

CIVIL ENGINEERING MATERIALS

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Properties of material and their evaluation (creep, elastic modulus, fatigue, impact, etc.); test methods and specifications; Cement: Chemical composition, properties – setting, strength, fineness, hydration; Aggregates: Sources, properties, chemical reactivity; Concrete: Constituents, proportioning, properties of fresh and hardened concrete, characteristic strength, quality control (sampling, acceptance, etc.), transportation and placing, testing (including NDT), porosity; Admixtures in concrete: Chemical and mineral; Steel: Properties and types; Bricks: Manufacture, properties and classification; masonry bonds; Bitumen: Source, composition, characterization, various forms, tests on bitumen; Bituminous mix design.