

DESIGN OF A WATER TOWER
IN STEEL

by
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Project Report
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DIPLOMA PROJECT

Title : " Design of a Water Tower in Steel "

Objectives :

- 1) To decide the geometry of the water tower
- 2) To estimate wind loading
- 3) To analyze and design the tower
- 4) To produce construction drawings and connection details

Terms and Conditions :

- 1) Height of Tower 20 M.
- 2) Capacity of Tank to be 100 m³ (20,000 gal.)
- 3) Soil bearing Capacity 200 KN/m².
- 4) Mild Steel throughout.

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Summary

The major objective of this project was to design a Water Tower in Steel for potable water and to produce construction drawings and connection details.

The cost of a water tower depends on its shape and whether it is made of concrete or steel. Although steel costs more than concrete, a steel water tower will cost less to be built because the procedure followed is easier and requires less time.

To present better that the objectives were accomplished the main body is divided into the following sections:

- a) Advantages and disadvantages of steel and concrete as construction materials for water tower.
- b) Design of Braced Tower supporting water tank.
- c) Calculation of wind load.
- d) Design of Tank-supporting Beams.
- e) Design of Tower members.
- f) Design of foundation to resist uplift.
- g) Connections with Bolts.
- h) Drawings.

C O N T E N T S

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Acknowledgements

Summary

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