



## Industrial Building Design – Control Room, Substations, Warehouse and Offices Training

### Description

#### Course Description

- The industrial building design need more attention to some requirement. The design management procedure for industrial building will be clarify.
- The concrete and steel structure design principal will be illustrated to select the suitable structure system
- In this course the different structure system for concrete and steel structure will be discussed. All the load which effect the industrial building will be discussed.
- The design of the control room, workshop , warehouse and offices will be illustrated.
- The design and construction procedure based on the ACI AISC, and API will be discussed.
- This course is intended for civil engineers who are interested in the area of design , construction for the industrial projects.
- The Structure dynamic analysis will be discussed in case of design foundation under reciprocating machines. This course enables delegates already familiar with what concrete is, to develop skills in effective specification, production and end users of concrete. The course also covers basics as well as advanced concepts up-to-date technology.

#### Course Objective

- The participants will be provided with detailed course material and will be familiarized with suitable way in design and construction the industrial building.
- The engineer will be familiar with any problem and its solution in the concrete structure in the petrochemical industry and its causes of failure.

#### Course Outline

- Design Management process
- Control the design of the industrial building
- Define the load on the buildings
- Ballast load and its design philosophy

- Principal of reinforced concrete and steel design
- Live load in different industrial building
- Wind and earthquake load effect in BS , UBC codes
- Principal of design foundation under machine
- Different types of structural system
- Ways to select the better structure system
- Control room design precaution
- Offices design based on an operation requirement
- Warehouse and workshop design cases
- Design of crane track girder in the workshop
- Reasons of fails and cracks of concrete structure in industrial building.
- Construction precaution to achieve design requirement
- Preparing tender package
- Tender evaluation technique
- The inspection and monitoring procedure to control the construction
- Use of HSC and HPC in the building

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