



HYDERABAD

STANDARD TECHNICAL SPECIFICATION PROPERTIES, STORAGE & HANDLING OF COMMON BUILDING MATERIALS

PEDC/STD.SPEC/02
REV 00

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PROPERTIES, STORAGE & HANDLING OF COMMON BUILDING MATERIALS

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1.00.0 Scope

The scope for this section is to specify the properties, storage and handling of Common building materials unless otherwise mentioned in drawings or schedule items.

2.00.0 MATERIALS

a) Bricks

Bricks for general masonry work shall be conform to IS: 1077 and for face Bricks work shall conform to the specifications in IS: 2691.

Bricks for general masonry work shall be of first class (Class A) quality, Well Burnt, of uniform size, shape and colour free cracks, flaws or nodules Or free lime and emit clear ringing sound when struck. Fractured surface shall show uniform texture free from grits, lumps holes etc. Compressive Strength shall be 75kg/cm² minimum for common bricks and 150/kg/cm² Minimum for face bricks. Water for common bricks absorption after 24 Hours Immersion shall not exceed 15% by weight for common bricks and 12% For Face bricks. Dimensional tolerance shall not exceed 8% of the size shown in Drawing for common bricks and 3% for face bricks. All bricks shall have Rectangular faces and shape bricks shall be 6mm at the edges and 10mm For Corners. The bricks shall show no effluences after soaking in water and in shade. Each bricks shall have manufacturer's identification marks clearly marked on the frog. Representative samples shall be submitted by the contractor and approved samples shall be retained by the engineer for comparison of bulk supply. Any brick not found the specification should be removed immediately from site at the contractor's own cost.

b) Stone

All stones shall be from approved quarries. Hard, tough, durable compact Drained, uniform in texture and colour and free from decay, flaws, veins, Cracks and sand holes. The surface of freshly broken stone shall be bright, Clean and sharp and shall show uniformity of texture, without loose grains and free from any dull, chalky or earthy appearance. Stone showing mottled colours shall not be used for face works. A stone shall not absorb more than 5 percent of its weight of water after 24 hours immersion. The type of stone shall be as specified on drawings and/or instructed by Engineer. Samples shall be submitted by the contractor and approved samples shall be retained by the engineer for comparison of bulk supply.

c) Lime

Lime shall be stone lime and conform to the specification Building lime IS: 712. Lime putty may be prepared from hydrated lime or quick lime. Hydrated lime shall be mixed with water to form putty and stored with Reasonable care to prevent evaporation for at least 24 hours before use. Quick Lime shall be shackled with



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enough water to make a cream passed through a No. O Sieve and then stored with reasonable care to prevent evaporation for at least 7 days before use.

d) Cement

Cement used shall be ordinary Portland cement conforming to Code for Ordinary cement in IS: 8112 and shall be fresh when delivered. The contractor shall submit the anufacture's certificate for each consignments of cement procured to the contractor, the Contractor shall satisfy himself at the time of taking delivery that the quality, quantity and freshness of cement are up to the Specified standards No. shall be entertained and all rectification work on Account shall be done by the contractor at his own expense. If at any time, the Engineer feels that the work and send the samples of the cement to a testing Laboratory for standard tests and all expenses incurred thus shall be borne by the Contractor. The contractor shall else have no claim for this type of Suspension of work.

e) Coarse Aggregates

Coarse aggregates shall be as per IS: 383 latest editions, consisting of hard, Strong and durable pieces of crushed stone and shall and be free organic or clay coatings and other impurities like disintegrated stone. Soft flaky particles etc. and any other materials liable to affect the strength durability or appearance of Concrete. Aggregates other than crushed stone conforming to the provisions of specification may be used if permitted by the Engineer. Washing of aggregates by approved means shall be carried out, if desired by the Engineer. Grading of coarse aggregates shall generally conform to IS: 383 and shall be Such as produce dense concrete of the specified proportions and strength and of Consistency that will work readily into position without segregation.

f) Sand

Sand shall be hard, durables, clean and free from adherent coating or organic matter and shall not contain clay balls or pellets, the sand shall be free from impurities such as iron pyrities. Alkalise, salts, coal, mica, shale or other laminated materials in such forms or quantities as to affect adversely the Harding, strength, durability or appearance of mortar. Plaster or concrete or to cause corrosions to any metal in contact with such mortar, plaster or concrete. All sand shall be properly graded. Unless otherwise directed by the Engineer all sand shall pass through IS Sieve NO< 240 and 15 to 30% of and for masonry mortar and 5 to 50% of sand for plaster shall pass through IS Sieve No 30. Sand for concrete shall conform to IS: 383.

e) Water

Water shall be clean, fresh and free from organise matters, acids or soluble salts and other deleterious substances which may cause corrosion, discolouration, Efflorescence etc.

g) Reinforcement

Reinforcement steel shall be clean and free from loose mill scales, dust, loose Rust, oil and grease or other coatings, which may impair proper, bond Structural Steel shall conform to



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IS: 226. Mild steel and medium tensile steel and medium Tensile steel bars and hard-drawn steel wire for concrete reinforcement shall conform is IS: 432 Cold twisted steel bars shall conform to IS: 1786 Hexagonal Wire netting shall conform to IS: 3150. All steel bars including and above 10mm Diameter shall be of tested quality. All wire netting shall be galvanised.

3.00.0 STORAGE AND HANDLING OF MATERIALS.

a) Bricks

Bricks shall not dumped at sits. They shall be stacked in regular tires. Even as they are unloaded, to minimise breakage and defacement of bricks. Bricks selected for different situation of use in the work shall be stacked separately.

b) Stones

Stones shall be stored at site in manner approved by the Engineer. Dressed stone For wall facing, paving etc. shall be stored with special care to avoid Defacement of faces and edges or damp and rust stains.

c) Lime

Lime shall be in weatherproof sheds.

d) Cement

The cement shall be stored above the ground level in perfectly dry and watertight sheds. The bags shall be stacked in a manner so as to facilitate removal or first in first out basis. Any material considered defective by the Engineer shall not be used by the contractor and shall be removed from the Site immediately.

e) Coarse and Fine Aggregates

Aggregates shall be stored on brick soiling or an equivalent platform so that they do not come in contact with dirt. Grass or any other injurious substances at any stage. Aggregate of different size shall be kept in separate stacks. If so desired by the Engineer aggregate from different sources shall be stacked separately with proper care to prevent intermixing.

f) Reinforcement

Reinforcement bars shall be stored off the ground and under cover if so desired by the Engineer. If necessary. A coat of cement wash shall be given to the bars to guard against rusting.