Advanced Concrete Technology

Training program

Introduction:

There have been rapid advances in concrete technology during the past three decades or so. The improvement in strength and other structural properties achieved earlier through the use of steel reinforcement are now accepted as routine and the reinforced cement concrete and pre–stressed concrete have become conventional materials. Later work led to the development of a variety of concretes in the form of, among others, fibre reinforced concrete, polymer concrete, Ferro cement, sulphur concrete, lightweight aggregate concrete, autoclaved cellular concrete, high-density concrete, ready-mixed concrete, self-compacting concrete, roller compacted concrete, high strength concrete, super high-strength concrete, high performance concrete, high-volume fly ash concrete, self-curing concrete, floating concrete and smart concrete

Who Should Attend?

Engineers, architects, technologists and field inspectors

Course Objectives:

This course will provide engineers, architects, technologists and field inspectors with a comprehensive understanding of modern concrete technology, covering all aspects from mixture design, to transporting, to handling, to curing to field control tests and on-site performance

Course Outline:

- Fundamentals of Concrete
- Portland, blended and other hydraulic cements
- Fly ash, slag, silica fume, and other natural pozzolans
- Mixing water for concrete
- Aggregates for concrete
- Admixtures for concrete
- Fibers and fiber reinforced concrete
- Air-entrained concrete
- Designing and proportioning normal concrete mixtures
- Batching, mixing, transporting and handling concrete mixtures
- Placing and finishing concrete
- Curing concrete
- Hot-weather concreting
- Volume changes of concrete
- Control tests for concrete
- High-performance concrete
- Special types of concrete