



Angera (Province of Varese, Italy) NEW BALCONIES AND FAÇADES

CUTTING-EDGE PRODUCT SYSTEMS TO RESTORE A FAÇADE,
REPAIRING CONCRETE AND WATERPROOFING THE BALCONIES

Problems and solutions

The successful outcome of maintenance work of façades is highly dependent on the quality of the renovation work carried out prior to painting. Over the years, Mapei has developed numerous new, cutting-edge technologies to ensure the best result of these operations. They include two special mortars for carrying out quick repair work on concrete, PLANITOP SMOOTH & REPAIR and PLANITOP SMOOTH & REPAIR R4, shrinkage-compensated, thixotropic, fibre-reinforced, cementitious mortars.

If we glance upwards while we are walking the streets of our towns and cities, we will soon realise how most European buildings can be badly affected and show the signs of the passage of time: ruined façades, detached render and concrete structures with exposed rebar and clear signs of damage.

For instance, all the apartment blocks built between the end of the Second World War and the nineteen eighties in Italy have a certain degree of damage or deterioration.

This is why restoring the façade of apartment blocks is a job that becomes an absolute necessity after

a certain number of years. Cracks, mould stains and detached render on the external façade of buildings need to be evaluated very carefully and thoroughly. And that is exactly what happened when tackling the restoration work on the façades of this large apartment block in Angera, on the eastern shore of Lago Maggiore in Northern Italy, which included the use of various Mapei product systems.

Waterproofing the balconies

Repair work on the façades of the apartment block in Angera commenced with waterproofing the bal-

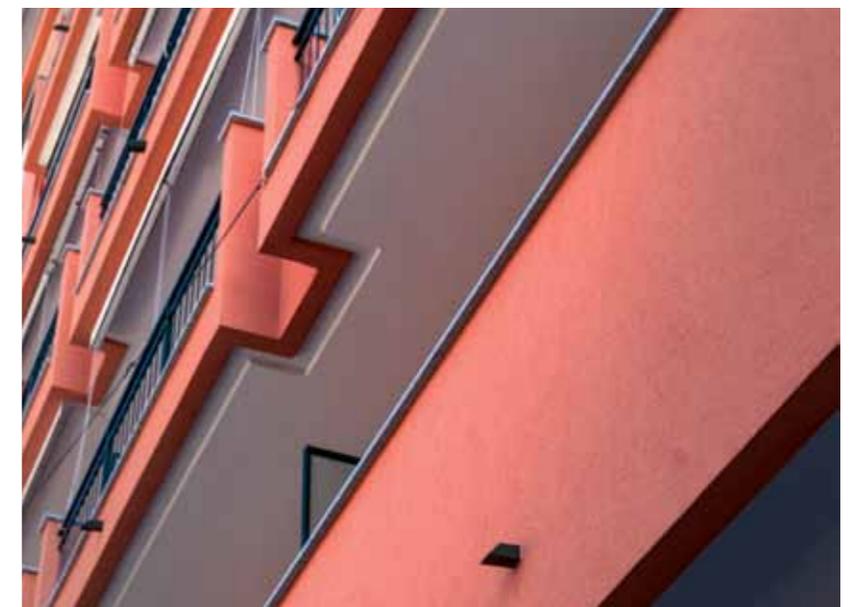
conies. Once the loose tiles had been removed, the gaps in the surface were filled with ADESILEX PG4 two-component, thixotropic, epoxy adhesive with modified rheology.

The surfaces were then sanded down and cleaned thoroughly, before installing DRAIN FRONT, TPE angular pipe unions for lining drains on parapets, which were bonded in place using again ADESILEX PG4 adhesive. The area was then waterproofed with MAPELASTIC two-component, elastic cementitious mortar reinforced with MAPENET 150 alkali-resistant fibre glass mesh. The waterproofing system was hemmed in along the walls around the outside and blended in with the joints, corners and edges by creating fillets made from MAPEBAND SA self-adhesive butyl tape with alkali-resistant, nonwoven fabric.

Once the MAPELASTIC layer was fully cured, the tiles were installed using ADESILEX P9 high performance cementitious adhesive with no vertical slip and extended open time. The joints were then grouted with ULTRACOLOR PLUS high-performance, anti-efflorescence mortar with water-repellent DropEffect and anti-mould BioBlock technology.

Restoring and finishing off the façade

Once all the areas of render and concrete that were no longer firmly attached to the substrate had been removed, the reinforcing rods that had been left exposed following this operation were cleaned and treated with MAPEFER 1K, one-component, corrosion-inhibiting mortar. The areas from where the concrete had been removed were reintegrated



with PLANITOP SMOOTH & REPAIR, a quick-setting, fibre-reinforced, shrinkage-compensated, thixotropic cementitious mortar.

The areas from where the render had been removed, on the other hand, were reintegrated and the substrate was skimmed with PLANITOP 200, a water-repellent, cementitious mortar with a fine, natural finish, reinforced with MAPENET 150 mesh. Then, once the repair work had been completed, PLANITOP 200 was also used to completely smooth all the surfaces. Once the surfaces had cured sufficiently, the façades were treated with a coat of SILANCOLOR PRIMER a silicon resin based primer in water dispersion with high penetration properties. The final finish was obtained by applying SILANCOLOR TONACHINO, a water-repellent, transpirant silicone resin based plaster for "rustic" effect exterior coatings, suitable for walls requiring attractive finishing, excellent water-repellence and vapour permeability.

The intervention began by waterproofing the substrates of the balconies with MAPELASTIC and MAPENET 150, while the finishing operations on the façades were carried out with SILANCOLOR PRIMER and SILANCOLOR TONACHINO.

PLANITOP 200

Water-repellent, cementitious skimming mortar with a fine, natural finish for concrete and plastic, glass and porcelain tile coverings.

FIND OUT MORE



TECHNICAL DATA

Rossella apartment,
Angera (Italy)

Year of construction: 1968

Year of the intervention:
2018

Intervention by Mapei:

supplying products to waterproof balconies and renovate the façade

Design: GZ Studio

Works direction:

GZ Studio

Contractor: Impresa Edile
Francesco Curci Srl

Mapei distributor: A.P.A.
di Papotti Adriano & C. Snc

Mapei coordinators: Paolo
Puricelli, Mauro Boselli,
and Fabio Bergamaschi,
Mapei SpA (Italy)

MAPEI PRODUCTS

Repairing and waterproofing balconies:
Adesilex PG4, Drain Front,
Mapelast, Mapeband SA,
Mapenet 150

Installing and grouting ceramic tiles: Adesilex P9,
Ultracolor Plus

Repairing concrete:
Mapefer 1K, Planitop

Smooth & Repair, Planitop
200, Mapenet 150
Wall coatings: Silancolor
Primer, Silancolor
Tonachino

For further information
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