ABSTRACT


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One of the most important aspects to consider when a work is performed is the wording risks prevention. Accidents in the construction sector hold high positions in any working death – rate in Spain. Accidents, vacancies and unfortunately deaths, are too high in our country. For this reason, a global effort of all the areas of this sector is necessary to reduce working risks and accordingly working mortality.

This thesis try to begin on this aspect, but refered to a specific theme, which is construction in its own ampleness of morphologies, uses and different construction proceedings. The development and evolution of these proceedings has been remarkable in these last decades, but not enough in safety and working risks prevention. Thus, a study on working risks, mesure to eliminate these risks and an economical cost evaluation model in Safety and Health is tried to develope in this tesis.

First of all, and as an introduction, the problem and the way to solve it is described.

Secondly the activities which conform the performance of a building and the different construction proceedings are described. Consecuently we will have a detailed knowledge of the different activities of each construction proceeding and it will help us to identify the working risks as well as to evaluate them and to establish the suitable safety mesure.

Then the model to solve the problem is detailed, starting with a description of the tool behaviour, mainly based on a sequence of Excel sheets.

In the next chapter the application, which is the thesis objective, is develope by the analysis of a practical case. The project to study is described. This is a case as general as possible: a familiar ground-floor housage with three more floors and garage, lumber-rooms and comercial locals. When the project is defined, the reader is guided through the data introduction and the study of the variables which take part in the calculation process, to finally arrive to the costs evaluation.

In this chapter, different alternatives are studied, and when the economical valuation of each case is found, we will be able to compare between the different construction proceedings and we could analyse the same proceeding but with a different morphology in the elements which constitute the building, to analyse the same element but made of different materials, to study the same element but with different construction proceedings, to look for a relationship between the performance material cost and the cost of the safety mesure, to find another relationship between performance cost and the percentage dedicated to safety mesure...

Consecuently, is in this chapter of analysis of studied cases and conclusions where the cases are analized and compared, extracting, in graphics too, relationships between the different studied variables and synthesizing, very shortly, the most important conclusions.

At last but not least, the conclusions chapter propose the work plan and establish a hand-out to continue in the future with this thesis. Some helpful ideas are unfold and it point out, according to the author, the work way to follow in a future.