

ignition loss—see loss on ignition (preferred term).

ilmenite—a mineral, iron titanate (FeTiO_3), which in pure or impure form is commonly used as aggregate in high-density concrete.

impact—instantaneous contact of a moving body with another body, either moving or at rest.

impact breakers—see concrete breakers, impact.

impact echo—a nondestructive testing method, based on stress wave propagation, that uses impact to generate a low frequency wave; the presence and position of a reflector, such as a crack, delamination, or void, are indicated by the echo amplitude and time.

impact hammer—see hammer, rebound (preferred term).

impact resistance—resistance to fracture under the sudden application of an external force.

impending slough—a consistency of a shotcrete mixture containing the maximum amount of water such that the product will not flow or sag after placement.

impregnation—a process in which the void structure of a hardened material is filled by saturation with a liquid.

impulse radar—a nondestructive testing procedure that uses low-power impulse radar elements and advanced signal processing techniques to detect and image the internal structure of reinforced concrete.

inclined-axis mixer—see mixer, inclined-axis.

incompatible—a condition in which two or more materials are unable to combine or remain together without undesirable aftereffects. (See also compatibility.)

incrustation—a crust or coating, generally hard, formed on the surface of hardened concrete.

indented strand—see strand, indented.

indented wire—see wire, indented.

index, plasticity—the range in water content through which a soil remains plastic; numerical difference between the liquid limit and the plastic limit. (See also limits, Atterberg.)

index, pozzolanic-activity—an index that measures pozzolanic activity based on the strength of cementitious mixtures containing hydraulic cement with and without the pozzolan; or containing the pozzolan with lime.

induction time—the time between mixing of two-component materials and the time they can be used.

industrialized building—the integration of planning, design, programming, manufacturing, site operations, scheduling, financing, and management into a disciplined method of mechanized production of buildings, sometimes called systems building.

inelastic behavior—see deformation, inelastic (preferred term).

inelastic deformation—see deformation, inelastic.

inert—devoid of active properties; incapable of or resisting combination.

infiltration—the uncontrolled ingress of air or liquid through cracks and pores in concrete.

infrared spectroscopy—see spectroscopy, infrared.

infrared thermography—a nondestructive testing method for locating delaminations in pavements and bridge decks and detecting moist insulation in buildings; the presence of flaws within concrete affects the heat conduction properties of the concrete and the presence of defects is indicated by differences in surface temperatures when the test object is exposed to correct ambient conditions.

inhibitor—a substance that slows chemical reaction.

initial drying shrinkage—see shrinkage, initial drying.

initial prestress—see prestress, initial.

initial set—see set, initial.

initial setting time—see time, initial setting.

initial stresses—see stresses, initial.

initial-tangent modulus—see modulus of elasticity.

initiator—a substance capable of causing a chemical reaction (such as polymerization or curing) to start.

injection grouting—see grouting, injection.

injection port—entry point where grout is introduced into cracks and voids.

insert—anything other than reinforcing steel that is rigidly positioned within a concrete form for permanent embedment in the hardened concrete.

in-situ—situated in the original place or position; undisturbed.

in-situ concrete—see concrete, cast-in-place (preferred term).

in-situ condition--the existing condition of a structure, member, connection, or components including sizes and geometry, material properties, and damage from aging or other events.

insoluble residue—the portion of a cement or aggregate that is not soluble in dilute hydrochloric acid of stated concentration.

insulating concrete—see concrete, insulating.

insulation, form—insulating material applied to the outside of forms between studs and over the top in sufficient thickness and air tightness to conserve heat of hydration to maintain concrete at required temperatures in cold weather.

insulation, roof— low-density concrete used for insulating purposes only and placed over a structural roof system.

interface—the common boundary surface between two materials, e.g., an existing concrete substrate and a bonded repair material.

intermittent sampling—see sampling, intermittent.

internal vibration—see vibration.

intumescent coating—a fire retardant coating which, when heated, produces nonflammable gases that convert the coating to a foam, thereby insulating the substrate.

inverted L-beam—a beam having a cross section in the shape of an inverted L. (See also L-

beam.)

inverted T-beam—a beam having a cross section in the shape of an inverted T. (See also T-beam.)

investigation—collecting and assembling data and detailed information regarding a structure's behavior, condition, and strength, acquired from analyses of documents, surveys, observations and tests, and other means, such as conducting interviews with persons knowledgeable of the structure.

I-section—beam cross section consisting of top and bottom flanges connected by a vertical web.

isolation joint—see joint, isolation.

isotropic material—a material that exhibits the same properties in all directions.