

CHAPTER NO. 15

PLASTERING, POINTING, WHITE-WASHING
AND DISTEMPERING

SPECIFICATION NO 15.1—Cement Plaster—One coat work

1. Plastering shall be done in mortar of various ingredients mixed in the specified proportions and shall be of specified thickness.

General.

2. The mortar used for plastering shall conform to Chapter No. 2. Fine sand used in mortars for external and internal plastering, as the case may be, shall have a grading as given in para 3 (a) of specification no. 3.11 for fine sand.

Materials.

3. Where possible, independent scaffolding shall be used to obviate the subsequent making good of putlog holes and other breaks in the work. Scaffolding shall be checked to make sure that it is suitable and safe. The scaffolding shall be carefully dismantled and removed at the completion of work without damaging the work.

Scaffolding.

4. All tools* shall be cleaned by scraping and washing at the end of each day's work.

Tools.

5. Plastering shall be so programmed that the surface receiving plaster coat shall be sufficiently matured. Care shall be taken to ensure that subsequent building operations do not cause damage to plaster-work. Generally speaking, external plastering shall start from the topmost floor and proceed downwards. Internal plastering shall be started after the structural work has been completed and the centring for roofing has been removed. Plastering on ceilings, wherever required, shall be done before walls are plastered.

Time Schedule.

6. For the durability of the plaster, it is of the utmost importance to obtain a satisfactory bond between the back-ground and the plaster coat and also ensure that the bond is maintained subsequently. Before plastering, the joints of all old brickwork or masonry and of all new work in mud shall be raked out with a hook (not a hammer or tesi) to a depth of $\frac{1}{2}$ inch (13 mm). New brickwork or masonry in lime, or cement mortar, if it is to be subsequently plastered, shall have the joints raked out before the mortar has set. The earth and mortar dust obtained from raking the joints shall be thoroughly washed off, and the work watered for 24 hours before the plaster is applied.

Preparation of surface.

*Note.—Attention in this connection is drawn to Indian Standard : 1630—“Masons Tools for Plaster Work and Pointing Work” which may be made use of with advantage.

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Concrete surface, if required to be plastered, shall be roughened with wire brushes immediately on the removal of form work, so as to remove all laitance and loose particles and to bare the coarse aggregate for providing bond with the plaster. Where the surface has hardened to the extent that wire brushing does not produce the desired effect, the surface shall be bush-hammered to roughen it. Before actual plastering the surface shall be cleaned of all dust and loose particles and shall be well wetted. A slurry composed of 1 volume of cement to 2 volumes of coarse sand shall be forcibly dashed on to the concrete surface, and allowed to harden untouched under damp condition.

Where plastering is to be done on an old backing, special care shall be taken in preparing the same for a new coat of a plaster. The crumbed layers of backing shall be completely removed and made good. Any traces of algae or moss formation shall be removed. If the backing contains soluble salts particularly sulphates, the application of the plastering shall be done only after the efflorescence of the salts is complete, and same is thoroughly removed from surface.

The backing shall be even in order to avoid variations in the thickness of plasters. Any brickwork or masonry that projects beyond the general face of plaster shall be cut back.

All putlog holes shall be filled up in advance of the plastering, as the scaffolding is being taken down.

Screeds.

7. After the surface has been prepared and passed by the subordinate incharge, dabs or reference marks ("bundās") of mortar 2 to 3 inches (5 to 7 cm.) in diameter shall be fixed to ensure that the plastered surface shall be truly plain and that the plaster coat shall have the required thickness. These shall act as gauges and guides in applying the plaster. In case of walls, the dabs shall be fixed so as to be truly in plumb and they shall be 8 to 10 feet (2.5 to 3 metres) apart horizontally, and 3 to 4 feet (about 1 metre) apart vertically. In case of floors and ceilings, the mortar dabs shall be truly horizontal or shall represent the finished slope in the structure and shall be provided to 10 feet (2.5 to 3 metres) apart in both directions.

**Cement Plaster
on Arrises.**

8. In case of plastering on walls, the arrises shall be plastered with the 1:3 cement sand mortar for a space of 4 inches (10 cm.) on each side and up to the ceiling, except in case of openings, where it will run round them. This plaster will also serve as screeds for laying the mortar.

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| <p>9. The mortar shall be applied uniformly between the mortar dabs and finished off with a wooden straight edge reaching across the dabs. The straight edge shall be worked with a small upward and sideways motion 2 inches or 3 inches (5 or 7.5 cms) at time. Finally, the surface shall be finished off with a plaster's wooden float. Metal floats shall not be used. If so specified or directed by the engineer-in-charge, all corners and arrises may be rounded off to a radius of $\frac{3}{4}$ inch (20mm.) or any other specified radius. In the absence of any definite instructions, all corners and arrises shall be made truly sharp and square.</p> | <p>Laying.</p> |
| <p>10. The plaster shall be laid to a true plain surface and tested frequently with a straight-edge and plumb-bob or the spirit-level as the case may be. The straight-edge shall not be less than 10 feet (3 metres) in length. All horizontal lines and surfaces shall be tested with a level, and all jambs and corners with a plumb-bob and a masons' square as the work proceeds. All mouldings shall be worked true to template and shall be neat, clean, level, and parallel, or truly plumb as the case may be.</p> | <p>Finish,</p> |
| <p>11. After completion, plaster shall be kept wet for 10 days and shall be protected during that period from extremes of temperature and weather.</p> | <p>Protection whilst curing.</p> |
| <p>12. To prevent cracking of plaster, caused by discontinuity of backing, such as changing from concrete to brickwork or changing from wall to ceiling, a neat cut through the plaster shall be applied at the junction.</p> | <p>Precaution against discontinuity.</p> |
| <p>13. Adequate protection shall be given to all existing work and fittings, which are liable to be damaged during plastering by covering up with boards, dust sheets etc. as necessary. Care shall be taken to avoid the splashing of mortar on to neighbouring finished surfaces ; any such splashes shall be cleaned off immediately. On completion, work affected by plastering operations, shall be left clean.</p> | <p>Cleanliness and protection.</p> |
| <p>14. Any cracks in the plaster, or parts which sound hollow when rapped, or are found to be soft or otherwise defective after the plaster has dried, shall be cut out in rectangles or squares and replastered by the contractor.</p> | <p>Defects.</p> |
| <p>15. For jambs, soffits, sills, etc., for openings not exceeding 5 sq. ft. (0.5 metre) each in area, ends of joints, beams, posts, girders, steps, etc., not exceeding 5 sq. ft. (0.5 sq. metre) each in area.</p> | <p>Measurement.</p> |

SPECIFICATION NO. 15.1—Cement Plastering—One coat work
and openings not exceeding 30 sq. ft. (3sq. metres) each, deductions and additions shall be made in the following manner :—

- (a) No deduction shall be made for ends of joists, beams, posts, etc., and openings not exceeding 5 sq. ft. (0.5 sq. metre) each, and no addition shall be made for reveals, jambs, soffits, sills etc., of these joists, beams, posts etc.
- (b) Deductions for openings exceeding 5 sq. ft. (0.5 sq. metre) but not exceeding 30 sq. ft. (3 sq. metres) each shall be made as follows and no addition shall be made for reveals, jambs, soffits, sills, etc., of these openings :—
 - (i) When both faces of wall are plastered with the same plaster, deduction shall be made for one face only ;
 - (ii) When two faces of wall are plastered with different plasters or if one face is plastered and the other pointed, deduction shall be made from the plaster or pointing on the side of frames for doors, windows etc., on which the width of reveals is less than that on the other side, but no deduction shall be made on the other side.

In case of openings of area above 30 sq. ft. (3 sq. metres) each, deduction shall be made for the openings but jambs, soffits and sills, shall be measured.

Thickness shall be exclusive of the thickness of key, i.e., grooves or open joints in brickwork, stonework, etc., or space between laths.

Rate-

16. The through rate for plaster includes—

- (i) plastering surfaces, arrises, and corner with the specified mortars ;
- (ii) preparing, cleaning and watering the surface to be plastered including slurry coat for concrete surfaces where required ;
- (iii) watering and protecting the plaster after completion ;
- (iv) provision, erection and removal of scaffolding and staging ;
- (v) provision of tools such as special floats ; straight edges, level, and plumb-bobs ; and
- (vi) setting right the damage due to splashing etc. and cleaning after plastering.

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The labour rates for plaster include the labour charges for above operations and scaffolding and water charges.

Both the labour and through rates do not include the cost of removing and making good the defective backing, removing algae or moss formation and cutting back the projecting masonry mentioned in para 6 of this specification; these shall be paid for separately :

SPECIFICATION NO. 15.2—Cement Plaster—Two-coat work**Where used.**

1. Where, owing to the irregularity of the surface to be plastered (as in the case of 9 inch or 20 cm. brick walls or certain classes of masonry), it is not possible to obtain an even surface with a single floated coat $1/2$ inch (12mm.) thick, an under coat shall be applied before laying the finishing coat.

Thickness of coat.

2. Generally speaking, an under coat should not exceed $5/8$ inch (15 mm.) or be less than $3/8$ inch (10mm). in thickness in any part. The thickness of the finishing coat shall normally be $1/4$ to $1/2$ in (6 to 12 mm.). The combined thickness of two coats shall not exceed 1 inch (25mm.).

Material.

3. The provisions of para 2 of specification No. 15.1 "Cement Plaster—One Coat Work" shall apply.

Laying preliminary coat.

4. After preparing the surface and laying the dabs or reference marks as detailed in the specification for one-coat work, the under coat shall be applied uniformly thick by laying on or throwing from the trowel. The mortar shall be well-pressed so that the raked joints are properly filled. It shall be kept rough and after it has been left to set firm, the surface shall be scratched with a sharp tool to form a key for the finishing coat. The surface shall be kept wet for 4 days until set.

Finishing coat.

5. Finishing coat shall be applied in the same manner and to the same specification as for one-coat work.

General.

6. In all other respects, the specification No. 15.1 "Cement Plaster—One-coat Work" shall apply to two-coat work as well.

SPECIFICATION NO: 15.3—Cement Lime Plaster

The specification for Cement Lime Plaster shall be the same as specification No. 15.1 (Cement Plaster—One-coat) Work and specification No. 15.2 (Cement Plaster—Two-coat Work), with the exception that the mortar used shall be cement-sand-lime mortar in the specified proportions. The mortar shall comply with the specification No. 2.3 for Cement Lime-Sand mortar.

General.

SPECIFICATION NO. 15.4--Lime Plaster

The specification for lime Plaster shall be the same as specification No. 15.1 "Cement Plaster—One-coat Work" and specification No. 15.2 "Cement Plaster—Two-coat Work" with the exception that the mortar used shall be either lime-sand mortar or lime-surkhi mortar, in the specified proportions and complying with specification Nos. 2.5 and 2.4 for "Lime-Sand" and "Lime-Surkhi" mortars respectively.

SPECIFICATION NO. 15.5.—Cement Rendering

1. The cement rendering shall be prepared by mixing neat cement with water. The quantity of cement used shall be such that a coating of about 1/32 inch (3/4 mm.) thickness is obtained. Before applying the cement solution, the plastered surface shall be cleaned and smoothed and thoroughly dry. The solution shall be applied with a trowel and floated when the plaster is still green, so as to present a smooth and regular surface of uniform colour. Every precaution shall be taken to prevent cement rendering being splashed on surfaces other than that being rendered.

Preparations.

2. The through rate for cement rendering covers the cost of applying the cement coat including cost of scaffolding, and water charges. The labour rate covers the labour charges for applying the cement coat, cost of scaffolding and water charges.

Rate.

SPECIFICATION NO. 15-6—Mud Plaster

Preparation.

1. Mud mortar for plastering shall be prepared as per specification No. 2.6 for Mud Mortar and 4 lbs. of chopped 'bhusa' well-mixed with each cubic foot of mortar (65 kgs., per cubic metre). The mortar shall then be kept in a plastic state for a week, being well worked up by pugging with the feet in the interval.

Method of spreading.

2. The plaster shall be spread evenly over the wall so as to be not more than $\frac{3}{4}$ inch (20 mm.) thick, and so that every portion of the wall is covered by at least $\frac{1}{4}$ inch (6 mm.) thickness of plaster. In the case of roofs and floors, it shall be spread 1 inch thick (25 mm.) After spreading, the plaster shall be floated with a straight edge 8 to 10 feet (2.5 to 3 metres) long until the surface is perfectly smooth, level and true. Any cracks that open out during drying shall be filled with liquid cowdung.

Finish.

3. When the surface has dried, it shall be leaped as specified under "Gobri Leaping".

General.

4. The provisions of specification no. 15.1 for "Plastering" shall be followed in all other respects like scaffolding, time schedule, preparation of surface, screeds, rounding off the corners and edges, protection, removal of defects etc., excepting that no curing is needed for mud plaster. Also no 1:3 cement plastering on arrises of walls is required in case of mud plaster of walls.

Measurement.

5. The provisions of para 15 of specification no. 15.1 shall apply.

Rate.

6. The rate of mud plaster includes the cost of all materials, labour charges for above operations water charges, scaffolding, rounding off the corners and setting right the damage due to splashings etc. and cleaning after plastering. The rate do not include the cost of removing and making good the defective backing and cutting back the projecting masonry.

SPECIFICATION NO. 15.7—Gobri Leeping

1. The "leepai" shall be prepared as follows :—

Preparation.

Cowdung is steeped in water to free it from grass, straw, seeds and other impurities ; if necessary, it shall be passed through a fine sieve. An equal part of finely powdered clay is added to the cowdung and the whole mixed in a tub and thoroughly incorporated to form a thin paste.

2. The mixture is applied over the surface of the mud plaster, and finished off, with a trowel or float so as to have a smooth and even finished surface.

Application.

SPECIFICATION NO. 15.8—Pointing

Types.

1. The pointing shall be one of the following types [and further as illustrated by Fig. No. 15.8(a)] as specified or directed by the Executive Engineer :—

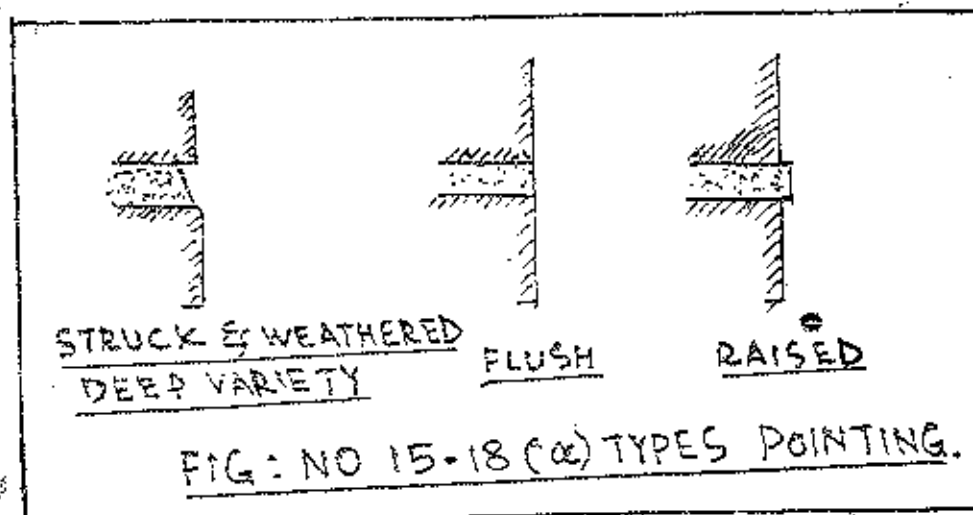
- (a) **Flush Pointing.**—The mortar is placed in the joint and pressed and smoothed by trowel till the surface is flush with the rest of the wall.

This is not an ornamental kind of pointing, and will ordinarily be used in engineering structures, which are subject to the action of water. It is also used in all internal surfaces of building which are to be white-washed.

- (b) **Deep Variety (or weathered and struck) Pointing** :—In this type, the mortar is filled in the joints flush with the masonry with a pointing trowel and then the upper portion of the joint is pressed in with a proper pointing tool as shown in the Fig. No. 15.8 (a). The vertical joints are struck in the same way with a similar tool having a triangular edge.

This type of pointing makes a good joint, because the mortar becomes dense on compression. Besides in case of horizontal joints, the water runs off the joints easily and is not allowed to enter the joint.

- (c) **Raised Pointing** :—In this type, the joint is defined by ridge raised $\frac{1}{8}$ inch (3 mm.) from the face of the wall with a width of about $\frac{3}{8}$ inch (10 mm.). This is also an ornamental type of pointing, generally used on stone walls



SPECIFICATION NO. 15.8-- Pointing

2. The cement sand mortar, for pointing shall be composed of one part of cement and two or three parts of fine sand as specified. Lime-surkhi mortar shall consist of two parts of lime and three parts of surkhi.

Materials.

The mortar used for pointing shall conform to specifications no. 2.2 and 2.4 for cement-sand and lime-surkhi mortars, respectively.

3. Where possible, independent scaffolding shall be used to obviate the subsequent making good of putlog holes and other breaks in the work. Scaffolding shall be checked to make sure that it is suitable and safe. The scaffolding shall be carefully dismantled and removed at the completion of work without damaging the work.

Scaffolding.

4. All tools shall be cleaned by scraping and washing at the end of each day's work. Care shall be taken that tools do not develop up a cutting edge, as the object is to compress the green mortar into the joint and not to cut it away.

Tools.

5. Care shall be taken to ensure that subsequent building operations do not cause damage to pointing work. In case of walls, pointing shall generally start from top and proceed downwards.

Time Schedule.

6. Before pointing old brickwork or new brickwork in mud, the joint shall be raked out with a hook (not a hammer), to a depth of $\frac{1}{2}$ inch (13 mm.). In case of new brickwork or masonry in lime or cement mortar, which is to be subsequently pointed, joints shall be raked out as the work proceeds and before the mortar sets. All earth and mortar dust obtained from raking the joints shall be thoroughly washed off and the brickwork watered for 24 hours and the brick face washed before the pointing is put in hand. The raking out of joints and surface cleaning shall be kept at least 4 feet (1 metre) ahead of the pointing and no pointing commenced until the walls have been passed as ready by the subordinate-in-charge.

Preparation of surface.

7. For deep or struck pointing, the mortar shall be filled in the joints flush with the masonry or brickwork, with a pointing trowel and then pressed in with a proper pointing tool. Lining with a spike on a mess of mortar will not be tolerated. In case of vertical joints, a V-notch shall be left in the joint by a triangular pointing tool.

Deep or struck pointing.

All lines shall be perfectly straight, truly horizontal or vertical and the mortar shall be so stiff that the pointing tool leave a clean-cut line, with no appearance of ragged edges.

SPECIFICATION NO. 15.8—Pointing

Pointing
Random
Rubble Stone
Masonry.

8. When random rubble stone masonry is pointed, the mortar shall be simply struck off with a trowel, and the work left showing frankly the irregularities in line and surface of the stones themselves.

Flush Pointing.

9. For flush pointing, the mortar shall be filled and pressed into the joints with a pointing trowel, and finished off level with the edge of the bricks to give the smoothest possible appearance to the work.

Raised
Pointing.

10. For raised pointing, the mortar after being filled and pressed into the joints, shall project about $\frac{1}{8}$ inch (3mm.) from the face of the joint and shall be finished neatly true to alignment.

General
Precautions.

11. The pointing must follow the actual joints and is not to represent false joints. On no account any chipping of the bricks is to be permitted. No portions of the surface shall be left out entirely to be patched up later on.

The mortar shall not be spread over the edges and corners of the bricks but these are to be left clearly visible. The practice of smearing mortar over defects in bricks to hide them, will not be tolerated, and will render the whole brickwork liable to rejection.

Washing
down after
pointing.

12. After pointing, the face of the brick shall be cleaned of all surplus mortar adhering to the face. No washing is to be done until the pointing has set.

Curing.

13. Lime-pointed work shall be kept wet for 5 days, and cement pointed work for 10 days after completing and the work protected during that time from extremes of weather.

Measure
ment.

14. Deduction for openings and additions for soffits, etc., will be done in the same manner as laid down in specification no. 15.1 for "Cement Plastering—One-Coat Work."

Rate.

15. The through rates for pointing cover the provision and erection of all scaffolding that may be necessary, the provision of all necessary special trowels and tools, and the protection and watering of the work during the period of curing. The labour rates include the provision and erection of all scaffolding, tools, watering charges and labour charges for above operations.

SPECIFICATION NO. 15.9—Striking Joints

1. Where in case of exposed brickwork in cement or lime mortar, pointing is not provided as a separate item, the joints in each day's work shall be struck by a separate mason following up the bricklayers. This also applies to "jibbi" work to be finished in the same manner.

Where required.

2. Joints shall be struck in the case of walls, by striking off the green mortar after the brickwork has been laid and then finishing the joints with a pointing tool. In the case of floors, the joints after being struck shall be trowelled smooth flush with the surface.

Striking Joints.

3. Striking joints, though giving the same finish ultimately as the pointing, is payable at a lesser rate provided in the common schedule than pointing as no fresh mortar is required.

Rate.

When striking joints have been specified and the contractor, with the approval of the Executive Engineer, for his own convenience elects not to do so as the work proceeds but to complete the pointing at subsequent date, he shall only be due payment at the rate for striking joints.

Both the labour and through rates for striking joints include the labour charges in above operations, water charges and scaffolding.

SPECIFICATION NO. 15.10—Whitewashing

- New Plaster.** 1. New plaster to be whitewashed shall not be trowelled to a glazed surface, otherwise whitewash will not adhere to it. The surface to be whitewashed shall be clean and smooth and thoroughly dry before whitewash is applied.
- Material.** 2. The lime for whitewashing shall be unslaked class "C" lime (or fat lime) and shall comply with specification no. 3.8.
- Re-white washing.** 3. In case of re-whitewashing, the surface shall be cleaned down and freed from any foreign matter and old loose whitewash ; such work being included in the rate for re-washing.
- Smoked surface.** 4. If the old whitewashed surface is discoloured by smoke, a wash of wood-ashes and water shall be applied before the coat of whitewash.
- White washing surface requiring repairs and renewal.** 5. When the old plaster requires repair, it shall be cut out in a square or rectangle and a new patch put in. If the Sub-Divisional Officer so directs, the walls shall be scraped clean of all old lime-washing and all holes stopped with lime putty. Any patches of new plaster shall receive two extra coats of whitewash before the regular coat is given, such whitewash being applied only after the patches are thoroughly dry. The men repairing the patches shall, therefore, work well ahead of the white washer.
- Preparing the whitewash.** 6. Water shall be added to unslaked fat lime in a tub on the site of work until the mixture is of the consistency of cream, and allowed to rest for 24 to 48 hours. The mixture shall then be strained through coarse cloth and, to each cubic foot of it, shall be added four ounces of gum (4 kgs. per cubic metre) dissolved in hot water. Water shall be added at the rate of about one gallon per seer of lime (5 litres per kg.) to produce a milky solution.
- Apply with a brush.** 7. The whitewash will then be applied with a brush to the specified number of coats. Each coat shall consist of four strokes of the brush, one in each direction.
- Each coat to dry finish.** 8. Each coat of whitewash is to be allowed to dry and shall be inspected and passed by the subordinate-in-charge before applying the next. When dry, a coat of whitewash shall show no sign of cracking, nor come off readily on the fingers when rubbed. The whitewash, when completed, shall form an opaque coat of uniform white colour, through which the old work does not show, and shall present a smooth regular surface free from powdery matter.

SPECIFICATION NO. 15.10—Whitewashing

9. The contractor shall take every precaution to prevent white-wash dropping or being splashed on any place or thing other than the wall or the portion of a wall being whitewashed.

Protection.

10. Deduction for openings and additions for soffits etc., will be done in the same manner as laid down in specification no. 15.1 "Cement Plaster—One Coat Work".

Measurement.

11. The through rates for whitewashing covers the protection of all places and things, needing protection and cleaning such places and things of all droppings or splashes of whitewash. The rates also include the provision and erection of scaffolding and ladders, which shall be shod at both ends with gunny bags to prevent damage to walls and floors.

Rate.

The labour rates cover the labour charges for above operations, ladders, gunny bags, and water charges.

The work of scraping old lime wash and repairing the patches is not included in the rates and shall be payable separately. The rates, however, include the wash of wood ashes and water on smoked surfaces.

The contractor shall also satisfy the Sub-Divisional Officer that he is equipped with the necessary materials, e.g. gunny bags, old newspapers, etc. for the protection of floors, fixed furniture, etc. before commencing work.

SPECIFICATION NO. 15.11—'Colour Washing'

Materials.

1. The colour-wash shall be made from class 'C' pure slaked fat lime, complying with the specification no. 3.8 and mixed with the necessary pigment to give the shade required. The pigment shall be such as to be unaffected by lime and is subject to the approval of the Executive Engineer.

Preparing the colour surface.

2. The surface to be colour-washed shall be prepared as specified for whitewashing (specification no. 15.10 paragraphs 3 to 5).

Preparing the colour wash.

3. After the whitewash has been prepared as in paragraph 6 of the above-mentioned specifications, the requisite colouring matter shall be added, the mixture stirred thoroughly and strained through clean, fine, cloth. The mixture shall be kept constantly stirred with a stick whilst being applied.

Full batch for one room.

4. Before taking a room in hand, sufficient colour-wash shall be prepared to cover all the walls and to a uniform tint. Work in a room shall be started sufficiently early in the day to ensure the room being finished before the evening.

Under coat of white wash.

5. New or scraped surfaces shall be given one coat of white-wash and then one or two coats of colour-wash as specified. Old surfaces, when the white or colour-wash is satisfactory, shall be given one coat of colour-wash. When replacing one colour with another of a lighter shade, the old colour shall be thoroughly scraped off and a coat of whitewash given before the new colour is applied.

Each coat to dry.

6. Each coat of white or colour-wash is to be allowed to dry and shall be inspected and passed by the subordinate-in-charge before the next is applied. When complete, the walls shall be of a uniform colour, free blotches, lines or cut shades, and shall present a smooth regular surface such as will neither crack nor come off readily on the fingers when rubbed.

Protection measurement and rate.

7. The instructions laid down in specification no. 15.10 for whitewashing paragraphs 8, 9 and 10 shall also apply here.

SPECIFICATION NO. 15.12—'Distempering'

1. The distempering shall be done either with dry distemper or oil-bound distemper, as specified or directed by the Executive Engineer. General.
2. The dry and oil-bound distempers shall comply with specification no. 3.39 and no. 3.40 respectively. Pale-boiled linseed oil shall comply with specification no. 3.37. Clearcole solution shall consist of weak glue size to which a small quantity of whiting has been added. Materials.
Alkali-resisting priming paint shall comply with specification no. 3.37.
- Brushes shall be 8 inches to 10 inches (20 to 25 cm.) wide flat brushes, having long bristles and shall satisfy specification no. 3.37.
3. The provisions of para No. 2 of the specification no. 16.1 for 'Painting-General' shall apply. Care of Brushes.
4. The provisions of para No. 3 of specification no. 16.1 for 'Painting-General' shall apply. Climatic Conditions.
5. Newly-plastered surfaces shall be cleaned and all irregularities and inequalities, sand papered smooth and wiped clean. Preparation of surface.
Old plastered surfaces shall be thoroughly cleaned of dust, grease, smoke etc. If previously whitewashed or colour-washed or distempered and if the previous coat is in a sound condition, the old coat shall not be removed. If the coating is in a decomposed condition, and is flaking off, it shall be taken off by rubbing down with sand paper, washing off completely and allowing to dry. All cracks, holes and surface defects shall be repaired and the surface rubbed smooth, with a sand paper and wiped clean. The surface shall be absolutely dry and stable before distempering is commenced.
6. For dry distempers, there is usually no need for priming. If the surface to be distempered, is very porous, a coat of clearcole solution shall be given and then allowed to dry. Priming coat.
- Before applying oil-bound distempers to newly plastered surface, it will be desirable to wait for 12 months after plastering. If it is not possible to wait, the newly plastered surface shall be given a coat of alkali-resistant priming coat. On old plastered surfaces, a coat of clearcole solution or any other special primer recommended by the manufacturer shall be applied and allowed to dry. No priming of old distempered or whitewashed surface is necessary.
7. Dry distemper shall be applied in one or two coats, as specified. Under coat and finishing coat.
The dry distemper shall be stirred slowly in clean water using 1/2 pint of water per pound (0.63 litre per kg.) of distemper (or as specified by the manufacturer). It shall be allowed to stand for at least 30 minutes (and

SPECIFICATION NO. 15.12.—'Distempering'

if practicable, overnight) and stirring shall be resumed until the mixture is of an even consistency.

Oil-bound distemper shall be applied in one coat for old work and two coats for new work and when shade is to be changed, the oil-bound distemper shall be thinned in the proportion by weight of 4 parts of paste with one part of cold water (or as specified by the manufacturer), so as to form a smooth and uniform mixture suitable for application by brushing. Before application, the mixture shall be well stirred to allow the water to incorporate properly with oil medium, and then left to settle; this prevents air bubbles. The appearance of the work is improved, if after mixing the distemper is strained through muslin. For exterior work, before thinning, 1/4 pint of pale-boiled linseed oil to each 14 lb. (0.2 litres per kg.) of oil-bound distemper shall be added. The second coat, if required, shall be applied only after the first has hardened and dried.

Method of Application.

8. The distemper of either type is to be applied quickly and boldly, leaving no dry edges. The brush is to be dipped and stroked crosswise on the wall, then immediately stroked up and down, and stopped. The brush shall be used lightly avoiding heavy pressure with the side of the brush. Two men shall work on a wall together, one working from the ceiling downwards as far as he can reach and second following him, applying the distemper below. No patchy overlaps shall be tolerated under any circumstances. Care shall be taken to see that the work is well covered as patches missed cannot easily be retouched afterwards.

Before starting work, enough distemper shall be mixed to finish one room. Each room shall be finished in one operation and work shall not be started in a room so late that it cannot be finished the same day.

Cleanliness.

9. The provisions of para 12 of the specification no. 16.1 on General, shall apply.

Measurement.

10. The provisions of para No. 10 of specification no. 15.10 for 'Whitewashing' shall apply.

Rate.

11. The provisions of para No. 14 of specification no. 16.1 'Painting-General' shall apply.

SPECIFICATION NO. 15.13—Finishing with Cement Paint

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| 1. Cement-based paints (like 'Snowcem, Robbiacem', etc.) shall be used for exterior decorative work. | General. |
| 2. The cement-based paint comply with specification no. 3.38. | Materials. |
| 3. The surface of new walls shall be cleaned of dust and other foreign matter. Old and previously unpainted surfaces shall be thoroughly washed down and scrubbed well to remove dirt. The fungus, if present, shall be killed as specified in para 5 of the specification no. 16.4 for "Painting Plastered and Concrete Surfaces." Old surfaces painted with ordinary oil or synthetic enamel paint shall be thoroughly scrubbed with wire-brushes to remove the old coats down to the original surface, while old surfaces, previously painted with cement-bases paints, shall be freed from dust and any loose flakes that might be present. If the surface is discoloured with fungus, it shall be killed in the usual manner. | Preparation of surface. |
| <p>All patches and cracks in the surface shall be repaired to make the surface smooth. The surface shall be wetted before the finishing is applied.</p> | |
| 4. Two parts of cement paint shall be added to one part of water and mixed to a normal creamy consistency ; care shall be taken that the paint in added to the water and not <i>vice, versa</i> . After thorough mixing, one part of water shall be further added and the mixture stirred well. Only sufficient quantity of paint shall be mixed which is sufficient for an hour's work. | Mixing. |
| 5. The solution shall be applied on the cleaned, wetted surface, working it will into the surface with a stiff brush. To avoid cracking and flaking, working in the sun shine shall be avoided, where possible. In dry weather, the surface after application shall be lightly sprayed with water to keep it wet. If specified, the second coat of paint shall be applied the next day in the same manner. | Application. |
| 6. The provisions of para 12 of specification no. 16.1 on "Painting General" shall apply. | Cleanliness. |
| 7. The provisions of para no. 10 of specification no. 15.10 for "Whitewashing" shall apply. | Measurement. |
| 8. The provisions of para no. 14 of specification no. 16.1 for "Painting General" shall apply. | Rate. |