GENERAL RULES OF NATURAL PLASTER

Rule #1 The surface where every coat is being applied must be WET before applying the coat.

Rule #2 Lime plaster must be cured slowly. Do not let the plaster dry out for a couple of weeks. Mist the walls several times a day as needed to maintain moisture. We protect the exterior from the sun during curing by the use of burlap, which we hang over the wall.

Rule #3 Rounded Corners are good. Voleada.

Rule #4 MUST HAVE SOME SORT OF OVERHANG ON THE ROOF TO PROTECT THE PLASTER FROM EXCESSIVE WATER. This can be achieved with a small overhang of 5-7 cm with the cap on the parapet.

Rule #5 If one is not worried about maintaining a completely natural plaster, cement strengthens the mix. Typically, 1 shovel of cement per 2 buckets of slaked lime.

1) Wall Preparation

A mechanical bond is an important element of natural plasters. Providing a key for the plaster to attach to can be achieved in several ways. When laying the blocks up, it is unnecessary and counterproductive for the bed and head joints to be filled at the inner and outer surface. The joints should be left rough and if they are not completely filled, it is good. All loose mortar should be removed from the surface. Blocks should be roughed up with the back of a hammer to provide more key.

Joints can also be opened up and a rajuela system used to ensure adhesion.

We use a three coat system for lime and clay plaster.

Adhesion Coat

The first coat that we put on the wall is the adhesion coat. The coat is thrown on the wall (sarpeada). The adhesion coat is a lechada of:

2 parts slaked lime
5 parts sharp, clean sand (1/4 " screened)
½ part baba de nopal.

Hydrated lime is slaked in 200L barrels. Lime and water are added together and mixed to the consistency of sour cream. The allows for greater water absorption with the lime producing an easier mix to work with. 5 bags of lime and 9-10 buckets of water fit in a 200L barrel.

Baba de Nopal is made by cutting pencas de nopal in 3cmX3cm chunks, filling a barrel ¾ with the chunks and adding water until it is filled. This is brought to a boil, which time the heat is removed. When cool, this slimey mix is sifted and used in the mix. Remember only to produce enough nopal to be used within a couple of days because it will lose is binding quality and start to stink if left too long.

2) Base coat

The base coat is the same mix as the adhesion coat, only thicker. This coat is also harled (sarpeada). This coat is 1 – 1 ½ cm thick and is used to smooth the surface, preparing it for the finish coat. String lines are placed for plum and maestras and reglas are used. The surface should be left rough to provide for proper adhesion of finish coat.

3) Finish Coat

The Finish Coat is applied with a trowel about 4 mm thick, left to set up a bit and typically finished with a sponge on the interior and with a wood float on the exterior so as to leave it rougher, which allows plaster to stand up to the weather better.

The basic mix for the finish coat is:

5 clean, sharp sand (1/8 screen exterior, 1/16" screen exterior)
2.5 slaked lime
½ baba de nopal

We have used different mixes. Here is one additional:

Yellow Exterior Lime Plaster Finish
1/8 thick
5 - 5 gal. buckets of sand (1/16)
2.5 - buckets fine marble dust T-1
2.5 - buckets lime putty
2 L. nopal
300 grams yellow ochre pigment

Finished: