

**HIGHER TECHNICAL INSTITUTE  
NICOSIA- CYPRUS**

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CIVIL ENGINEERING DEPARTMENT**

**DIPLOMA PROJECT  
No. C/824**

**DESIGN OF A WATER TOWER IN CONCRETE**

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.

TERMS AND CONDITIONS:

1. Height of tower 20m.
2. Capacity of tank be  $100\text{m}^3$
3. Soil bearing capacity  $200\text{KN/m}^2$
4. High yield steel throughout

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| HIGHER<br>TECHNICAL<br>INSTITUTE | PROJECT NO.<br><br>2806 |
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# 1.DESIGN OF A WATER TOWER.

PREPARED BY CHARALAMBOUS IOANNIS

## Summary

The object of this experiment is to design a water tower of height 20m and capacity 20,000 gallons( $100\text{m}^3$ ).

The water tower is supposed to be constructed outside of a city in order to be used as a water supply system. The fundamental requirement of a water tower is that it should be constructed on a given height in order not to use any machinery methods to supply the water to any places we want to.

The tank has to be made of reinforced concrete. In order to provide the necessary pressure heads the total height must be 20m above datum. It is circular in shape and it is supported on four columns, with dimension 400x400 mm.

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