



University Of Technology
Building and Construction Department
Water and Dams Branch



Analysis & Design of A Rectangular Reinforced Concrete Tank Rested On Soil By Staad Pro Program

A project submitted to the building and construction department / university of technology in partial fulfillment of the requirement for the degree of B.CS.



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Abstract

A structure that is designed to retain liquids must fulfill the requirements for normal structures in having adequate strength, durability, and freedom from excessive cracking or deflection. In addition, it must be designed so that the liquid is not allowed to leak or percolate through the concrete structure.

This study about a rectangular tank rested on soil with dimension ($21 \times 5 \times 5$ m) used as pure water storage. Many types of tanks mentioned in chapter 2. This tank represented by Staad Pro Program where the walls was represented by using a plate element (Finite Element Theory).

The weight of the tank was represented by the (self-weight) command and the analysis was conducted by (Perform analysis) command and finally designed by the program.

This study included the crack width calculation and compared with ACI code.