

Horgan & Webb

Restoration & Conservation

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PLASTERING ONTO BRICK OR STONE BACKGROUNDS

Background Preparation: follow good working practices, ensure that the background is thoroughly clean. If the background is saturated check externally for cracks or other causes of water penetration. Causes of damp should be remedied and cracks should be cleaned out, (packed with low fire clay tiles or slate if necessary) and sealed with a pointing mortar.

Keying: Joints should be raked back (normally 10mm) to provide a key for the under coat.

Suction Control: apply sufficient water to reduce excessive suction, especially on bricks and porous stone. On many occasions this is done the day before, if necessary several times with the last damping just before application starts. Apply water starting at the top of the structure.

Old bricks require more water than new ones. The top of the structure will dry out before

the bottom. (In base coats this means that scouring back and keying of the lower section might have to be done later than the upper section. Always dampen down before applying

subsequent coats)

Dubbing out: on defaced surfaces or in areas with a large amount of damaged joints it might be necessary to apply a dubbing out coat (using a 3-4mm down well graded aggregate) to provide a relatively level surface. In most cases this will be sufficient and joints or holes will not have to be filled with rubble unless quite deep. When a dubbing out coat is used let it set sufficiently before keying it. The most efficient way to apply a dubbing coat is by harling. The strength should, as always, be compatible with the type of

background but a mix of one part lime to two parts grit sand is recommended.

Apply base coat or scratch coat after approx. 3-4 days (more if very deep recesses have been filled)

Undercoat/Scratch Coat: to be applied 3-4 days (or more, depending on atmospheric

conditions) after completion of the daubing out.

The under coat is to consist of one part lime to three parts grit sand. Just before the mortar is ready for application horse, goat, cow or yak hair should be added to the mix approx. 0.5 kg per 100 litres – or one three-inch roll, cut in half, per mixer-load.

Thickness can vary according to the overall thickness required but it is normally between 10 and 12 mm. It must not be applied over 15 mm thick. If this is required it should be done as an extra coat (two intermediate coats) each not above 12 mm. The thicker the intermediate coats the longer the waiting time before each application. Provide a criss cross key, creating 25-35 mm diamonds, with a pointed but blunt wooden lath.

Where different materials meet, and where there are timber lintels and other changes in the background material it is necessary to fix timber laths on counter laths.

Float Coat: to be applied 4-5 days (or more, depending on atmospheric conditions) after completion of the scratch coat. Again, this plaster should be haired in the same proportions as for the scratch coat.

The thickness should be kept between 9 and 11 mm. On walls screeds should be laid out to ensure a level surface is achieved. Alternatively to achieve a uniform and level surface fix vertical timber battens on the wall at 2-2.5 m. interval. If the wall is uneven use spacers and check that battens are straight with a plumb level. Screed off excess mortar between battens with a wooden or aluminium straight edge spanning between the battens.

When battens are taken down, fill in strips with the same mortar.

Scour back and key with a devil float or scratch comb after initial setting. Check for shrinkage during the first 2 days and, if necessary, lightly dampen the relevant area, scour back and re-key. Do not apply a finishing coat for 4-5 days, until undercoat is adequately firm and any small amounts of shrinkage are complete. This is especially critical on timber lathed ceilings.

Finishing Coat: Use a well matured, un-haired mix of one part sieved lime putty to one part fine silica sand for a fine internal finish and for an external finish use one part lime putty to two parts of a good quality building sand and provide a sponge finish. This top coat can be applied in two thin coats immediately after each other.

PLASTERING ONTO TIMBER LATH

Wood lath backgrounds should be well wetted the day before, and again 2 hours before work proceeds. The constant principal is that at no time should the lath be so dry that it will absorb moisture rapidly from the first coat when it is applied. If the wall becomes dry in patches, these areas should be damped again to ensure uniform adhesion.

Hair must be added to all but the finishing coat. The mortar for the first coat should be stiff enough to hold up when laid, but sufficiently plastic to squeeze easily through gaps between the laths. The first coat should be laid in a diagonal direction across the lath. After the surface has steadied up provide a criss-cross key with a pointed wooden lath. The first coat should be mixed at the same ratio as the first undercoat described above and laid to approx. 12mm.

Subsequent coats are applied and looked after in the same way as is described above. Any subsequent under coat/float coat on the ceiling will need to match in with existing levels allowing for a skim finish of approx. 2-3mm.

If lath is to be treated against insect and fungal attack it is to only be treated with a waterbased

carrier solution and must be fully dried out before any work commences. Areas still wet from timber treatment will cause failure.

Before plastering starts it is essential that all laths are sound and securely fitted. Any new laths should be laid so as not to create long continuous joints and they should be left a few mm short of each other to allow for swelling when wetted.