

obsidian—a natural volcanic glass of relatively low water content; usually of rhyolite composition. (See also perlite.)

offset—an abrupt change in alignment or dimension, either horizontally or vertically; a horizontal ledge occurring along a change in wall thickness of the wall above.

offset bend—an intentional distortion from the normal straightness of a steel reinforcing bar to move the center line of a segment of the bar to a position parallel to the original position of the center line; a mechanical operation commonly applied to vertical bars that reinforce concrete columns.

offset yield strength—see strength, offset yield.

oil, form—oil applied to the interior surfaces of forms to promote easy release from the concrete when the forms are removed. (See also agent, release and bond breaker.)

oil, mold—an oil that is applied to the interior surface of a clean mold, before casting concrete or mortar therein, to facilitate removal of the mold after the concrete or mortar has hardened. (See also bond breaker; oil, form; and agent, release.)

oil-well cement—see cement, oil-well.

one-way system—see system, one-way.

opacity—the ability of a surface-applied coating to obliterate or hide the color of the surface to which it is applied.

opal— a mineral composed of amorphous hydrous silica.

opaline chert—chert composed entirely or mainly of opal.

open-circuit crushing—a crushing system in which material passes through the crusher without recycling of oversize particles.

open-circuit grouting—see grouting, open-circuit.

open-graded aggregate—see aggregate, open-graded.

open-top mixer—see mixer, open-top.

orange peel—the dimpled appearance of a dried surface-applied coating that resembles the peel of an orange.

ordinary portland cement—see cement, ordinary portland.

orthotropic—a contraction of the terms “orthogonal anisotropic” as in the phrase “orthogonal anisotropic plate”; a hypothetical plate consisting of beams and a slab acting together with different flexural rigidities in the longitudinal and transverse directions, as in a composite beam bridge.

osmosis—spontaneous flow of water from a less concentrated solution to a more concentrated solution through a semipermeable membrane until chemical potential equilibrium is achieved.; the tendency of fluids to diffuse in such a manner.

osmotic pressure—the pressure required to maintain an equilibrium, with no net movement of fluid through a semipermeable membrane.

outgassing—the upward and outward emission of air or moisture vapor from concrete or mortar.

ovals—marble chips that have been tumbled until a smooth oval shape has resulted.

oven-dry—the condition resulting from having been dried to essentially constant mass, in an oven, at a temperature that has been fixed, usually between 221 and 239 F (105 and 115 C).

oven dry—the process of drying in an oven at a temperature usually between 221 and 239 F (105 and 115 C) until the mass of the test specimen becomes essentially constant.

overbreak—the quantity of material that is excavated or breaks out beyond the perimeter of a specific removal area.

overdesign—to require adherence to structural design requirements higher than service demands, as a means of compensating for statistical variation or for anticipated deficiencies or both.

overlay—a layer of concrete or mortar, seldom thinner than 1 in. (25 mm), placed on and usually bonded onto the worn or cracked surface of a concrete slab to either restore or improve the function of the previous surface; also polymeric concrete usually less than 0.4 in. (10 mm) thick.

overlay, bonded—increase in section of an existing concrete element by addition of a layer of material in direct contact with and adhering to the existing concrete surface.

overlay, unbonded—increase in section of an existing concrete element by addition of a layer of material placed on a separator layer (bond breaker) designed to prevent bonding to the existing concrete.

oversanded—containing more sand than would be necessary to produce adequate workability and a satisfactory condition for finishing.

overspray—(1) in protective coatings, any material not deposited within the surface area specified for coating. (2) in shotcreting, material deposited away from the intended receiving surface.

overstretching—stressing of tendons to a value higher than designed for the initial stress to: (a) overcome frictional losses; (b) temporarily overstress the steel to reduce steel creep that occurs after anchorage, and (c) counteract loss of prestressing force that is caused by subsequent prestressing of other tendons.

overvibration—excessive use of vibrators during placement of freshly mixed concrete, causing segregation, stratification, and excessive bleeding.

owner--the corporation, association, partnerships, individual, or public body or authority with whom the contractor enters into an agreement and for whom the work is provided.

oxide, brown—a brown mineral pigment having an iron oxide content between 28 and 95%. (See also limonite.)

oxidize—to unite with oxygen; cause the oxidation of; rust.