

## CONCRETE PIPE TERMS AND DEFINITIONS

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Every product has certain terms and definitions that are unique to that particular product. Listed below are various terms and definitions that relate to concrete pipe. A good understanding of these definitions is essential to understanding concrete pipe and future Info Series. ASTM C 822 defines additional terms relating to concrete pipe.

**AASHTO** - American Association of State Highway and Transportation Officials

**ABSORPTION** - Amount (%) of water that penetrates into the concrete.

**ACI** - American Concrete Institute

**AGGREGATE** - Granular material of mineral composition such as sand, gravel or crushed stone.

**ANNULAR SPACE** - The space between the inner surface of the spigot and the outer surface of the bell end of an assembled pipe joint.

**ASTM** - ASTM International (formerly American Society for Testing and Materials)

**AWWA** - American Waterworks Association

**BACKFILL** - Material used to refill a trench or excavation above the bedding zone.

**BEDDING** - The soil or other material on which a pipe is supported.

**BEDDING FACTOR** - Ratio between the supporting strength of buried pipe to the strength of the pipe as determined in the three-edge bearing test.

**COMPRESSIVE STRENGTH** - Maximum resistance of a concrete specimen to axial compressive loading.

**CORE** - Cylinder of concrete obtained from the finished pipe by means of a core drill.

**CROWN** - The top or highest point of the internal surface (inside top of the pipe).

**DESIGN STRENGTH** - The minimum acceptable 0.01-in. crack D-Load.

**D-LOAD** - The load applied a pipe under three-edge bearing tests conditions expressed in pounds per linear foot per foot of inside diameter.

**EARTH LOAD** - The weight of the earth to be carried by the pipe.

**ELLIPTICAL REINFORCEMENT** - A line of reinforcement in the approximate shape of an ellipse.

**EXFILTRATION** - The volume of pipeline flow loss through the pipe, joints, connections and appurtenances.

**FLOWLINE** - A line formed by the invert of pipes.

**GRADATION** - The distribution of particle sizes usually expressed in terms of cumulative percentages larger than a series of standard size sieve openings.

**HYDROSTATIC PRESSURE** - The pressure exerted by the water.

**HYDROSTATIC TEST** - A test of the ability of a pipe or its joints to withstand internal hydrostatic pressure. Test may be performed in the plant or field.

**INFILTRATION** - The volume of groundwater entering a line through the pipe, joints, connections or appurtenances.

**INVERT** - The bottom or lowest point of the internal surface.

**LIVE LOAD** - The load to be carried by the pipe that is exerted by trucks, airplanes, trains, etc.

**MOMENT** - The product of (the bending) effects of loads causing a force and the distance to a particular axis or point.

**0.01 in. CRACK** - Any continuous crack having a surface width of 0.01 in. and depth of 1/16" and extending for a continuous length of 12 inches.

**PERMEABILITY** - That property which permits movement of a liquid through the pores and interstices of the concrete.

**QUADRANT MAT** - Additional tension zone circumferential reinforcement secured to a layer of reinforcement in the concrete pipe wall.

**REINFORCEMENT** - Steel embedded in concrete in such a manner that the two materials act together to resist forces.

**RCP** - Reinforced Concrete Pipe.

**SLOPE** - The inclination measured in feet of vertical change over a given distance expressed as horizontal length from the horizontal line.

**SPRINGLINE** - The horizontal centerline of the pipe or in box section, the mid-height of the vertical wall.

**ULTIMATE STRENGTH** - The maximum three-edge bearing test load supported by a pipe.