

ADVANCEMENTS OF CONCRETES

3-0-0-0-5

Mineral Admixtures: Mineral Admixtures (Fly ash, silica fume and slag) – Production – Physical and chemical properties, Classification, Lab tests, Specifications and Acceptance Criteria. *Additives:* Gypsum, Air-Entrainer, Lime and others.

Performance and prescriptive specifications; Situations demanding special performance; Important features in the Development of Special Concretes.

Special Concretes: Modified Portland and Blended Cement Concretes (Using natural, artificial and/or processed materials as pozzolans), High Strength, Self-Compacting, Fiber Reinforced Concretes, Mass and Roller Compacted Concrete, Ultra-High-Performance Concretes, Geo-Polymer Concretes, etc.

Special Cements: Concrete containing special cements such as Calcium Aluminate Cements, Expansive Cements, Fast-Setting Cements, etc.

Special Concreting Methods: Shotcreting, Underwater concreting, Preplaced Aggregate Concrete, Anti-Wash Out Concretes, Precast Concrete, others.