COMPARISON OF PORTAL FRAME AND TRUSS CONSTRUCTION

Project Report submitted by CHARICLIA LARCOU in part
satisfaction of the award of Diploma of Technician
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SUMMARY

The puspose of this project was to design and detail a
given warehouse in two ways, i.e. by using portal frame
construction and truss construction and to compare the
cost and benefits of the two designs.

In the case of portal frame construction, the moment
distribution method for analysis was not used, since it
is quite laborious. A simplified method was followed,
by making use of formulae, which are provided through
STEEL DESIGNERS MANUAL.

In the case of the roof truss construction, analusis
was carried out by using the analytical joint resolution
method, combined with the method of sections, for the
analysis.

Design was carried out in accordance to BS 449 re-
quirements.

Since the design of the foundations is not steel
design but concrete design, it was considered as beyond
the purpose of this project to show these calculations.

Also, only typical details were shown, because the
complete detail calculations is detailer's job, which
is done for pure constructional purposes.

Finally a comparison of the costs and benefits of the
two methods was done.

The attatched drawings show the partition walls,
since the workshop is for the purpose of furniture
making.

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