

Design, Inspection, Repair and Maintenance Concrete Structure In Petrochemical Plants Training

Description

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Course Description

- This course is intended for civil engineers who are interested in the area of inspection, assessment and repair of concrete structures in petrochemical plants. 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.
- The course will illustrate up to date modern technique to repair the reinforced concrete structure without shut down the plant.
- The advanced inspection methods for fresh and hardened concrete will be discussed and how to implement maintenance plan for all the concrete structure.
- The integrity management system procedure will be illustrated taking into consideration the major factors in design, construction and repair to maintain the concrete structure economically in all itslifetime.

Course Objective

- The participants will be provided with detailed course material and will be familiarized with various features on concrete construction in petroleum projects.
- 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

- Principal of design foundation under machine
- Pipleline support s design
- Concrete tanks in Gas processing
- Design of foundation under (separator, KOD, static equipment)
- Corrosion problem onsite
- Reasons of fails and cracks of concrete structure in process plant

- Portland concrete, slag and fly ash properties
- Properties of admixtures and concrete mixes
- Inspection and quality control of concrete
- Sampling and testing concrete on site
- Effective supervision of repairs
- Selection of materials — cements, aggregates, additions and reinforcement
- Concrete mixes and specifications
- Concrete production and quality assurance
- Principles of concrete mix design
- Inspection, sampling and compliance testing
- Measuring the corrosion propagation
- Design the CP system
- Advanced technique to protect the steel bars
- New modern method for repair
- CFRP for repair

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