

# THE DESIGN OF A NON-MOBILE TOWER CRANE

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## ABSTRACT

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For my project, the design of “Non-Mobile Tower Crane” is base on steel structure. It is simply because this structure will be the main component of the tower crane.

In this project report, I will discuss about how the structure of the tower crane has been designed. The project I have been done is composed of two parts that are theory part and calculation part.

The theory part is consisting of construction, design, result and analysis. The design of structure for each part of component for the tower crane included working arm, machinery arm, crane mast and crane footing. The various type, size and capacity of the truss have been designed for the structure of tower and also the suitable dimension of crane footing has been designed which can withstand and stable the whole structure of the tower crane.

Then, the calculation part is based on the design part of the tower crane. This part is consisted of determination of the member force for the truss and also the suitable material is designed for member of truss for the tower crane. The design of the material for the structure of the crane is base on the conditions that state in the British standard 5950 code. However, the materials are selected for the design must be satisfy, durability, lightly and economical of the cost.

Finally, I hope that this project will be able to help you to understand more about the tower crane.

Last but not least, design the gravity dam is the most interesting part in my project. In this part I will know the concept of design to figure out the shape of the dam which satisfactory with the entire safety requirement. Reinforcement is needed to reduce thermo and shrinkage of the concrete.