

Topic 2 INTERIOR PLASTERS

Part 4: Plastering

Plastering can be carried out by machine (using plaster machines, “mechanised plastering”) or manually.

Mechanised plastering

Mechanised plastering is carried out by means of special machines:

- A universal machine for automatic mixing of the dry mixture with water and even supply of prepared mortar, which is often called “turbosol plastering machine” or “plastering machine”.

The machine is supplied with the required amount of water and dry mixture. The machine stirs the mortar. By means of a pipe system and the application of pressure, it pumps out the mortar and the operator spread the mixture moving the hose from left to right and top to bottom. The next stage is manual smoothing/polishing the surface



Figure 1. Turbosol plastering machine

- Pneumatic machine gun for applying plaster (gun). It is operated similarly to the machine for applying plaster



Figure 2. Pneumatic machine gun



- Automated plastering system (Robot) – this is a double-action automated system: first, it applies the prepared mortar, then it smoothens the surface. This type of mechanized plastering could lead to a significant increase in productivity (plastering of about 500 m² per day)



Figure 3. Automated plastering system

Mechanized plastering is utilized when applying rough and/or fine lime plaster, lime-cement plaster or gypsum plaster. This does not apply to decorative and structured plasters

Manual plastering

With rough and fine plasters – beads of plaster with a diameter of 25-30 cm are applied every 1.50 m, which are then combined into guiding strips (“mothers”). Mortar is being applied between each of the guiding strips and with the help of a trowel (lightweight aluminium trowel, 2 cm long) it is smoothed. According to plastering technology, a float or a trowel is used for smoothing the applied layer or applying the finishing layer.

With decorative and structured plaster – applied on a well-plastered wall. There are a couple of ways of plastering depending on the type of decorative plaster:

- The application is performed with a long-haired roller, brush or a plastic trowel. The thickness of the applied layer depends on the selected secondary decoration technique
- The application is performed with a stainless-steel trowel, a small brush, artificial grass, or templates
- Application for acrylic plasters (Venetian) – the product is applied in three layers with a trowel for Venetian plaster: Layer 1: spread the mortar evenly and leave it to dry for 10-12 hours. Layer 2: apply a thin layer of the product to achieve a completely smooth surface. Leave it to dry for 6-8 hours. Layer 3: apply fine “masks” and polish the surface using the edge of the trowel.

Technological breaks (TB)

Technological breaks are necessary because it is a process where hydration, solidification and hardening of the binder is necessary:

- TB for maturing of the substrate
- TB between the application of individual layers of plaster
- TB for the finishing layer (decorative plasters)