyze great amount of the cases, most habitual in constructions. This is demonstrated making a series of cases that appear in an appendix to the tesina.

Finally the variation of certain parameters with respect to the variable presents in the spreadsheet is analyzed. As more important conclusions the linear variation of the costs of prevention with respect to variables is extracted approximately such as the length of board, number of workers, etc. and the greater necessity of disposition of collective measures of prevention in boards with smaller automatization or minor development in its constructive method.