भारतीय मानक ब्यूरो
BUREAU OF INDIAN STANDARDS

MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG, NEW DELHI 110002

व्यापक परिचालन मसौदा

हमारा संदर्भ : सीईडी 02:2/टी-30 **11 जनवरी 2024**

तकनीकी समिति : सीमेंट और कंक्रीट विषय समिति, सीईडी 02

प्राप्तकर्ता :

1. **सिविल इंजीनियरिंग विभाग परिषद, सीईडीसी के सभी सदस्य**
2. **सीमेंट और कंक्रीट विषय समिति, सीईडी 02 के सभी सदस्य**
3. **सीईडी 02 उपसमिति एंव इसकी पैनल और कार्यदल के सभी सदस्य**
4. **रूचि रखने वाले अन्य निकाय।**

महोदया/महोदय,

निम्नलिखित मसौदा संलग्न है:

प्रलेख संख्या	शीर्षक
सीईडी 02 (24629)WC	**सीमेंट कंक्रीट से संबंधित शब्दों की शब्दावली: भाग 4 कंक्रीट के प्रकार (पहला पुनरीक्षण) का भारतीय मानक मसौदा** (ICS: 01.040.91)

कृपया इस मसौदे का अवलोकन करें और अपनी सम्मतियाँ यह बताते हुए भेजे कि यह मसौदा प्रकाशित हो तो इस पर अमल करने में, आपको व्यवसाय अथवा कारोबार में क्या कठिनाइयाँ आ सकती हैं।

सम्मतियाँ भेजने की अंतिम तिथि: 12 फरवरी 2024

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धन्यवाद।

भवदीय

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सलंग्न: उपरिलिखित

भारतीय मानक ब्यूरो
BUREAU OF INDIAN STANDARDS

MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG, NEW DELHI 110002

DRAFT IN WIDE CIRCULATION

DOCUMENT DESPATCH ADVICE

Reference	Date
CED 02:2/T-30	11 January 2024

TECHNICAL COMMITTEE:

CEMENT AND CONCRETE SECTIONAL COMMITTEE, CED 02

ADDRESSED TO:

1. All Members of Civil Engineering Division Council, CEDC
2. All Members of Cement and Concrete Sectional Committee, CED 02
3. All Members of Subcommittees, Panels and Working Groups under CED 02
4. All other interested

Dear Madam/Sir,

Please find enclosed the following draft:

Doc. No.	Title
CED 02 (24629)WC	**Draft Indian Standard Glossary of terms relating to Cement Concrete : Part 4 Types of Concrete (*First Revision*)** (ICS 01.040.91)

Kindly examine the draft and forward your views stating any difficulties which you are likely to experience in your business or profession, if this is finally adopted as National Standard.

Last Date for comments: 12 February 2024

Comments if any, may please be made in the attached format and mailed to the undersigned at the above address or preferably through e-mail to ced2@bis.gov.in. The comments may preferably be shared in the prescribed template through the Manak Online portal at www.manakonline.in. Alternatively, the comments may be sent through the attached format for consideration by the BIS' Sectional Committee for necessary action.

In case no comments are received or comments received are of editorial nature, you will kindly permit us to presume your approval for the above document as finalized. However, in case comments, technical in nature are received, then it may be finalized either in consultation with the Chairman, Sectional Committee or referred to the Sectional Committee for further necessary action if so desired by the Chairman, Sectional Committee.

The document is also hosted on BIS website **www.bis.gov.in** .

Thanking you,

Yours faithfully,
Sd/-
(Arun Kumar S.)
Sc. 'E'/Director and Head (Civil Engg.)

Encl: As above

FORMAT FOR SENDING COMMENTS ON BIS DOCUMENTS

(Please use A4 size sheet of paper only and type within fields indicated. Comments on each clause/subclause/table/fig etc. be started on a fresh box. Information in column 5 should include reasons for the comments, and those in column 4 should include suggestions for modified wording of the clauses when the existing text is found not acceptable. Adherence to this format facilitates Secretariat's work) {Please e-mail your comments to ced2@bis.gov.in}

DOC. NO.	**Doc: CED 02 (24629)WC**
TITLE	**Draft Indian Standard Glossary of terms relating to Cement Concrete Part 4 Types of Concrete (First Revision)** **(ICS 01.040.91)**
LAST DATE OF COMMENTS	**12 February 2024**
NAME OF THE COMMENTATOR/ ORGANIZATION	

Sl No. (1)	Clause/Sub-clause/Para No. (2)	Comments/Suggestions (3)	Modified Wording of the Clause (4)	Reasons/ Justifications for the Proposed Changes (5)

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Draft Indian Standard

GLOSSARY OF TERMS RELATING TO CEMENT CONCRETE PART 4 TYPES OF CONCRETE

(*First Revision*)

Cement and Concrete	Last date of Comments:
Sectional Committee, CED 02	**12 February 2024**

FOREWORD

(*Formal Clauses to be added later*)

Cement concrete is one of the most versatile and extensively used building materials in all civil engineering constructions. There are a number of technical terms connected with the basic materials for concrete as well as the production and use of concrete which quite often require clarification to give precise meaning to the stipulations in the standard specifications, codes of practices and other technical documents. Based on this necessity and to standardize the various terms and definitions used in cement and concrete technology, this standard was published in 12 parts.

The other parts in the series are:

Part 1	Concrete aggregates
Part 2	Materials (other than cement and aggregate)
Part 3	Concrete reinforcement
Part 5	Formwork for concrete
Part 6	Equipment, tools and plant
Part 7	Mixing, laying, compaction, curing and other construction aspects
Part 8	Properties of concrete
Part 9	Structural aspects
Part 10	Tests and testing apparatus
Part 11	Prestressed concrete
Part 12	Miscellaneous

In addition to the above, two separate standards were brought out concerning terminology relating to hydraulic cement and pozzolanic materials. These standards are IS 4845: 1968 ‘Definitions and terminology relating to hydraulic cement’ and IS 4305: 1967 ‘Glossary of terms relating to pozzolana’.

This standard (Part 4) was first published in 1972. In this revision the necessary changes required have been incorporated in the light of experience gained in its use and also to bring it in line with the latest development on the subject. The significant modifications made in this revision include:

a) Definitions of High Performance concrete and Self Compacting concrete had been added.

In the formulation of this standard due weightage has been given to international co-ordination among the standards and practices prevailing in different countries in addition to relating it to the practices in the field in this country. This has been met by deriving assistance from the following publications:

a) BS 6100-9 (2007) Building and civil engineering – Vocabulary – Part 9 – Work with concrete and plaster, British Standards Institution
b) ASTM C125 (2021) Standard terminology relating to concrete and concrete aggregates, American Society for Testing and Materials (revision 21A)
c) ACI No. SP-19 (1967) Cement and concrete terminology, American Concrete Institute.
d) ACI 617 (1968) Recommended practice for concrete formwork, American Concrete Institute.

For the purpose of deciding whether a particular requirement of this standard is complied with the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2: 2022 ‘Rules for rounding off numerical values (second revision)’. The number of significant places retained in the rounded off value should be periodically removed to create more space for the future falling blocks.

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Draft Indian Standard

GLOSSARY OF TERMS RELATING TO CEMENT CONCRETE PART 4 TYPES OF CONCRETE

(*First Revision*)

Cement and Concrete Sectional Committee, CED 02	Last date of Comments: **12 February 2024**

1 SCOPE

This standard (Part 4) covers definitions of terms relating to different types of cement concrete.

2 REFERENCES

The Indian Standards listed below contain provisions which through reference in this text, constitute provisions of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below.

IS No.	*Title*
SP 7 (Group 2): 2016	National Building Code of India 2016 (Group 2)

3 TERMINOLOGY

For the purpose of this standard, the following definitions shall apply.

3.1 Aerated Concrete – A lightweight product consisting of portland cement, cement-silica, cement-pozzolana, lime-pozzolana, or lime-silica pastes containing blends of these ingredients and having a homogeneous void or cell structure, attained with gas-forming chemicals agents (for cellular concretes containing binder ingredients other than addition to Portland cement, autoclave curing is usually employed.

3.2 Air Blown Mortar – Mortar or concrete conveyed through a host and projected at high velocity on to a surface; also pneumatically applied mortar or concrete, sprayed mortar and gunned concrete (*see* also dry-mix shotcrete; gunite; and wet-mix shotcrete, pneumatically applied mortars).

3.3 Autoclaved – Steam curing of concrete products, sand lime brick, asbestos cement products, hydrous calcium silicate insulation products, or cement in an autoclave at maximum ambient temperatures generally between 170 and 215 °C.

3.4 Boron Loaded Concrete – High-density concrete including a boron-containing admixture or aggregate, such as mineral colemanite, boron frits, or boron metal alloys to act as a neutron attenuator.

3.5 Build-Up – Gunning of shotcrete in successive layers to form a thicker mass.

3.6 Cast-in-Place – Mortar or concrete which is deposited in the place where it is required to harden as part of the structure, as opposed to precast concrete.

3.7 Cast-in-Situ – *See* **3.6**.

3.8 Castable Refractory – A packaged, dry mixture of hydraulic cement, generally calcium-aluminate cement, and specially selected and proportioned refractory aggregates which, when mixed with water, will produce refractory concrete or mortar (*see* also **3.82**).

3.9 Cast Stone – Concrete or mortar cast into blocks or small slabs in special molds so as to resemble natural building stone.

3.10 Cellular Concrete – *See* **3.1**.

3.11 Cellular Construction – *See* **3.33.1**.

3.12 Central-Mixed Concrete – Concrete which is completely mixed in a stationary mixer from which it is transported to the delivery point.

3.13 Closed-Circuit Grouting – Injection of grout into a hole intersecting fissures or voids which are to be filled at such volume and pressure that grout input to the hole is greater than the grout take of the surrounding formation, excess grout being returned to the pumping plant for recirculation.

3.14 Colloidal Concrete – Concrete of which the aggregate is bound by colloidal grout.

3.15 Colloidal Grout – A grout which has artificially induced cohesiveness or ability to retain the dispersed solid particles in suspension.

3.16 Concrete, Aerated – Concrete made very light and cellular by the addition of a prepared foam or by generation of gas within the unhardened mixture.

3.17 Concrete, Dense – Concrete containing a minimum of voids.

3.18 Concrete, Dry-Packed – A concrete mixture sufficiently dry to be consolidated only by heavy ramming.

3.19 Concrete Fat – A concrete containing a large proportion of mortar.

3.20 Concrete Foamed – *See* **3.16**.

3.21 Concrete Granolithic – Concrete suitable for use as a wearing surface finish to floors, made with specially selected aggregate of suitable hardness, surface texture, and particle shape.

3.22 Concrete, Heavy – Concrete of exceptionally high unit weight, usually obtained by use of heavyweight aggregates, used especially for radiation shielding.

3.23 Concrete, High-Density – Concrete of exceptionally high unit weight usually obtained by use of heavyweight aggregates, used especially for radiation shielding (*see* **3.22**).

3.24 Concrete, Lightweight – Concrete of substantially lower unit weight than that made from gravel or crushed stone.

3.25 Concrete, Mass – Any volume of concrete cast-in-place (generally as a monolithic structure usually incorporating a high proportion of large coarse aggregate and low cement content) and intended to resist applied loads by virtue of its mass; it is distinct from other types of concrete because its dimensions are of such magnitude as to require that measures be taken cope with the generation of heat and attendant volume changes.

3.26 Concrete, No-fines – A Concrete mixture containing little or no fine aggregate.

3.27 Concrete, No-Slump – Concrete with a slump of 25 mm or less.

3.28 Concrete, Normal Weight – Concrete having a unit weight of approximately 2 400 kg/m^3 made with aggregates of normal weight.

3.29 Concrete, Precast – Concrete cast elsewhere than its final position in the structure. Also known as grouted concrete (*see* **3.59**).

3.30 Concrete, Prepacked – Concrete produced by placing coarse aggregate in a form and later injecting a Portland cement-sand grout, usually with admixtures, to fill the voids.

3.31 Concrete, Preplaced-Aggregate – *See* **3.30**.

3.32 Concrete, Ready-Mixed – Concrete delivered at site or into the purchaser's vehicle in a plastic condition and requiring no further treatment before being placed in the position in which it is to set and harden.

3.33 Concrete, Refractory – Concrete having refractory properties, usually made with calcium-aluminate cement and refractory aggregate and suitable for use even at temperature above 1 000 °C.

3.34 Concrete, Reinforced – Concrete containing reinforcement and designed on the assumption that the two materials act together in resisting forces.

3.35 Concrete, Spun – Concrete compacted by centrifugal action, for example, in the manufacture of pipes.

3.36 Concrete, Structural – Concrete used to carry structural load or to form an integral part of a structure; concrete of a quality specified for structural use; concrete used solely for protective cover, fill, or insulation is not considered structural concrete.

3.37 Concrete, Structural Lightweight – Structural concrete made with lightweight aggregate; the unit weight usually is in the range of 1 440 to 1 850 kg/m^3.

3.38 Concrete, Terrazzo – Marble-aggregate concrete that is cast-in-place or precast and ground smooth for decorative surfacing purposes on floors and walls.

3.39 Concrete, Transit-Mixed – Concrete, the mixing of which is wholly or principally accomplished in a truck mixer.

3.40 Concrete, Translucent — A combination of glass and concrete used together in precast or prestressed panels.

3.41 Concrete, Vacuum — Concrete from which water is extracted by a vacuum process before hardening occurs.

3.42 Concrete, Vibrated - Concrete compacted by vibration during and after placing.

3.43 Containment Grouting — Injection of grout, usually at relatively low pressure, around the periphery of an area which is subsequently to be grouted at greater pressure; intended to confine subsequent grout injection within the perimeter.

3.44 Contraction-joint Grouting — Injection of grout into contraction joints.

3.45 Control-joint Grouting - *See* **3.44**.

3.46 Cyclopean Concrete — Mass concrete in which large stones, each of 50 kg or more, are placed and embedded in the concrete as it is deposited; the stones are called ‘pudding stones ’ or ‘plums', preferably not less than 15 cm apart and not closer than 20 cm to any exposed surface (*see* also **3.101**).

3.47 Dense Concrete — *See* **3.17**.

3.48 Dry-Mix Shotcrete — Pneumatically conveyed shotcrete in which most of the mixing water is added at the nozzle (*see* also **3.88**).

3.49 Dry Pack — To forcibly ram a moist Portland-cement-aggregate mixture into a confined area; also the mixture so placed.

3.50 Dry-Packed Concrete — *See* **3.18**.

3.51 Dry-Tamp Process — The placing of concrete or mortar by hammering or ramming a relatively dry mix into place.

3.52 Expansive-Cement Concrete (Mortar or Grout) - A concrete (mortar or grout) made with expansive cement.

3.53 Fat Concrete - *See* **3.19**.

3.54 Flash Coat — A light coat of shotcrete used to cover minor blemished on a concrete surface.

3.55 Gas Concrete — Lightweight concrete produced by developing voids with gas generated within the unhardened mix (usually from the action of cement alkalies on aluminium powder used as an admixture).

3.56 Granolithic Concrete - *See* 3.21.

3.57 Ground Wire - Small-gauge high-strength steel wire used to establish line and grade as in shotcrete work; also called alignment wire or screed wire.

3.58 Grout — Mixture of cementitious material and aggregate to which sufficient water is added to produce pouring consistency without segregation of the constituents, or mixtures of other compositions, such as containing PVC or epoxy resin or sodium silicate, but of similar consistency.

A cementitious mixture with or without aggregate or admixtures that is used primarily to fill voids.

3.59 Grouted — Aggregate Concrete **—** Concrete which is formed by injecting grout into previously placed coarse aggregate (*see* **3.30**).

3.60 Gun Finish — Undisturbed final layer of shotcrete as applied from nozzle, without hand finishing.

3.61 Gunite (Trade Name) — Method of applying dry-mix shotcrete.

3.62 Gunning Pattern — Conical outline of material discharge steam in shotcrete operation.

3.63 Heat-Resistant Concrete — Any concrete which will not disintegrate when exposed to constant or cyclic heating at any temperature below which a ceramic bond is formed, that is, below about 1 000 °C.

3.64 Heavy Concrete — *See* **3.23.**

3.65 Heavyweight Concrete — *See* **3.23**.

3.66 High-Density Concrete — *See* **3.23**.

3.67 High-Early-Strength Concrete — Concrete which, through the use of high-early-strength cement or admixtures, is capable of attaining specified strength at an earlier age than normal concrete.

3.68 Ilmenite — A mineral, iron titanate ($FeTiO_3$) which in pure or impure form is commonly used as aggregate in high density concrete.

3.69 Impending Slough — The consistency obtained with shotcrete containing the maximum amount of water that can be used without flow or sag after placement.

3.70 Insulating Concrete — Concrete having low thermal conductivity; used as thermal insulation.

3.71 Lean Concrete — Concrete of low cement content.

3.72 Lightweight Concrete — *See* **3.24**.

3.73 Liquid-Volume Measurement — Measurement of grout on the basis of the total volume of solid and liquid constituents.

3.74 Mass Concrete — *See* **3.25**.

3.75 Monolithic Concrete — Concrete cast with no joints other than construction joints.

3.76 Nailable Concrete — Concrete, usually made with a suitable lightweight aggregate, with or without the addition of sawdust, into which nails can be driven.

3.77 Non-Air-Entrained Concrete — Concrete in which neither an air-entraining admixture nor air-entraining cement has been used.

3.78 Normal-Weight Concrete — *See* **3.28**.

3.79 No-Slump Concrete — *See* **3.27**.

3.80 Open-Circuit Grouting — A grouting system with no provision for recirculation of grout to the pump.

3.81 Oversanded — Containing more sand that would be necessary to produce adequate workability and a satisfactory condition for finishing.

3.82 Packaged Concrete, Mortar, Grout — Mixtures of dry ingredient in packages, requiring only the addition of water to produce concrete, mortar, or grout.

3.83 Packer — A device inserted into a hole in which grout is to be injected which acts to prevent return of the grout around the injection pipe; usually an expandable device actuated mechanically, hydraulically, or pneumatically.

3.84 Pass — Layer of shotcrete placed in one movement over the field of operation.

3.85 Pavement, Concrete — A layer of concrete over such areas as roads, sidewalks, airfields, canals, playgrounds, and those used for storage or parking.

3.86 Perimeter Grouting — Injection of grout, usually at relatively low pressure, around the periphery of an area which is subsequently to be grouted at greater pressure; intended to confine subsequent grout injection within the perimeter (*see* **3.43**).

3.87 Plain Concrete — Concrete with reinforcement; or concrete that does not conform to the definition of reinforced concrete.

3.88 Pneumatically Applied Mortar — Mortar or concrete conveyed through a hose and projected at high velocity on to a surface; also known as air-blown mortar; also pneumatically applied mortar or concrete, sprayed mortar and gunned concrete (*see also* **3.48, 3.61, 3.166** and **3.128**).

3.89 Pozzolanic Cement Concrete — Concrete having pozzolana partly substituted for its cement, the pozzolana content being not less than 16 percent of the combined weight of cement plus pozzolana.

3.90 Prepacked Concrete — *See* **3.31**.

3.91 Preplaced-Aggregate Concrete — *See* **3.31**.

3.92 Preshrunk Concrete

a) Concrete which has been mixed for a short period in a stationary mixer before being transferred to a transit mixed.
b) Grout, mortar, or concrete that has been mixed 1 to 3 h before placing to reduce shrinkage during hardening.

3.93 Puddling

a) Process of inducing compaction in mortar or concrete by use of a tamping rod.
b) Undesirable placement of shotcrete wherein air pressure is decreased and water content is increased.

3.94 Pumped Concrete — Concrete which is transported through hose or pipe by means of a pump.

3.95 Ready-Mixed Concrete — Concrete manufactured for delivery to a purchaser in a plastic and unhardened state (*see also* **3.12, 3.107** and **3.117)**.

3.96 Rebound — Sand and cement or wet shotcrete which bounces away from a surface against which shotcrete is being projected.

3.97 Refractory Concrete — *See* **3.33**.

3.98 Refractory Insulating Concrete — Refractory concrete having show thermal conductivity.

3.99 Reinforced Concrete — *See* **3.34**.

3.100 Rich Concrete — Concrete of high cement content.

3.101 Rubble Concrete

a) Concrete similar to cyclopean concrete except that small stones (such as one man can handle) are used.
b) Concrete made with rubble from demolished structures (*see also* **3.46**).

3.102 Rustic or Washed Finish — A type of terrazzo toping in which the matrix is recessed by washing to setting so as to expose the chips without destroying the bond between chip and matrix; a retarder is sometimes applied to the surface to facilitate this operation.

3.103 Sagging — Subsidence of material from the gunned surface of a sloping or vertical concrete structural member or from the gunned surface of an over head horizontal shotcrete structural member (*see also* **3.108**).

3.104 Sawdust Concrete — Concrete in which the aggregate consists mainly of sawdust from wood.

3.105 Shooting — Placing of shotcrete.

3.106 Shotcrete — *See* **3.88**.

3.107 Shrink-Mixed Concrete — Ready-Mixed concrete mixed partially in a stationary mixer and then mixed in a truck mixer (*see also* **3.92**).

3.108 Sloughing — Subsidence of material from a vertical surface of newly gunned shotcrete generally due to the use of an excessive amount of mixing water (*see also* **3.103**).

3.109 Slugging — Pulsating and intermittent flow of shotcrete material due to improper use of delivery equipment and materials.

3.110 Sounding Well — A vertical conduit in the mass of coarse aggregate for preplaced aggregate concrete, provided with continuous or closely spaced openings to permit entrance of grout; the grout level is determined by means of a float on a measured line.

3.111 Sprayed Mortar — Mortar or concrete conveyed through a hose and projected at high velocity onto a surface; also known as air-blown mortar; also pneumatically applied mortar or concrete, sprayed mortar an gunned concrete (*see also* **3.48**, **3.61** and **3.129**).

3.112 Spun Concrete — *See* **3.35**.

3.113 Structural Concrete — *See* **3.36**.

3.114 Structural Light Weight Concrete — *See* **3.37**.

3.115 Terrazzo Concrete — *See* **3.38**.

3.116 Tesserae — Small pieces of marble tile or glass used in mosaics.

3.117 Time of Haul — In production of ready-mixed concrete, the period from first contact between mixing water and cement until completion of discharge of, the freshly mixed concrete.

3.118 Transit-Mixed Concrete — *See* **3.39**.

3.119 Translucent Concrete — *See* **3.40**.

3.120 Tremie Concrete — Concrete placed by means of a tremie.

3.121 Tremie Seal — Concrete placed under water by means of a tremie in a cofferdam or caisson so that it can be dewatered after the concrete hardens.

3.122 Truck-Mixed Concrete — *See* **3.39**.

3.123 Undersanded — With respect to concrete, containing an insufficient proportion of fine aggregate to produce optimum properties in the fresh mixture, especially workability and finishing characteristics.

3.124 Unreinforced Concrete — See **3.87**.

3.125 Vacuum Concrete — Concrete from which water is extracted by a vacuum process before hardening occurs.

3.126 Venetian — A type of terrazzo topping in which large chips are incorporated.

3.127 Vermiculite Concrete — Concrete in which the aggregate consists of exfoliated vermiculite.

3.128 Vibrated Concrete — Concrete compacted by vibration during and/or after placing.

3.129 Wet-Mix Shotcrete — Shotcrete wherein all ingredients, including mixing water, are mixed in the equipment before introduction into the delivery hose; it may be pneumatically conveyed or moved by displacement.

3.130 Water Resisting Concrete — Concrete that has high resistant to water penetration.

3.131 Pressed Concrete — Precast concrete that is pressed before it hardens expelling some of the mixing water.

3.132 Polymer Impregnated Concrete — Hardened concrete that is impregnated with Underwater concrete polymer.

3.133 Retarded Concrete - Fresh concrete that changes to a hardened state more slowly as a result of the use of a set retarding admixture.

3.134 Rolled concrete — Concrete that is compacted by roller.

3.135 Self Compacting Concrete – Highly flowable, non-segregating concrete that fills uniformly and completely every corner of formwork by its own weight without the need for any compaction and encapsulates reinforcement or any other embedment.

3.136 Shotcrete — Mortar or concrete pneumatically projected at high velocity onto a surface; also known as air-blown mortar, pneumatically applied mortar or concrete sprayed mortar, and gunned concrete.

3.137 Steam Cured Concrete — Concrete that is cure more quickly to increase its early strength using steam at atmospheric pressure.

3.138 Stiffened Concrete — Concrete that has lost its consistence to the extent that it is no longer readily mouldable.

3.139 High Consistence Concrete — Fresh concrete that can be placed with little compactive effort.

3.140 Gap Graded Concrete — concrete made, with gap graded aggregate.

3.141 Concrete Roller Compacted — Concrete compacted while fresh by a roller often a vibratory.

3.142 Extruded Concrete — Concrete that a finished cross section formed by extrusion.

3.143 Fibre Reinforced Concrete — Concrete strengthened with fibres.

3.144 Green Concrete — Hardened concrete that has gained only a small proportion of its final strength.

3.145 High Performance Concrete – Concrete whose ingredients, proportions and production methods are specifically chosen to meet special performance and uniformity requirements.

3.146 High-Strength Concrete — Concrete that has a specified compressive strength for design of 41 MPa or greater.

3.147 Monolithic Concrete - Reinforcement Displacement — Movement of reinforcing steel from its specified position in the forms.

3.148 Plasticized Concrete — Fresh concrete that contains an admixture that increase consistence for a given water/binder ratio or maintains consistence at a lower water/binder ratio.

3.149 Air Entrained Concrete — Concrete in which an admixture is used to incorporate a quantity of small uniformly distributed air bubble during mixing, and these remain after hardening.

3.150 Block, Concrete — A concrete masonry unit, usually containing hollow cores.

3.151 Centrifugally cast — Concrete compacted by centrifugal action, for example, in the manufacture of pipe and poles. (See also centrifugal process.)

3.152 Cell Was Concrete — Low density cementitious mixture having a homogeneous void or cell structure attained using gas forming chemicals or foaming agents.

3.153 Chemically Prestressing — Concrete made with expansive cement and reinforcement under conditions such that the expansion of the cement induces tensile stress in the reinforcement so as to produce prestressed concrete.

3.154 Concrete, Dry-Mix — Concrete of very low water content used in the dry-cast process Concrete (mortar or grout) expansive-cement – concrete **—** (mortar or grout) made with expansive cement.

3.155 Concrete Exposed — Concrete surface formed so as to yield an acceptable texture and finish for permanent exposure to view.

3.156 Concrete, Fair-Face — A concrete surface that, on completion of the forming process, requires no further (concrete) treatment other than curing.

3.157 Concrete, Field — Concrete delivered or mixed, placed, and cured on the job site.

3.158 Concrete, Fresh — Concrete that possesses enough of its original workability so that it can be placed and consolidated by the intended methods.

3.159 Concrete, Flowing — Concrete that is characterized by a slump greater than 190mm while remaining cohesive.

3.160 Concrete, Hardened — Concrete that has developed sufficient strength to serve some defined purpose or resist a stipulated loading without failure.

3.161 Concrete Pervious — Hydraulic cement concrete proportioned with sufficient distributed interconnected macroscopic voids that allow water to flow through the material under the action of gravity alone.

3.162 Concrete, polymer — Concrete in which an organic polymer serves as the binder; also known as resin concrete; sometimes erroneously employed to designate hydraulic cement mortars or concretes in which part or all of the mixing water is replaced by an aqueous dispersion of a thermoplastic copolymer.

3.163 Concrete, Siliceous-Aggregate — Concrete made with normal- density aggregates having constituents composed mainly of silica or silicates.

3.164 Concrete, Reinforced — structural concrete reinforced with no less than the minimum amount of prestressing tendons or non prestressed reinforcement as specified by ACI 318.

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