# New Life for the Arcade

The Galleria Colonna in Rome, which has finally re-opened its doors to the general public after years of being closed, is now named after the famous Italian actor Alberto Sordi.







gates that open from 8 a.m.-10 p.m. and at the moment contains thirty-five shops, including a huge book shop, and is completed by an underground car park with room for 2,000 vehicles and glass windows closing off the entrances along the high street and Via Santa Maria. A power airconditioning system hidden away behind the awnings makes the arcade a haven sheltered against the summer heat and winter cold. In addition to shops, the top part of the arcade will soon house offices for the Prime Minister.

### The Arcade's Historical Background

The long history behind the arcade's construction began back in 1872 with a proposal to extend Piazza Colonna after the demolition of Palazzo Piombino. The widest possible range of design projects and ideas (one of the projects actually envisaged building an arcade similar in size to the one in Milan) saw the people of Rome involved in heated discussions until the final decision was made in 1911 to approve the project by the architect Dario Carbone.

But it was another ten years before Colonna Arcade was actually completed: it was officially opened only on 20th October 1922. The arcade's fate was closely tied to the new role played by Piazza Colonna in the city's socio-political life after the unification of Italy in 1870.

The fact that Palazzo di Montecitorio, the building chosen to host the Italian House of Representatives, was so nearby meant the square was much more busy and turned into a congregation point for the multifaceted world of journalists, clients and brokers on the fringe of the world of politics. Its public function was further enhanced when the head-quarters of the Italian mail service was moved from Palazzo Madama, now used to hold the Italian Senate, into the building on the edge of the square over on the Montecitorio side, where the Ministry of Education was also located for a while.

## The Philosophy Underpinning the Renovation Work

The reason for the restructuring and other works was always the same right from the start: to fit in with the existing structures and not alter the static behaviour of the entire complex. At the beginning of the works, which happened in August 1999, the structural surveys and geological research uncovered the nature of the ground, most significantly checking and verifying whether the position of the fault referred to in the papers was the same as its real position 90 cm below the floor surface in the underground level. Studies were then carried out to check the correlation between this fault, the votive water in nearby Santa Maria in Via Church, and the water running beneath Via del Tritone, assessing how it interacts with flooding of the Tiber.

It was found that there were a number of communicating "compensation chambers", which even now prevent the water level, in certain weather conditions, from rising to the base of the construction and flooding the building. The old technical handbook was extremely useful and interesting for analysing the building structures and construction features composing it, making it possible to check the technology and materials used back then. After completing the monitoring and analysis of all construction features, the works proper began in January 2001 with the knocking down of all the building work constructed over the original architecture and radical repair work on the existing structures, while deliberately holding onto their geometric design and key features. Examining the documents and papers found and kept in the Rome City



Archives made it possible to create the mosaic, that was originally supposed to decorate the arcade but was never actually installed for financial reasons, exactly as it was designed by the architect Dario Carbone. The glass surface of the roof awning and all the decorations and mouldings on the walls inside the arcade were restored to their former state. Lengthy restoration and cleaning operations uncovered the ornamentation made of "pavonazzetto" marble decorating the central area in the very heart of the arcade originally used for banking purposes and then later adapted for film and variety shows. Special care was also taken over repairing the lighting inside the arcade by restoring and, in certain cases, copying the original globes. The air-conditioning system, the modern entrance doors transparent so as not to alter the facades, the adapting of the electrical and fire-fighting systems, the sound insulation and the improving of the safety mechanisms, all helped improve the building's quality standards, adjusting it to modern operating needs.

#### Mapei's Work

Mapei contributed to these complex works, involving the renovation of 4,000 square metres of flooring, 3,400 inside and 600 outside, by supplying the products for laying the deco-

# **Projects**



rative mosaic.TOPCEM\* mixed with gravel varying in grain size from 0-8 mm for thickness ranging between approximately 4-6 cm was used for making the screeds inside the areas designed for holding shops.

A sheet of polyethylene was also applied for sunscreening purposes. The substrate of TOPCEM\* was preferred for controlled shrinkage that takes place within 24 hours of casting and to ensure high mechanical resistance (30 MPa after 28 days' curing at 23°C and 50% relative humidity), which makes it ideal for taking flooring subject to constant, heavy traffic, as is the case here. After 4 days the product has a residual humidity rating of 2%, making it ideal for laying any kind of humiditysensitive flooring (stone material, resilient material, wood), and it can be walked on after just 12 hours.

This latter is a valuable and indispensable factor in preventing the installation work from being interrupted.

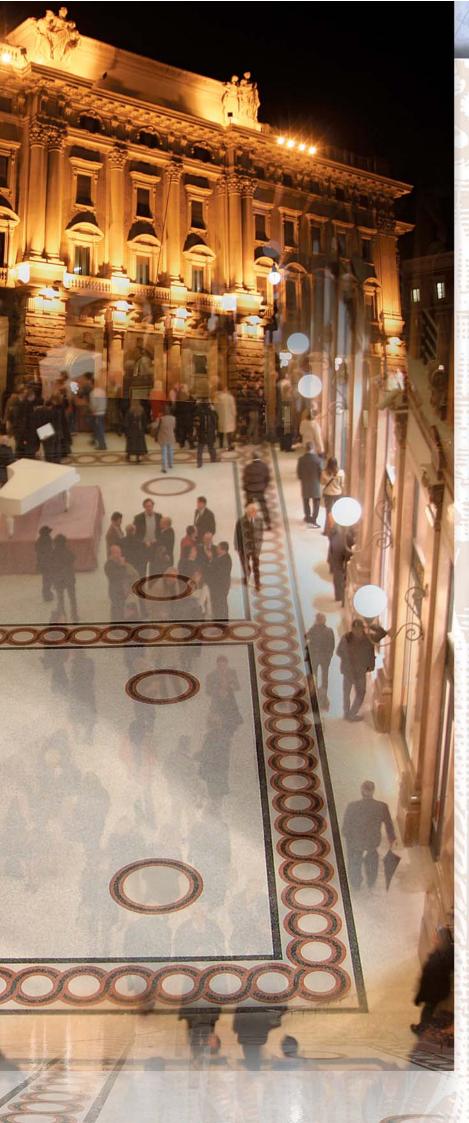
All the surfaces in the arcade and shops were treated using PRIMER G\*, a synthetic resinbased primer mixed with water used prior to smoothing to make the substrate evenly absorbent all over. The surface was the levelled using ULTRA-PLAN\* to get the substrates ready to be installed with flooring subject to heavy traffic.

Next the precious mosaic made of Botticino marble in the colours Verona red and Issoria green was installed in the central arcade, opting for the formats 2x2 cm, 1.5x1.5

cm and 1x1 cm, all in a thickness of 10 mm, carried out using ADESILEX P10\* mixed with ISOLASTIC\* instead of 50% of the usual water. This resulted in a product with better adhesive properties and more elastic (class C2TE/S1), ready for taking traffic or being grouted within 24 hours. ULTRACOLOR\* was used for the grouting because, in addition to perfectly even colour distribution, is does not generate efflorescence and is quick drying.

Outside, in front of the entrance to the arcade and opposite Piazza Colonna, 3 mm thick 20x20 cm and 60x100 cm slabs of Botticino marble were laid using white GRANIRAPID\* adhesive, ideal for both natural and artificial stone. GRANIRAPID\* is always used when looking for a two-component installation system ideal for rapidly refacing surfaces requiring, as in this case, quick installation. The entire job was grouted by using the fst drying mortar ULTRACOLOR\*. MAPEFILL\*, a high-flow non-





shrink grout that is extremely adhesive, has high mechanical resistance and meets the designer's elasticity requirements, was used for anchoring the concrete substrates to the metal carpentry of the shops and metallic housings. The restructuring of the arcade showed that technology and works of art can be brought together, and it is certainly a fine example of how to redevelop an old building that would otherwise be slowly left to fall apart.

Photos by Pino Mancini.

#### **TECHNICAL DATA**

**Galleria Colonna,** now known as Galleria Alberto Sordi, Rome (Italy)

**Work:** renovation and restructuring of the Galleria including screed making and installation of the mosaic and marble floor slabs

Years: 1999-2003

**Customer:** Immobiliare Colonna s.r.l., Rome (Italy) **Project and Works Management:** architect

Bruno Moauro

**Contractor:** Lamaro Appalti SpA Roma **Installation Company:** Memorie Srl

Mapei Distributor: products for laying floors, Innamorati Edilizia (L'Aquila, Italy); products for other

jobs, Lamaro Appalti (Rome, Italy)

Mapei Co-ordinators: Pino Mancini and Renato Soffi

\*Mapei Products: the products referred to in this article belong to the "Products for Ceramic Tiles and Stone Materials" and "Building Speciality Line" ranges.

The technical data sheets are available on the "Mapei Global Infonet" CD/DVD and at the web site: www.mapei.com.

Mapei adhesives and grouts conform to EN 12004 and EN 13888 standards.

Adesilex P10 (C2TE): white high performance cementitious adhesive with no vertical slip and extended open time for glass, ceramic and marble mosaic coverings

**Granirapid (C2F):** high performance, deformable, fast setting and hydration two-component cementitious adhesive for ceramic tiles and stone material **Isolastic:** flexible latex additive to be mixed with Kerabond, Kerafloor and Adesilex P10

**Mapefill:** high-flow shrink-free grout for anchor **Primer G:** synthetic resin-based primer in water dispersion

**Topcem:** normal setting, rapid drying (4 days), special hydraulic binder for screeds

**Ultracolor(CG2):** high performance fast setting and fast drying mortar for grouting joints of 2-20 mm, available in 26 colours. it does not generate efflorescences. **N.B:** The product has been replaced by Ultracolor Plus

**Ultraplan:** ultra-fast hardening self-levelling smootthing compound.