

2.10 Summary

In this chapter, initially the structural and functional requirements of industrial buildings were described. The loads to be considered were mentioned and then the floor and roof systems were explained. In particular, the steel-concrete composite slab using profiled deck sheets was explained along with the design methods. The topic of roof trusses was covered in detail.

The basic concepts of Plastic Analysis were discussed and the methods of computation of ultimate load causing plastic collapse were outlined. Theorems of plastic collapse and alternative patterns of hinge formation triggering plastic collapse have been discussed. The use of plastic analysis and design of steel portal frames for single storey industrial buildings was discussed.

The calculation of wind and earthquake loads was also described.

