

A COMPUTER AIDED ANALYSIS AND DESIGN OF PORTAL FRAME

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ABSTRACT

In Malaysia, portal frame construction is found in most of the industrial buildings as it is an alternative and economic solution to the design of such single storey building. A FORTAN computer program was developed in order to help designer to analyze and design a typical portal frame structure. It was designed to include uniformly distributed load acting on the frame, and the element designs of the stanchion and rafter to BS5950.

This program would help the designer to go through all complex calculations in the analysis and design of the portal frame structure with effective time saving produce and accurate output. A sample run of the program and flow diagrams are included to illustrate functions of the program, the procedures of data entering, and the expected output.