

DESIGN OF PETROL STATION WITH A STATION SHOP

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ABSTRACT

This project is concerned with the detailed of reinforced concrete elements to BS 8110. My project is to design a petrol station with a station shop. There are a lot of steps to follow as well as to design. Firstly, the main source to start off with a project must be prepared the building layout or an architectural drawing. Then, we can analyze and decide on the location of beams and columns. Once the above mention structural elements have being decided, a structural key plan can be prepared. When the structural key plans have being developed, we can start off the design work.

The main designs for the petrol station are the structural members of slabs, beams, columns and foundations. The forces from slabs transmitted to beams, and then to columns, which carry into the foundation and finally spread smoothly into the soil. Therefore, the design work must be start off from the roof instead of from the foundation, whereas the construction work is initialize from the foundation. I have started to design slabs first, followed by beams, columns and finally the foundations.

The materials used in project designing is decided by the designer such as what grade of strength steel to use, what grade of concrete to use and what diameter of reinforcement to use. All these factors can effects the efficiency, effectiveness and economic in design. There are two ways for designing a petrol station, one is using steel work another one is using reinforced concrete. Previously, most of the petrol station was built by using reinforced concrete, but nowadays, steel design is preferable.