

STRUCTURAL DESIGN; TECHNOLOGY AND COMPUTERIZATION NOT THE PROBLEM

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ABSTRACT

The building industry remains the biggest consumer of extracted materials such as steel, bauxite, and sand mined from the environment and a source of pollution. The advent of computers has further exposed the industry to many complexities. Engineers have adapted to the use of computer-based software to perform designs, analysis and specifications for buildings and structures. The advantages being the improvement in the accuracy of results, efficiency, and reduction in time. However, this software's can also impact negatively on the designs and sustainable construction. It is in this regard that this paper presents the results of an analysis and design of a G+5 building from STAAD Pro and ETABS respectively.

The methodology employed involved the calculation of loads using manual methods and software and the following factors such as resource conservation, cost efficiency and design for human adaptation were targeted for satisfaction.

It was observed that the user must possess enough experience, knowledge in structural behavior, have a strong grasp of structural analysis to be able to manually check reports from the computer as well as have the ability to creatively think about the problems that are to be analyzed in order to improve the accuracy and efficiency of the design. It has also been observed from the percentage of steel data from ETABS, that, the cost of the project can be greatly influenced.

KEYWORDS: *Computers, Analysis, Cost, Efficient Design, ETABS, STAAD Pro*