

Abstract

The aim of this work is to study the phenomenon of casual fatigue by analyzing the phenomenon from both a theoretical and an experimental point of view.

Important in this topic is time for the study of the bibliography and in the analysis of the same. The topic of randomness is in fact still subject to study and very dynamic.

In this first phase of the work the effectiveness of the main damage methods was evaluated by comparing the theories that concern in the frequency field with the reference of the methods in the time field.

In a first measure, therefore, a case study was chosen in the field of frequencies, and applied on a real case study, evaluating the estimate obtained. To do this it is necessary to define an operative methodology using a calculation tool made ad hoc based on the algorithm of the method.

Obtained at the exit, it has happened to perform a critical analysis of the errors on the evaluation of the variables involved, such as the load history, which greatly affects the variability and convergence of the methods.

Being the story of a series of data that have been made in order to have a critical analysis of the data that could be processed.

A valley of this is the way to define the problem is more suitable for loading history or for the specific case study.

To do this we will have to try to evaluate the considerations with experimental tests