

PART 1 – ARCHITECTURAL SPECIFICATIONS- SAMPLE

A. GENERAL

I. Scope:

This specification applies to the Civil, Structural, Finishing and External Development Works and building works to be executed by the Contractor. It is to be read in conjunction with and subject to the general conditions of contract and in conjunction with the drawings, the schedule of rates and such other documents as may from time to time be agreed upon as comprising part of this contract. Where these specifications are not clear, relevant BIS codes and CPWD specifications shall be followed with prior permission of Project Manager.

B. SITE PREPARATION

I. Clearing

The contractor shall clear the site of all rubbish and old buildings remove all grass and low vegetation and remove all bush wood, trees, stumps of trees, and other vegetation only after consultation with the Project Manager as to which bushes and trees shall be saved. All disused foundations, drains or other obstructions met with during excavation shall be dug out and cleared.

II. Site Levels

The contractor shall carry out the survey of the site and shall establish sufficient number of grids and level marks to the satisfaction of the Project Manager, who shall decide on the basis of this information, the general level of the plot and the plinth.

III. Bench Marks

Prior to commencement of construction, the contractor shall in consultation with the Project Manager, establish several site datum bench-marks, their number depending on the extent of the site. The bench-marks shall be sited and constructed so as to be undisturbed throughout the period of construction.

IV. Site Investigation

The Project Manager might have got the soil investigation done and if so, the report will be handed over to the contractor for their scrutiny. The contractor shall however inspect the site and study the findings from the trial pits or bores in order to assess the problems involved in and methods to be adopted for excavation and earthwork. The contractor shall ascertain for himself all information concerning the sub-soil conditions, Ground water table periods and intensity of rainfall, flooding of the site and all data concerning excavation and earthwork. Any extra work required on this account, nothing will be paid extra.

V. Setting out the work

The contractor shall set out the works and during the progress of the building shall amend at his own cost any errors arising from inaccurate setting out.

During the execution of the work contractor must cross check his work with the drawings. The contractor shall be responsible for all the errors in this connection and shall have to rectify all defects and/or errors at his own cost, failing which the Project Manager reserves the right to get the same rectified at the risk and cost of the contractor.

VI. Lining out of work

Contractors shall line out the work with help of side rails, etc. and get it approved from Architect before commencement of actual work.

VII. Cleaning up and handing over

Upon completion of the work all the areas should be cleaned. All floors, doors, windows, surface, etc. shall be cleaned down in a manner which will render the work acceptable to the Project Manager. All rubbish due to any reason, shall be removed daily from the site and an area of up to ten metres on the outer boundaries of the premises will be cleaned by the contractor as a part of the contract. Upon completion of the project, the contractor shall turn over to the Project Manager the following:

- a) Written guarantee and certificates.
- b) Maintenance manuals, if any, and
- c) Keys.

VIII. Samples

The contractor shall submit to the Project Manager samples of all materials for approval and no work shall commence before such samples are duly approved. Samples of precast concrete panels, masonry units, building insulation, finished hardware, metal window and door frames, terrazzo flooring, kota stone, marble etc. and every other work requiring samples in the opinion of the Project Manager shall be supplied to the Project Manager, and these samples will be retained as standards of materials and workmanship. The cost of the samples shall be borne by the contractor.

Throughout this specification, types of material may be specified by manufacturers' name in order to establish standard of quality, price and performance and not for the purpose of limiting competition. Unless specifically stated otherwise, the tenderers may assume the price of 'approved equivalent' except that the burden is upon the contractor to prove such equality, in writing.

A detailed programme shall be submitted by the Contractor for the material approvals, within four weeks of the Project Manager's order to commence. The detailed programme shall include but not limited to:

- a) Date/s of submitting the various material samples.
- b) Date/s by which the Project Manager's approval is required.
- c) Date/s of placing orders on the Manufacturers/Suppliers.
- d) Date/s of arrival of the approved material/s on to the site.

Date/s of the completion of the 'Mock-ups', wherever required, and the Date/s by which the Project Manager's inspection of such 'Mock-ups' should be completed and the Date/s by which the Project Manager should fully approve the said Mock-ups.

IX. Tests:

All materials and methods of tests shall conform to the latest rules, regulation and/or specifications of the following authorities where specified herein as applicable. Bureau of Indian Standards (BIS), British Standards Code of Practice (BS) in case no equivalent BIS is available. The Project Manager will have the option to have any of the materials tested and if the test results show that the materials do not conform to the specifications, such materials shall be rejected. A reasonable number of representative tests will be deemed to be included in the rates tendered.

X. Mode of Measurements

All measurements will be taken in accordance with IS 1200 latest issue unless otherwise specified.

Cost of activities under Para A.I to A.IX, the contractor should include in their quoted rate as well as contract scope of work may be considered.

C. FINISHING WORK- GENERAL

- a) All plaster work shall be of the best workmanship and in strict accordance with the dimensions of the drawings. All plastering shall be finished to true levels including plumbs, without imperfections, and square with adjoining work. It shall form proper foundations for finishing materials such as paint etc. Masonry and concrete surface to which plaster is to be applied shall be clean, free from efflorescence, sufficiently rough and keyed to ensure proper bond.
- b) Wherever directed all joints between RCC frames and masonry walls, shall be expressed by a groove in the plaster. This groove will exactly coincide with the joint beneath. At the corners of all windows and doors or other openings and wherever instructed, 24 gauge expanded galvanized metal mesh strips 300 mm wide shall be placed diagonally to prevent plaster cracks.
- c) Where grooves are not called for, the joint between concrete and masonry in filling, chasing for conduits, pipes, boxes etc. shall be covered by 24 gauge expanded galvanized metal strips, 300 mm wide installed before plastering. The contractor shall supply all necessary labour, material, tools and scaffolding necessary for the completion of the work detailed. He shall be responsible to take proper precautions to all works from damage. Any work rejected through non-compliance with the specifications or damaged work shall be removed and replaced at the expense of the contractor.
- d) All chasing, installation of conduits, boxes, etc. shall be completed before any plastering is commenced on a surface. Chasing or cutting of plaster will not be permitted. Broken corners shall be cut back less than 150 mm on both sides and patched with plaster of Paris as directed. All corners shall be rounded to a radius. Contractor shall get samples of each type of plaster work approved by the Project Manager.
- e) The materials used for plastering shall be proportioned by volume by means of gauge boxes. Alternatively it may be required to proportion the materials by weight.

D. MASONRY

- **All walls and compound wall shall be in 150 mm solid concrete block masonry in cement mortar.**
 - a) **Blocks** precast solid concrete block masonry (including quoin block, jamb block, closer etc.) of approved size of as per IS:1905-1987 and an average compressive strength of 35 kgf/sqcm in cement mortar 1:6 of 12mm thick joints at all levels with 2nos. of 6mm dia MS round bars at every third course (including curing, scaffolding, etc.).
 - b) **Cement** shall comply in every respect with the requirements in the latest publication of IS:269 and, unless otherwise specified, 43 grade Portland cement shall be used. The weight of ordinary Portland cement shall be taken as 1440 Kg. Per Cubic Meter (90

LBS per cft.) Cement shall be measured by in whole bags, and each undisturbed and sealed 50Kg. Bag being considered equivalent to 35 ltr. (1.2 cft.) in volume. Care should be taken to see that each bag contains full quantity of cement. When part bag is required, cement shall be measured in measuring boxes. Weekly record of cement received and consume shall be maintained by the contractor in an approved form and submitted to the architect.

- c) **Sand** shall be conform to IS 383 and relevant portion of IS 515. It shall pass through a IS sieve 4.75 mm (3/16 B.S) test sieve , leaving a residue of not more than 5%. It shall be from natural source or crushed stone screening (if allowed), chemically inert, clean, sharp, hard, durable, well graded and free from impurities like dust, clay, shell, large pebbles, salt, organic matter, loam or other deleterious substances. The sum of percentage of such deleterious materials shall be within acceptable limits. Sand shall not contain any trace of salt and it shall be tested and sand containing any trace of salt shall be rejected. The sand aggregate shall be stacked carefully on a clean hard dry surface so that it will not get mixed up with deleterious foreign materials. If such a surface is not available, a platform of planks or corrugated iron sheets or brick floor or a thin layer of lean concrete shall be prepared.

I. **Solid concrete block masonry**

Hollow and Solid concrete block Masonry Hollow and solid concrete block shall conform to the requirement of I.S 2185. Hollow concrete block shall be sound, free from broken edges; free from cracks, honeycombing and other defects, which may give a defective work, impaired the required strength. Dimensional stability: concrete masonry units shall be made of proper sizes and shape to suit the construction need and shall be in neutral of the following sizes: The nominal size of concrete block /solid concrete block. Masonry Page 3 of 8 Length: 400,500,600. Height 200,100 Width 50,75,100,150,200,250,300. In addition block shall be manufactured in half-length of correspondence to full length. Maximum tolerance of length shall be (+) 5mm and in height &with shall be + 3mm. The average crushing strength shall be determined as per I.S 2185 and shall be of Load bearing wall density of block shall be not less than 1500 kg /mm³ and minimum average compressive strength of units shall be 3.5 to 7 N/mm³ and minimum strength of individual unit shall be 2.8 to 5.6 for block density less than 1500 kg /mm³ but not less than 1000 kg /mm³ average compressive strength of units shall be 2.0 to 5 N/mm³ and minimum strength of individual unit shall be 1.6 to 4.0 N/mm³ For non load bearing wall block density shall be not less than 1000kg / mm³ and minimum average compressive strength of units shall be 1.5 N/mm³ and minimum strength shall be 1.2 N/mm.

II. **Cement Mortar**

Cement mortar shall be of proportions specified for each type of work in the schedule. It shall be composed of Portland cement and sand. The ingredients shall be accurately gauged by measure and shall be well and evenly mixed together in a mechanical pan mixer- care being taken not to add more water than is required. No mortar that has begun to set shall be used. River sand shall be used unless otherwise specified.

If hand mixing is allowed, then it shall be done on pucca waterproof platform. The gauged materials shall be put on the platform and mixed again until it is homogeneous and of uniform

colour. Not more than one bag of cement shall be mixed at one time and which can be consumed within half an hour of its mixing.

III. Scaffolding

Single scaffolding shall be used generally. Double scaffolding shall be used if necessary to avoid making holes into walls.

IV. Preparation of Surface

All putlog holes in brick work and junction between concrete and brick work shall be properly filled in advance. Joint in brick work shall be raked about 10 mm and concrete surface hacked to provide the grip to the plaster. Projecting burrs of mortar formed due to gaps at joints shuttering shall be removed.

The surface shall be scrubbed clean with wire brush/ coir brush to remove dirt, dust, etc. and the surface thoroughly washed with clean water to remove effloresce, grease and oil, etc. and shall be kept wet for minimum of 6 hours before application plaster.

E. PLASTER

- d) The joints in the brick work, concrete blocks, shall be raked (as specified in respective subhead) while the masonry is green. Concrete surfaces to receive plaster shall be suitably roughened. All walls shall be washed with water and kept damp for 10 hours before plastering.
- e) The plaster unless specified otherwise shall be average of 15 mm thick on walls and minimum 6 mm thick for the ceiling. The finished texture shall be as approved by the Project Manager. The mix for plaster unless otherwise specified, shall be one part cement and four parts sand, to walls and one part cement, 3 parts sand to ceiling.
- f) The interior plaster shall be applied in one coat only. The surface shall be trowelled smooth to an approved surface. All plaster work shall be kept continuously wet for seven days.
- g) The external plaster shall be minimum 20 mm. Preparations of walls to receive plaster work shall be the same as in internal plaster. Both layers of all external plaster shall be waterproofed with approved water proofing powder added to cement in proportion of 1.5 Kg. to 50 Kg. of cement as per the manufacturers' instruction, for both the coats under layer 12 mm thick cement plaster 1:5 (1 cement : 5 coarse sand) finished with a top layer 8mm thick cement plaster 1:6 (1 cement :6 fine sand) including making of grooves, bands, drip coarse as shown in drawing.
- h) For sand faced cement plaster, the finishing coat shall be in cement mortar 1:3, sand used shall be of selected colour, properly graded and washed so as to give a grained texture. Finishing plaster coat shall be 8 mm thick, uniformly applied and surface finished with special rubbing by sponge pads and other tools and recommended by the Project Manager.

I. Neeru Plaster – For all interior application including Staircase

Neeru shall be made of class 'C' lime (i.e. pure fat lime) as mentioned in IS:712, It shall be slaked with fresh water and sifted and reduced to a thick paste by grinding in a mill. Neeru thus prepared shall be kept moist until used. No more than that can be consumed in 15 days shall be prepared at a time.

Cement mortar of specified proportion and thickness shall be prepared in small batches and applied to the wall surface / ceiling. To ensure proper thickness, gauged patches shall be made at 1.5 m. to 2.0m. apart and surface plastered true to line level and plumb, taking special care to finish jambs of windows, doors, wall returns, corners, junctions, etc. A thin layer of neeru shall then be applied and rubbed into surface and finished by means of trowel until the surface even and smooth. The surface shall be kept moist for 7 days and then given coat of white wash.

II. Sand Faced Plaster – For all exterior applications

The surface shall be prepared as above. The coat of cement in proportion of 1:3 as specified shall be applied uniformly all over the surface to an average thickness of 12 mm. and finished true to level and line and keys shall be formed on the surface. The surface shall be kept moist till the finishing coat is applied.

The finishing coat shall be applied a day or two after. The proportion of mortar for finishing coat shall be 1 part of cement and 4 part of sand, well graded and washed, and it shall be applied in a uniform thickness of 6 mm (1/4"). Sand grains shall be exposed by use of sponge. Curing shall start after 24 hours and the surface kept wet for 7 days.

F. FLOORING

I. Tile Flooring And Dado

The tiles shall be procured from approved manufacturer conforming to IS 777. They shall be of color, design and size as approved by the Architect. They shall be free from cracks, glazing spots, chipped edges and corners. The glazing & color shall be of uniform shade and unless otherwise specified the tile shall be 8 mm thick. All specials like corners-internal or external angles, borders, beads etc. shall be used as directed. Under layer of specified thickness with a mortar of specified proportion shall be laid as described in Marble Mosaic tile flooring. The tiles shall be washed clean and set in cement and each tile being gently tapped with a wooden mallet till it is bedded and in level with the adjoining tile. The joint shall be kept as thin as possible. The tiles shall be laid straight or to suit required pattern. After the tiles have been laid, surplus cement grout shall be mopped off. The joints shall be cleaned off the gray cement with wire brush or trowel to a depth of 5 mm. All the dust and loose mortar shall be removed. Joints shall then be flush pointed with matching color cement. The floor shall be kept wet for 7 days. After curing, the surface shall be washed with a mild hydrochloric acid and clean water. The finished surface shall not bulge or sound hollow when tapped with wooden mallet.

II. Kota Stone Flooring

They shall be of selected quality, hard, sound, dense and homogeneous in texture, free from cracks, decay, weathering and flaws. Stone slabs shall be uniform in color (green/ Brown) and as approved by the Architect. They shall be machine cut and machine polished where specified and shall conform to the required sizes. Thickness shall be as specified in respective items.

The flooring shall be either with rough stone or machine cut and machine polished stone as specified in the Bills of Quantities. The stone slabs shall be of approved quality, size and thickness, free from cracks and flakes and shall be uniform in color, with straight edges and perfectly flat. The sides shall be dressed to have perfect right angles and size. The stone slabs shall be laid on minimum thickness of 25mm thick cement mortar 1:4 (1 cement: 4 coarse sand) mix to match the total thickness of flooring of 50mm thick and joint to be fitted with cement slurry mixed with pigment to match the shade of stone. The finished surface thus laid shall be machine polished to the required degree as approved by the Project Manager. Flooring shall be finally mirror polished and protected till the handing over of the building.

III. Marble/ Granite Stone

Marble/Granite shall be the best Indian Marble/Granite to be approved by the Project Manager. The quality shall be uniform and it shall be hard and free from any discolorations, cracks, flaws, veins of foreign materials or any other defects. When marble/Granite of different colour and kinds associated, care shall be taken to see that they are of equal hardness so as to wear evenly. The marble/Granite slabs shall be machine cut true to the shape and size and machine mirror polished. Care shall be taken to cut the slabs so as to provide a pattern as indicated. Marble/Granite stone slabs for wall lining and dadoes shall be machine mirror polished edges. The wall shall be lined with the marble/Granite in courses as indicated and grain of the marble/Granite shall be arranged in pattern as per detailed drawings. The marble/Granite shall be bedded in adequate thickness of cement mortar, backing covering the full area of the marble. The wall surface shall be cleaned from all dirt, mortar droppings etc. before applying the base plaster. The marble/Granite shall be fixed to the wall by S.S cramps and pins of required sizes embedded firmly in to wall by cutting hole and grouting alternately stainless steel cramps and pins as per design including fixing small stone pieces with adhesive. Fixing of cramp shall be with fastener (as approved by Project Manager) in case of RCC and in Brick Work pocket (100mmX75mmX75mm) shall be made and filled by non-shrinkage compound (as approved by Project Manager). The size and design of the cramp and fastener shall be to suite site requirement and shall be approved by the Project Manager. The load of one marble/Granite slab shall not be borne by the slab below. Joints between slabs shall be hair fine and filled with coloured cement to match the marble/Granite. The marble/Granite lining and dadoes shall be finally polished by Carborundum stone, buffing with polishing felt and cleaned with diluted oxalic acid wash.

IV. Dado / Skirting

Tiles shall conform to IS 1237 and shall be of approved design with minimum 6mm thick tiles of approved manufacturer. The tiles shall be fixed with neat cement grout on a backing coat consisting of cement plaster (1:4) 15 to 20 mm thick. The top and bottom junctions of tiles shall be rounded off neatly as directed. The joints shall be filled with matching shade cement slurry. The surface shall be kept wet for 7 days and then polished with carborundum stone to obtain smooth and fine polish.

V. Cement Concrete flooring (IPS Flooring)

Indian patent stone flooring shall be 40mm or of specified thickness and laid in two layers, bottom layer 28mm thick or as specified in 1 part of portland cement, 2 parts of coarse sand and 4 parts of crushed stone aggregate 12.5mm down well graded machine mixed with not more than 5.5 gallons of water for each bag of cement and top layer 6mm thick in one part of portland cement, 2.5 parts of selected crushed stone chips with just enough sand maximum part to make workable mix, machine mixed with not more than 5 gallons of water. Top layer to be laid before the bottom layer has hardened. Flooring shall be laid in squares or bays as directed and each layers shall be

well compacted by ramming with heavy teak wood floats. The top shall be brought to a smooth and even surface free from blemishes and finished smooth with neat cement by steel trowelling. The flooring shall be kept wet for seven days for curing. The flooring shall be laid by forming panels as per the advised of the Project Manager / Architect including roughening of the base layer and providing cement slurry for jointing.

I. PAINTING

I. General

All painting works on walls, ceilings, doors, windows or other varieties in respect of white/color washing, dry/oil bound distemper, plastic emulsion, readymade oil paints, cement based paints on plastered surfaces, wood work or paint on plastered surfaces, wood work or steel work are covered under these specifications.

All paints, varnishes etc. shall be of approved make. The make shall be approved by the Architect/Engineer & contractor shall bring the materials in original sealed containers. All thinners, brushers, etc. shall also be of approved quality & adequate quantity shall be brought to site well in advance. Painting shall be done, as far as possible, in dry weather conditions. The Architect / Engineer, may at his discretion ask the contractor for testing the paint, in any approved laboratory for the quality of paints. The cost of such tests shall be borne by clients, if the results are unsatisfactory. Rejected containers, materials etc. shall be removed from the site. All other approved materials shall be well protected when not actually in use. Lids of containers shall be kept closed tightly & the surface of paint in open shall be covered with a thin layer of turpentine to prevent from forming of skin.

II. Preparation of Surface:

All surface either plastered surface, wooden or steel surfaces shall be thoroughly cleaned. All dirt, rust, scales, smokes, grease, oil etc. shall be thoroughly removed. Necessary arrangement for scaffolding, ladders, etc. shall be made, which shall be strong enough & also render no damage to flooring, painted surfaces etc. All furniture, flooring, sanitary fittings, lighting fixtures or such other articles shall be covered by tarpaulins or such other means so as not to damage these during the painting process. Instructions of the manufactures in respect of various paints shall be followed generally, regarding preparation of the surface, mixing, application of priming & finishing coats.

Where such instructions are not available the following instructions shall be followed:

The plastered surface shall be cleaned & all cracks, holes, surface defects shall be repaired with gypsum or Plaster of Paris or such other means & allowed to set hard. All irregularities shall be sand prepared smooth & wiped clean. New surfaces shall be completely dry & clean. All steel work shall be degreased, & rusting if any removed by sand papering, wire brushing or such other approved means like sand blasting and shot blasting. All woodwork shall be cleaned, sand papered with coarse & middle grade paper, & surface shall be scratch free. Knotting shall be completed by varnish, fevicol or such other approved means.

III. Application General

All brushes, tools, etc. shall be cleaned of all foreign matter. Paint shall be applied by spraying or by brushing as approved by the Architect/Engineer. The brushes shall be of appropriate sizes

& shall be either round or oval shaped & shall be maintained carefully throughout. Contents of drum & tins shall be well stirred & occasionally keep on stirring with small clean smooth stick to prevent- sedimentation at the bottom.

Single or double scaffolding shall be done by the contractor. Ladders, if used, shall be strong, stable & shall be tied with old gunny bags at top to prevent any damage o scratches to the walls.

Sufficient time shall be allowed for one coat of paint to dry before the next coat is applied. Painted surface shall be protected from sun; rain, condensation, contamination, or surface damages till it is completely dry. "WET PAINT" boards shall be put wherever necessary.

IV. Weather Shield Cement Paint – For exterior walls

The surface shall be prepared as specified earlier and thoroughly wetted with clean water before waterproof cement paint is applied. The paint shall be prepared strictly as per manufacturers specifications and in such quantity as can be used up in an hour of its mixing, as otherwise the mixture shall set and thicken, affecting flow and finished.

The paint thus prepared shall be applied on clean and wetted surface with brush or spraying machine. The solution shall be kept stirred during the period of application. Cement paint shall be mixed in such quantities as can be used up within an hour of its mixing as otherwise the mixture will set and thicken, affecting flow and finish.

Cement paint shall be mixed with water in two stages. The first stage shall comprise of 2 parts of cement paint and one part of water stirred thoroughly and allowed to stand for 5 minutes. Care shall be taken to add the cement paint gradually to the water and not vice versa. The second stage shall comprise of adding further one part of water to the mix and stirring thoroughly to obtain a liquid of workable and uniform consistency. In all cases the manufacturer's instructions shall be followed meticulously. The lid of cement paint drums shall be kept tightly closed when not in use, as by exposure to atmosphere the cement paint rapidly becomes air set due to its hydrophobic qualities. The solution shall be applied on the clean and wetted surface with brushes or spraying machine. The solution shall be kept well stirred during the period of application. It shall be applied on the surface which is on the shady side of the building so that the direct heat of the sun on the surface is avoided. The method of application shall be as per manufacturer's specifications. The completed surface shall be watered after day's work.

Water cement paint shall not be applied on surface already treated with white wash, colour wash distemper dry or oil bound, varnishes, paints etc. It shall not be applied on gypsum, wood and metal surfaces. The completed surface shall be watered after days work. The number of coats shall be specified in the bills of quantities.

V. Oil / Enamel / Plastic Emulsion

Ready mixed oil paint, flat oil paint, plastic emulsion paint, synthetic enamel paint, aluminum paint, etc. shall be brought in original containers and sealed tins in sufficient quantities, at a time to suffice for a fortnights work. If for any reason thinner is necessary, the brand and quantity of the thinner recommended by manufacturer or as instructed by the architect shall be used. Oil emulsion (oil bound) distemper (IS:428-1929) of approved brand and manufacture shall be used. The primer used shall be cement primer or distemper primer. This shall be of same manufacture as distemper. The distemper shall be diluted with water or any other prescribed

thinner in a manner recommended by the manufacturer. Only sufficient quantity of distemper required for days work shall be prepared.

The surface is prepared as specified earlier and a coat of approved primer shall be applied. After 24 hours of drying, approved or specified quality paint shall be applied evenly and smoothly. Filler putty shall be given to give a smooth finish. Each coat shall be allowed to dry out thoroughly and then rubbed lightly with sand paper and cleaned of dust before next coat is applied. Number of coat shall be as specified under the item in bills of quantities. If the finished of the surface is not uniform, additional coats shall be applied to get good and uniform finished at no extra coat. After completion, no hair marks from brush or clogging of paint puddles in the corners, angles and mouldings etc. shall be left on the work. The glass panes, floors etc. shall be cleaned of the stains. When the final coat is applied, if directed, the surface shall be rolled with a roller or if directed otherwise, it shall be stippled with stipling brush.

VI. White Washing

The wash shall be prepared from fresh stone lime (Narnaul/Satna or Dehradun quality). The lime shall be thoroughly slaked on the spot, mixed and stirred with sufficiencies to water to make a thin cream. This shall be allowed to stand for a period of 24 hours and then shall be screened through a clean coarse cloth. 40 gm of gum desolved in hot water, shall be added to each 10 entire delimiters of cream. The approximate quantity of water to be added in making ht cream will be 5 liters of water to 1 Kg. of lime.

The white wash shall be applied with moon brushes to the specified number of coats. The operation for each coat shall consist of a stroke of the brush given from top downwards, another from bottom upwards over the first stroke, and similarly one stroke horizontally from the right and another from the left before it dries up.