

INTERNATIONAL

[Realtà MAPEI]

ISSUE 65

65

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SERENE



TRADITIONAL



NATURAL



ROMANCE



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COVER STORY
 Fine example of contemporary architecture and a strategic hub for the regional and national high speed railway network, Naples Afragola is an important opportunity to integrate the urban areas of the local territory with the world of transport. The projects was designed by Zaha Hadid Architects and was put by CNN news network on the list of highly anticipated works of 2017.



SUMMARY

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NEWS

- 2 80 years and 18 short stories in the new Mapei monograph
- 4 The new Mapei website is now online!

TRADE FAIRS

- 6 Cersaie 2017
- 12 Marmomac 2017

PROJECTS

- 14 Naples Afragola HS Railway Station in Italy
- 30 Jardin de Chine in Montréal
- 38 Haukeland Paediatric Hospital in Norway
- 46 Five Palm Jumeirah Hotel in Dubai
- 50 InterContinental Los Angeles Downtown Hotel
- 54 Saint Petersburg Stadium
- 58 El Poris Lighthouse, Canary Islands
- 60 Apollo Theatre in Italy
- 68 48 Restaurant & Bar in Hungary

INTERVIEW

- 22 Zaha Hadid Architects: architectural experimentation and innovation
- 28 Canada: a land of opportunities

TEAMWORK

- 24 Mapei Inc.'s success story
- 34 Mapei in Norway
- 36 Prestigious visit of the Norwegian Royal Family

CERTIFIED QUALITY

- 64 GEV: 20 years in business
- 66 Internal Air Quality: a drive for Mapei

SOLIDARITY

- 72 Tour de Zalakaros in the name of solidarity

SPORT DIVISION

- 41 2017 Road World Championships in Bergen
- 74 Europa League: Atalanta put on great display at Mapei Stadium
- 75 Italy-Israel at Mapei Stadium
- 76 Carnevali: "My view on Sassuolo"
- 78 Cristian Bucchi: "We will always play offensively!"

IN THE SPOTLIGHT

Coloured grouts - inside front cover, Planitop Fine Finish pg. 19 and 21, external wall coatings pg. 33, Ultralite S1 pg. 40, Keralastic T pg. 49, Ultrabond Eco 185 pg. 53, Ultraplan pg. 57, Mapegrout T40 pg. 59, Topcem Pronto pg. 61, Ultrabond Eco 195 pg. 67, Adesilex P9 pg. 71, Ultralite Family pg. 80, Mapei sealants' new look - inside back cover.

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ERRATA CORRIGE

In the article about the works carried out on Angioino Castle (Lecce, Italy) that appeared in issue 64 of *Realta' Mapei International*, we failed to mention the following building contractors: HGV from San Severo (Foggia), Digitarca di Mola from Bari (Bari) and Tecnologia Edilizia Impianti from Valenzano (Bari). We apologise to the companies in question and to our readers.

80 years of history and experience

18 short stories in the new monograph

Certain moments in a company's history are more intense than others. These include momentous events that often coincide with reaching a goal or celebrating some kind of shared feeling commemorated by special occasions.

One of these occasions is the 80th anniversary of the founding of Mapei, which the company has been celebrating throughout 2017 in every country in which it operates.

MAPEI's marketing and communication department has provided the ideal means of conveying the values and content that have emerged down the years while at the same time announcing the company's latest goals and the targets it hopes to achieve.

In addition to a completely restyled corporate website and coordinated imagery reflected in all the company's many means of communication, two new MAPEI publications – one factual and the other fanciful – communicate the commitment and passion of MAPEI at 80.

The new official MAPEI monograph – published at the beginning of last summer – is the most powerful and striking embodiment of Mapei's business achievements and goals.

The new Mapei monograph, which was designed to inform the public about the goals set by its corporate mission and the growth and results achieved so far, has gone even further. It has ventured into the extremely effective, though certainly not commonplace, domain of "corporate literature".

Not merely documenting and providing information about the company's products like so many other corporate communication tools, this monograph artistically represents our company's awareness of its own identity.

After an introduction by the Mapei Group CEO, Giorgio Squinzi, and a brief reference to the company's origins, the monograph provides a snapshot of the various branches of the company, making good use of pictures to highlight the facts and figures decreeing its corporate success.

A crescendo of words and images culminate in a description of the 16 MAPEI product lines, with the story told in spectacular pictures of the most important international projects Mapei

products have been involved in.

After perusing the monograph, the reader is greeted with a most wonderful surprise. A second publication entitled "1937 - 2017: a long story in 18 short tales" expands the length and breadth of MAPEI history with a set of whimsical and vibrant short stories.

The slim volume opens with a famous quote from Rodolfo Squinzi, Mapei's founder, "Work can never be detached from art and passion".

Written by Fabio Longhi and illustrated by Carlo Stanga, the 18 stories weave a fanciful tale about Mapei that highlights the real-life solutions and contributions the company has made to major construction projects in Italy and around the world.

The stories cover a timespan of eight decades and feature buildings, infrastructural works, famous people and Mapei products themselves, as well as not-so-well-known contributors and their testimonials.

All the stories are indeed "tall tales", but they are based on facts and actual events. Each tale comes with a cast-

iron certainty: the quality of Mapei products.

When readers finish a story, they see that it is in line with what the Mapei monograph states about global communication – that it must always be "clear, complete and correct". Truth and integrity are the cornerstones of a credible brand identity and reputation. These qualities cannot be imposed; they must be real.

Art and literature can certainly help build a company's reputation, as exemplified by the Mapei monograph.

The delightful set of short stories proves that writers and artists can powerfully depict the passion and humour that lie within successful companies. This spirit gives birth to innovative products like those Mapei has been designing and manufacturing for the last 80 years in Italy and around the world.

These elegant publications are beautifully boxed in a slipcase that looks so good it is impossible not to open it and browse through its contents. We wish you all the joy we have found in producing the verbal and visual images that tell you who we are – MAPEI.

Enjoy your reading!

Factual and Fanciful – MAPEI celebrates 80 years

Roberto Spesi

Mapei.
"A formidable
team" that
thrives on
challenges.

Mapei presents
1937 - 2017
**A LONG HISTORY
IN 18 TOLD TALES**

1947-1956

Villa Reale, Milan⁽²⁾
Ere he saw Waterloo

Nicholas Bonaparte, an everyone knows, was quite a shy character, a voluble but taciturn, one might say shy. He dropped easily even with his closest and most trusted. He could only be brought to life by his curiosity over the grunts. When by carriage. They were in the city, the grunts. When by carriage. They were in the city, the grunts. When by carriage. They were in the city, the grunts.

ades later. But that's another story. When it came to art, though, Napoleon envisioned second thoughts. He recognized the expressive force and value of art as a means for projecting imperial power. He was so sure of this that he would have needed to find a way to come into the Gallery of Modern Art to approve just before he could recede a face left at the end of World War II. He had been left a face left at the end of World War II. The second floor of the MUSEM was a contrast to had no silhouette-based material past for eternal use. The system was the lapid to use. A legend soon grew up around the skin.

That is started with one of the Villiers or Villiers' estate. It was set late one night after supper before the castle of a teddy bear and the Nargis Datta. It was a piece of skin to which you could not move more than this. Napoleon's gaze and it would appear to rights just right hand in jacket. It would stand erect before the air and not in apples. Its gate came on the terrace.

Our production system: powerful, efficient, flexible and sustainable.

Cutting-edge production technology is used in Maber's production facilities, allowing the intense rhythm of the entire chain to be flanked by **constant quality control**, from raw materials to final packaging.

Counseling and Technical Services Division

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1,000
new formulas every year
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Designers, contractors, users,
building suppliers: all together
to work better and to get
long-lasting results.

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Prices the classic, ongoing exchange of information and ideas with our customers and building leaders. Make it clear that your company is willing to provide information on how to use their product lines that is necessary to guide them to the highest sales points for customers and building materials, year after year. Make it clear that you are willing to the building firm. Make it clear that you are willing to the building firm. Make it clear that you are willing to the building firm.

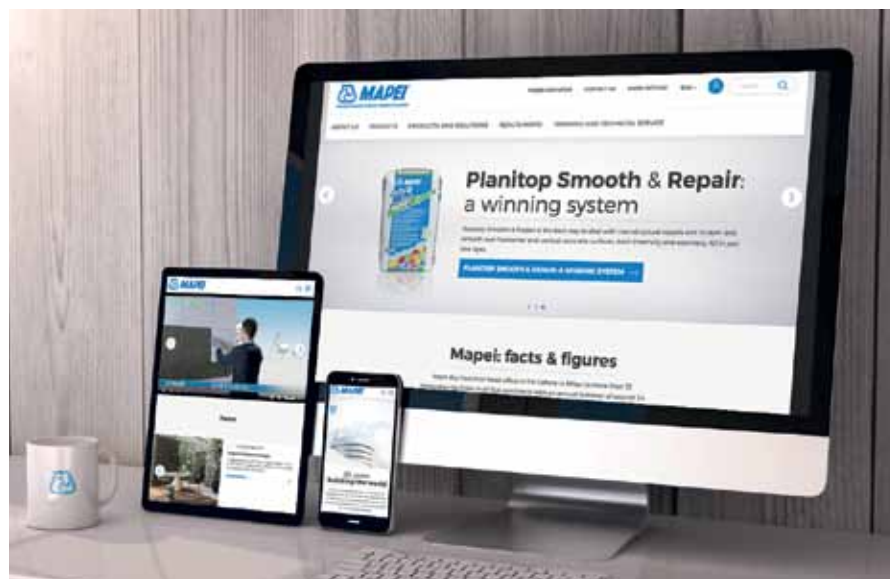
1977-1986

Financial Plaza, Phoenix, Arizona⁽⁶⁾
The Great Spirit
 will bring the waters

[illegible]

The new Mapei website is now online!

Work tool, corporate means of communication and so much more



The new corporate website, www.mapei.it, is now online: a treasure chest for the building world, because it informs, supports and engages users, providing all the latest news and practical solutions in an accessible way.

The new website has two main functions: it is a useful work tool and also an important means of corporate communication for the company, keeping users up-to-date with everything happening in the world of Mapei.

Easy, instantaneous browsing

Mapei.it website can be used from any kind of device from a desktop PC to a tablet or smartphone. Browsing is quick and easy thanks to its clear graphics and 80th anniversary iconography.

Users can choose from five options on the main menu: "About us", "Projects", "Products and Solutions", "Realtà Mapei" and "Training and Technical Service".

Each of these areas is full of content and links to other sections of the website: for example, a click in the "Projects" section provides access to an overview of Mapei's most important projects around the world, while the over 5,000 products are constantly visualised right through all the sections.

All the website content, from the products and solutions to the projects, news and articles from Realtà Mapei, are used synergistically to encourage "cross-browsing" that brings together the various sections in an across-the-board reading of the world of Mapei.

The "About Us" section focuses on the Mapei Group's "glocal" vision (global & local) as a major multinational company that is, in actual fact, a family-run business. Quotes from members of the Squinzi family provide an introduction to Mapei's strategic cornerstones (Research and Development, Internationalisation, Specialisation), the concept of Social Responsibility, and the company's commitment to the environment.

A work tool

The website is a useful work tool for anybody using it: designers, installers, businesses, retailers, ordinary people and customers, as well of course as Mapei staff worldwide:

- The search function is extremely powerful and found at the top of each page: constantly available to the user while browsing, it provides search results from the Products, Projects, Solutions, News, Realtà Mapei and Seminars and Events sections. For products - the real core of the world of Mapei - the search section has an autocomplete function to help users look for products with very similar



names that are hard to remember.

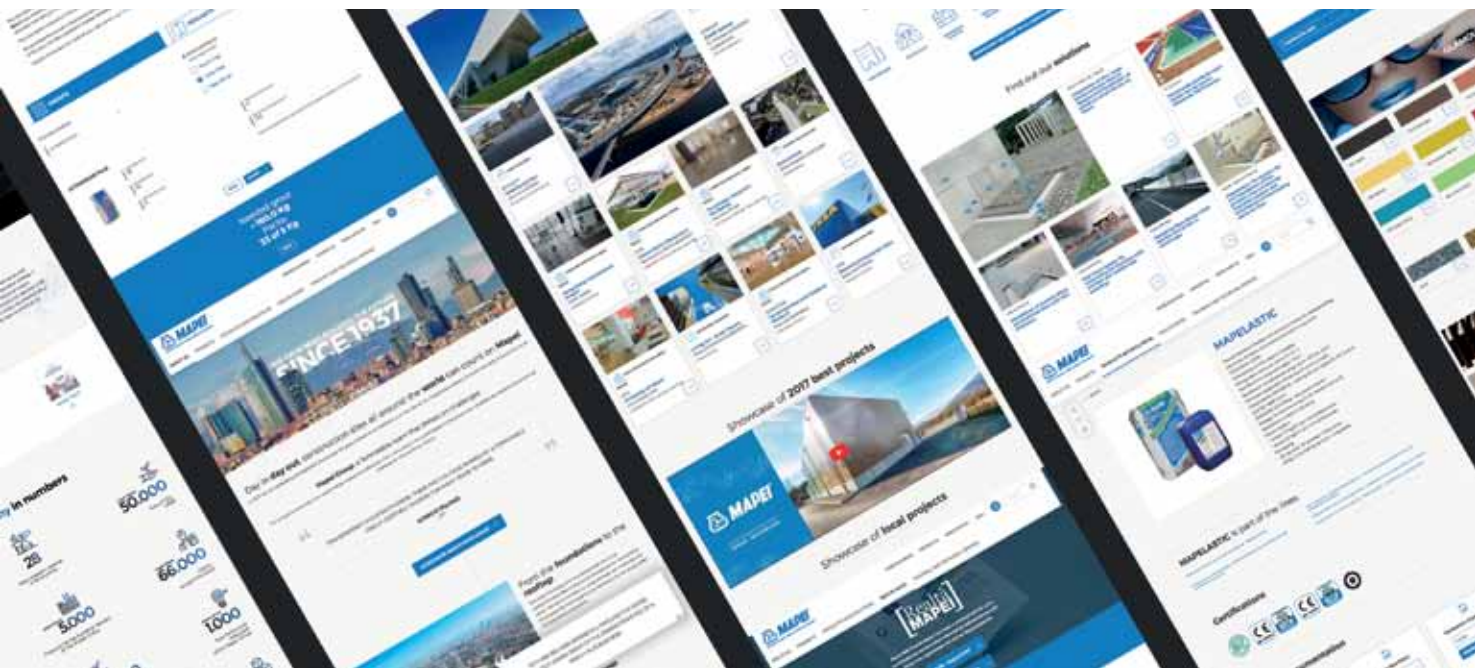
- The website also contains video tutorials, an intuitive dashboard for searching for technical documents, and tools for calculating product quantities to be used for your own projects.
- Designers will, likewise, find useful tools for helping them with their work, such as the tool for generating an LEED Declaration, calculation software ready to be downloaded, stipulations, and a set of BIM files.
- Every Mapei product line has its own dedicated space full of information forming a sort of mini-website. As well as showing products from the range, it provides lots of useful information: a description of the distinctive features of the line, correlated technical documentation, highlighted products, video tutorials, news, solutions, projects, articles from Realtà Mapei, training events, and the chance to get directly in touch with the line's product managers.
- Plenty of space has also been allocated to technical assistance, with a special section for getting directly in touch with the relevant departments and a list of agents operating in your area.

Area reserved for professionals only

The website also makes explicit reference to Mapei's commitment to provide training for people working in the building industry: operators in the industry can, indeed, enrol for seminars and conventions online.

Signing up also provides the chance to access the **MyMapei** section, a private area dedicated to the user that encompasses various different functions: you can sign up for the regular newsletter, receive Realtà Mapei magazine in paper form, and download calculation software. The MyMapei section also keeps a record of your favourites in the various sections for Products, Solutions, Projects and articles from Realtà Mapei; it shows any training events the user has enrolled for and indicates where the minutes can be found after the event; it also tracks any calculations made using the calculator for grouts and sealants, and even keeps a record of any LEED Declarations made.

Dive right in and enjoy the new look and feel!





Functionality and performances hand in hand with colour and design

Cersaie 2017

In the year which marks the eightieth anniversary of the company's foundation, Mapei could certainly not miss Cersaie, the International Exhibition of Ceramic Tile and Bathroom Furnishings, promoted by Confindustria Ceramica and organised by Edi.Cer. in collaboration with BolognaFiere, which was held in Bologna from the 25th to the 29th of September.

Thanks to a growth in the number of both Italian and overseas participants, Cersaie 2017 attracted 111,604 visitors, an increase of 4.7% compared with the 2016 edition. Confirmation that this is the reference trade event for the world market operating in this particular sector, which was completed and

enhanced with initiatives to help attract the world of architecture, interior design, installation, the media and consumers.

All these characteristics of the exhibition, along with an overall improvement in various markets, helped register a positive trend in the number of both Italian visitors (+5.0% for a total of 58,422) and overseas visitors (+4.3% for a total of 53,182) from almost every country in the world.

Representation and internationality were the key features of Cersaie, where every sector on show recorded positive trends over an exhibition of area of 156,000 m²: 869 exhibitors (+17 compared with 2016) from 41 different countries, represent-





The exhibition was another chance to celebrate Mapei's 80th anniversary

ing a total of 323 overseas companies, almost one third of the overall total. The ceramic tiles sector had the highest number of representatives with 457 companies, followed by the bathroom furnishings sector with 197 companies, confirmation of its importance for this exhibition.

80 years of innovation and constant quality

For Mapei, Cersaie 2017 was once again the ideal opportunity to present its new products and its most innovative, cutting-edge systems for the world of ceramics for the building industry. The Bologna exhibition was also the perfect occasion to take

stock of Mapei Group's activities and celebrate the results achieved in Italy and around the world. On the occasion of this milestone, Mapei published a celebratory monograph to present the history, values and commitment of the company over the last 80 years. The monograph, along with a collection of short stories, illustrates the most significant references that have marked the eight decades of the Company and the Group. The stories were available to visitors of the Mapei stand. The company website has also been completely revisited to help users look for and use all the information available (see the dedicated articles in this edition).

At Cersaie 2017, Mapei reiterated its commitment to environmental sustainability. Mapei products are formulated with innovative, recycled and ultra-lightweight raw materials and are developed to reduce energy consumption and to have very low emission of volatile organic compounds (VOC).





Two settings at the exhibition created with the monthly magazine Marie Claire Maison

A good example of Mapei commitment are its EPD's (Environmental Product Declarations), a kind of certified "identity card" which documents the impact a certain product has on the environment during its entire life cycle. Mapei currently has 172 EPD's available, which include product EPD's and system EPD's for installing ceramics and other materials.

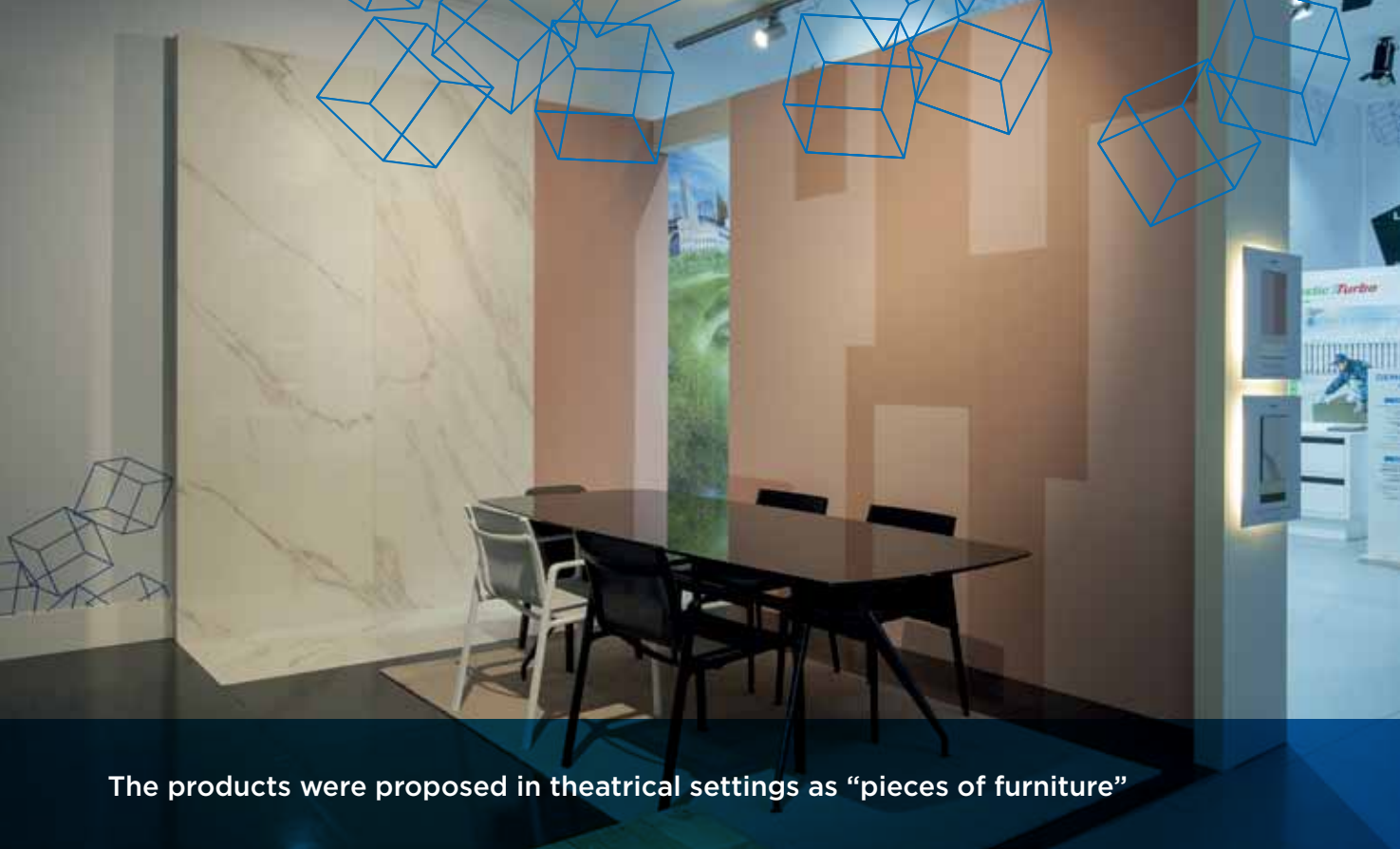
Design and colour according to Mapei

This year Mapei wanted to emphasise the importance of design and colour. Thanks to a series of photo-shoots with the Italian monthly interior design magazine Marie Claire Maison Italia, and in collaboration with the Cristina Nava Studio, Mapei

recreated two settings for the exhibition so that visitors could see for themselves the kind of results you can achieve with the company's solutions. Mapei products a "pieces of furniture": coloured finishes to protect and decorate walls, cementitious products for seamless floor and wall coverings with a materic effect, coloured grouts for ceramic tiles and mosaics, mortars for exposed finish masonry and special coloured, protective oils and lacquers for wooden floors become characterising features that enhance the surroundings where they are employed, without affecting their functional and performance characteristics.

The new MASTER COLLECTION BY COLORMAP® colour chart, with more than 1,000 different original Mapei shades for both internal and external surroundings, were also available for viewing on the stand.





The products were proposed in theatrical settings as “pieces of furniture”

Amongst the internal finishes on show were DURSILITE MATT, water-based wall paint with excellent white balance and a highly matt finish, and DURSILITE GLOSS, water-based, stain-resistant, washable finish for a highly attractive effect available in various bright colours. The collection also includes shades used for the range of external finishes, such as QUARZOLITE TONACHINO, shades for the MAPETHERM external heat insulation system, particularly recommended for their reflectance index of less than 20%, and those for the SILANCOLOR and SILEXCOLOR mineral-based systems.

SET THE MOOD COLLECTION is the solution for your coloured grouts and sealants: 50 different colours, as well as a transparent version, divided into 5 different collections to help designers and buyers recreate just the right atmosphere: Serene, Traditional, Natural, Glamour and Romance.

Tiling large formats

In the area dedicated to the display of materials the featured products were KERAFLEX cementitious adhesives and ULTRALITE lightweight adhesives.

KERAFLEX adhesives family is a favourite of tilers from all around the world for its performance properties when bonding all types of ceramic tiles, stone materials and mosaics on innumerable and different types of substrate, both internally and externally. Apart from the classic version, the family also includes KERAFLEX EASY S1 deformable adhesive for installing large formats over large surface areas, which is also suitable for floors in commercial and industrial environments, KERAFLEX MAXI S1 with very low VOC and KERAFLEX MAXI S1 ZERO, the first ever adhesive with zero climate-change effect: any residual greenhouse gas emissions are offset through the acquisi-





DEMO area as live stage to showcase MAPEI solutions

tion of certified environmental credits.

ULTRALITE is a family of innovative, lightweight adhesives. Unique in their kind, they have high performance properties and up to 80% more yield compared with other adhesives in the same class. These products contain lightweight natural aggregates or glass micro-beads that make them easier to spread and handle (they are supplied in bags weighing just 15 kg).

Innovation and completeness

Various new waterproofing products were on display on the stand, one of which was MAPEGUARD WP200: an alkali-resistant, waterproofing and anti-fracture membrane composed

of a special sheet sandwiched between two layers of non-woven fabric which forms a perfect bond for adhesive between the membrane and the substrate and between the membrane and the tiles, allowing ceramic tiles and stone material to be installed securely.

MAPEBAND EASY is the solution for rapid waterproofing interventions on terraces and balconies: rubber-backed tape used to waterproof edges and corners and suitable for use with a wide range of Mapei waterproofing systems.

For the urban décor, Mapei showcased the new solutions added to the MAPESTONE line for installing and reintegrating decorative stone road surfaces: MAPESTONE JOINT polyurethane binder for sealing grout lines between blocks, paving bricks and cobblestones and MAPESTONE JOINT CLEANER odourless cleaner, specific for removing residues of MAPE-





Sassuolo team and managing staff visiting Mapei booth

STONE JOINT.

MAPEI COLOR PAVING® is the dedicated system developed to create decorative concrete road surfaces with an exposed aggregate finish: a complete product system, from ready-mixed screed mortars to water and oil-repellent finishing treatments. And still: solutions for seamless wall and floor coverings, such as the highly attractive ULTRATOP LOFT, much appreciated by interior decorators and designers for their versatility and colour effects.

Also highlighted at Cersaie were adhesives and coloured finishes for wooden flooring, such as ULTRABOND ECO S968 1K one-component, high performance adhesive compliant with EN 14293 – Hard class, made from modified silylated polymers, a multi-purpose product offering high quality and reliability for the installation of all types and formats of wood-

en flooring, and ULTRACOAT OIL COLOR to colour wooden floors.

In line with the latest trends and the proposals available through retailers, Mapei solutions for the world of Luxury Vinyl Tiles (LVT): a complete range of products that guarantee reliable, durable installation of LVT in compliance with the principles of certified eco-sustainability and in full respect of international programmes to safeguard the environment and the health of mankind. Mapei offers solutions for installing bonded LVT, self-laying LVT, self-laying LVT with tack-dry technology and self-laying engineered LVT.

Numerous winning solutions that confirmed Mapei's central role in the international ceramics sector at a highly successful Cersaie exhibition which, in 2018, will be held in Bologna from the 24th to the 28th of September.





Mapei's creative functionality for marble and natural stone

Marmomac 2017

More business, more contacts, internationality, product culture and training. With this positive balance, the 52nd edition of Marmomac (the Stone Design and Technology Trade Fair), held at the Verona Exhibition Centre in Italy from the 27th to the 30th of September, drew to a close.

The Veronese exhibition focused on growth on all fronts and proved yet again to be the world's leading event for the world of natural stone, from raw materials and finished products to technology and processing equipment, right up to ground-breaking ideas in the field of design and architecture.

It was a rewarding event for Mapei which, as in previous years, exhibited their solutions for this important sector of the market at the trade fair. The figures speak for themselves: 1,650 companies at the event, of which 64% representing overseas companies from 56 different nations, and 68,000 visitors from 147 different countries. Internationality was also the main development directive for Marmomac 2017 with overseas visitors accounting for more than 60% of the total number.

Marmomac acts as a B2B promotional launch pad and plays a strategic role in the development of the Italian stone industry, with more than 75% of turnover coming from overseas markets.

Innovative systems and technologies for marble and natural stone

Marmomac was another opportunity for Mapei to celebrate its 80th anniversary in the business, a chance to show visitors the figures and goals achieved in Italy and around the world.

The Mapei stand at this year's event was used to exhibit the latest and most updated range of technologies and systems for this sector. Mapei placed particular emphasis on its proposals for substrates, waterproofing products, adhesives and grouts for natural and engineered stone and marble, and also presented new solutions for street furniture which have been added to its recent MAPESTONE and MAPEI COLOR PAVING systems. Amongst the mortars, the highlighted product was TOPCEM PRONTO, a ready-to-use, normal-setting quick drying mortar with Fast Track Ready technology, which is characterized by high thermal conductivity ($\lambda = 2 \text{ W/mK}$), which makes it particularly suitable for laying heated screeds.

Amongst the waterproofing products on display, apart from MAPELASTIC, the company's historic two-component flexible waterproofer, the spotlight this year was on MAPEGUARD WP 200 alkali-resistant waterproofing and decoupling membrane. The product of excellence for installing natural stone proposed at the trade fair was GRANIRAPID, a two-component, fast-setting and hydrating cementitious adhesive for bonding mar-

ble and natural, engineered and artificial stone on internal and external walls and floors.

Amongst the sealing products for natural stone and marble, the featured product was MAPESIL LM, a low-modulus sealant with BioBlock® technology and very low VOC, recommended by Mapei for sealing all those materials sensitive to acids and plasticisers such as marble, granite, sandstone and quartz, which has a particular chemical composition that helps protect substrates from staining.

Mapestone for architectural stone paving

As part of the MAPESTONE system for repairing, installing and grouting stone road surfaces, the new shade of "Dark Grey" for MAPESTONE PFS2 and MAPESTONE PFS2 VISCO ready-mixed mortars was presented. With the "Neutral" version, which was already available on the market, and the addition of the new "Dark Grey" version, Mapei can now offer a complete system to help balance the attractive finish of even the darkest of stone road surfaces. When MAPESTONE is used as a complete system (bedding plus grouting) it forms a monolithic structure which remains durable over the years and is used particularly for repair work on ancient pedestrian areas and streets when their overall appearance needs to be maintained. Other new arrivals to the MAPESTONE family were MAPESTONE JOINT one-component, solvent-free, odourless polyurethane binder, which is used to grout joints for setts, blocks and pebbles for flexible and pervious architectural stone paving, and MAPESTONE JOINT CLEANER, a specific, odourless cleaner and thinner for removing residues of MAPESTONE JOINT which can be used for any type of stone.

On-going training also held at the trade fair

Apart from actually taking part in the trade fair, the company's partnership with Marmomac has been ongoing for some time in order to attract and bring in numerous designers from different countries from all around the world, particularly the United States, so they can see for themselves all that's new in the world of marble and natural stone. And this year too, just like with the previous editions, Mapei accompanied a group of American guests, led by the company's American subsidiary Mapei Corp., to take a look for themselves at Mapei's technology and systems.



Excellence in natural stone installation

The group of guests also took part in a series of training courses about the world of stone and stone materials, covering all aspects from extraction to maintenance. These included two training sessions held by the Group's American subsidiary supported by Mapei Italy. The first one covered the petrography and technical application characteristics of the materials themselves and the second one discussed how to choose the correct adhesives for stone materials.

With a wish for a repeat of this year's signs of recovery, the next edition of Marmomac will be held, as always, at the Verona Exhibition Centre from the 26th to the 29th of September 2018.

Mapestone® Joint

Stop alle pozzanghere.
Put a stop to puddles.

NEW

Legante poliuretano monocomponente per la sigillatura delle fughe di cubetti, binder e ciottoli per la realizzazione di pavimentazioni architettoniche, elastiche e drenanti.

One-component polyurethane binder intended to grout joints for setts, blocks and pebbles for flexible and pervious architectural stone paving.



Inodore ed esente da solventi
Odourless and solvent-free

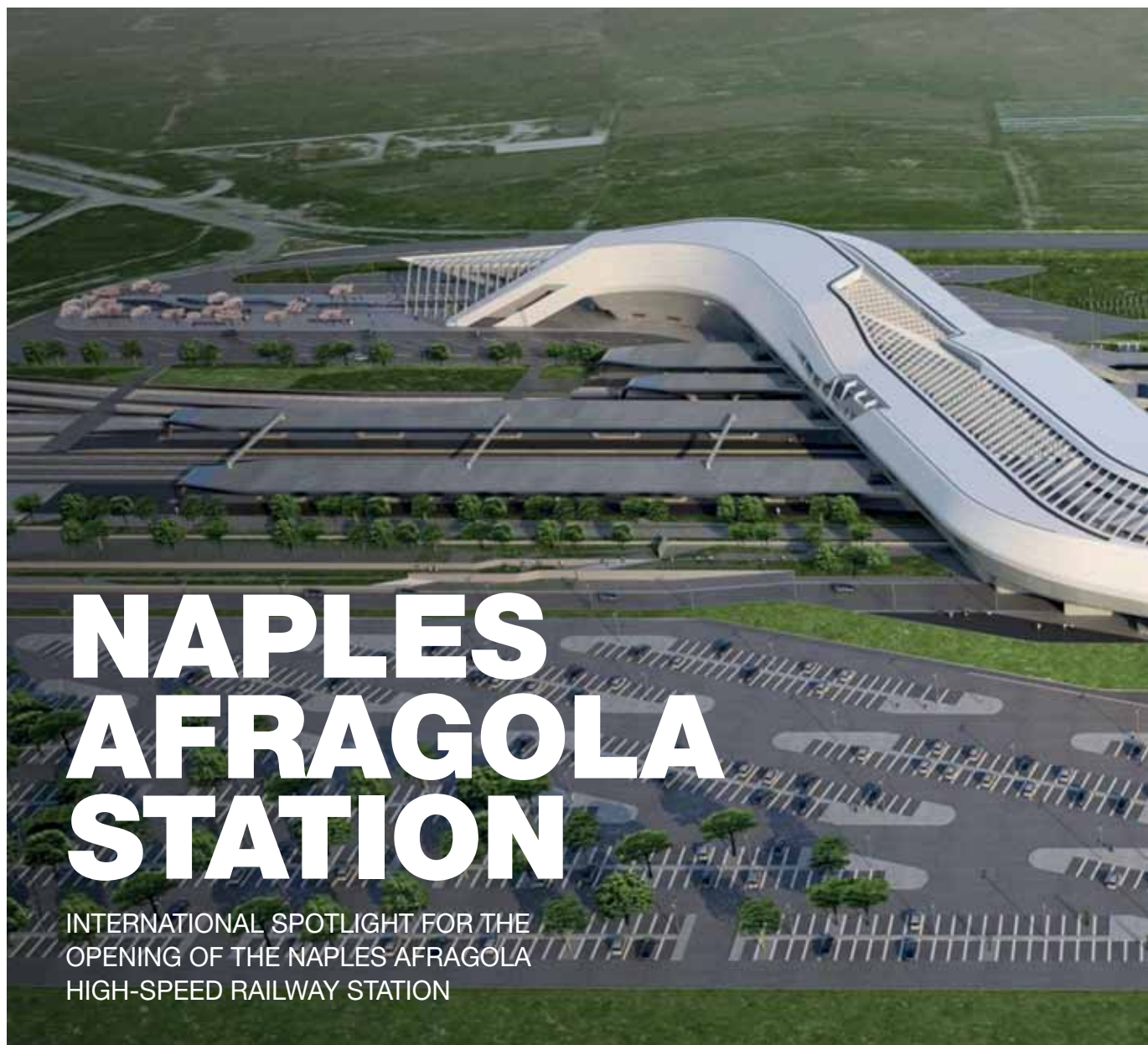
Resistente al gelo, ai sali disgelanti e al sale marino
Resistant to freezing weather, de-icing and sea salts

Elevata durabilità dell'opera finita
Highly durable finished work

Ridotte tempistiche di cantiere
Less time required for road works

Foncosorbente
Sound reducing





NAPLES AFRAGOLA STATION

INTERNATIONAL SPOTLIGHT FOR THE
OPENING OF THE NAPLES AFRAGOLA
HIGH-SPEED RAILWAY STATION

After two years of work and a contract worth around 600 million Euros, the Naples Afragola Railway Station was inaugurated by the Italian Prime Minister, Paolo Gentiloni, on the 6th of June. Because the station plays a strategic role in linking the north and south of the Italian peninsular, it is also known as the Gateway to the South. Apart from being a fine example of contemporary architecture and a strategic hub for the regional and national high speed railway network, Naples Afragola is an important opportunity to integrate the urban areas of the local territory with the world of transport.

Once it is working at full capacity, thanks to its future connection with the Circumvesuviana line, the hub will serve a catchment area of around 3 million potential users from North part of the whole region.

The station is the result of an international design contest with which the national railways group FS Italiane, through its subsidiary company RFI (Rete Ferroviaria Italiana), intended to launch a new era in large-scale architectural railway projects in

Italy. And 14 years after launching the four different contests for four different cities, the project can be considered on the road to completion following commissioning of the stations of Turin Porta Susa HS, Rome Tiburtina and Naples Afragola, with just Florence Belfiore missing from the role-call.

FUNCTIONAL AND MODERN: HOW A NEW STATION IS BORN

The station was designed by the British architect of Iraqi origin Zaha Hadid, who passed away in 2016 and carried out by Astaldi Group. It has sinuous lines similar to a train in motion and the CNN news network put it on the list of highly anticipated works of 2017.

The overall length of the central body of the station is 400 metres and, like a large bridge, straddles the platforms and connects the areas crossed by the railway lines, giving a sense of continuity between the surrounding landscape and the railway lines. The building of the station itself is characterised by large



SOME FIGURES

60 MILLION EUROS
CAPITAL INVESTMENT
IN THE CONTRACT

3 MILLION
PASSENGERS

25 MONTHS
TO COMPLETE
CONSTRUCTION

windows supported by steel and concrete walls that sit flush with the Corian dressing, a composite material made from acrylic polymer and alumina trihydrate (ATH), creating an effect of continuity between the opaque and transparent walls. The structure covers an area of more than 30,000 m², rises to a height of 8 metres above the level of the tracks, slopes away at the ends and is developed over 4 levels.

The first level is for the movements of the trains themselves which, during the first phase, will use four of the available platforms: two for arrivals and departures and two for the trains that do not stop at Naples Afragola. A further two platforms will be put into service during the second phase and they will be used for regional trains and for the extension to the Circumvesuviana line. On the second level of the station are the ticket offices and hospitality lounges of the railway company, which will provide various services for passengers in the new station. The third and fourth levels will be phased in shortly with shops and other commercial services available for the passengers.

A large glass cover of more than 6,000 m² was designed and installed on the roof of the station. The external area of the station will be 150,000 m² with gardens and a car-park for around 500 cars, which upon completion of the project will be extended to accommodate 1,400 cars. There will also be a taxi rank for 53 vehicles, a dedicated kiss&ride drop-off lane (free parking places for quick stops) and a bus terminus with 8 bays, which will then also be extended to 15 bays. Completion of the second phase and of the functional works for the commercial services will be gradually phased in over the coming years.

ARCHITECTURAL CONCEPTS AND LANGUAGE ACCORDING TO ZAHA HADID

Naples Afragola is a concrete example of a new concept in rail travel, in which the station is no longer just an arrival and departure point for trains, but forms part of a more far reaching concept of mobility, with roots in the urban fabric in which it is located. This was intended by the Zaha Hadid Studio to act



as a catalyser in the redevelopment of a highly urbanised territory located at the gateway to Naples. Designing a bridge-like structure over the tracks allows trains to have quicker stops, creates a more fluid internal distribution of traffic and, from an architectural point of view, guarantees a more rational use of spaces and the opportunity to use the main body of the station as a visual reference point for the flat landscape. The entrances are positioned at the two ends of the bridge-like structure so that the west entrance, which points in the direction of the city of Afragola, is close to the terminus of the public transport system, the car-park and access to the high-speed railway lines, while the east entrance is in correspondence with the access to the central part where the areas for the employees of the station are located.

Also, from a technological point of view, the layout of the bridge

allows the main body of the building to be oriented according to best practices in sustainability. Solar panels integrated into the projecting roofs, combined ventilation and integrated cooling and heating systems all help to reduce the amount of energy required over the year.

The construction technology adopted, on the other hand, may be summarised into three main sections: reinforced concrete for the base and glass panels for the roof over the commercial and shopping gallery, while for the raised structure, the external shell of the building (around 20,000 m²) supported by around 200 specially-shaped steel columns, is made from concrete and Corian, a material chosen for its high performance properties in these particular atmospheric conditions and its exposure to chemical agents. To increase the level of comfort in the station, allow natural light to enter from above and improve vis-



**30
THOUSAND M²
TOTAL SURFACE
AREA**

**6000 M² OF
GLASS FRONTAGE**

PHOTOS 1 and 2. Where required, the concrete was repaired and levelled off with MAPEGROUT T60 and MAPEGROUT LM2K. EPORIP was recommended to seal any cracks in the concrete.

PHOTO 3. Installation of the metal and glass roof structure of the station, where POLYGLASS synthetic membranes were also used.

PHOTO 4. The walls in the area alongside the platforms were protected against scuff marks and scratches with WALLGARD GRAFFITI BARRIER.

PHOTOS 5 and 6. The surfaces were skimmed with PLANITOP FINE FINISH, which was specifically developed for this site. They were then finished off with MALECH primer and COLORITE BETON paint in a tailor-made RAL colour.





7

550 TOTAL SITE
WORKFORCE

36 HS TRAINS
EVERY DAY

150,000 M²
OF OUTDOOR SPACE



8

PHOTOS 7, 8 and 9. The gallery where the shops and commercial services are located, the corridors connecting various areas in the station and the waiting areas were coated with MAPEFLOOR SYSTEM 31.

ibility in the station to help passengers find their way around, the internal walls are mainly in glass, while the artificial lighting is mainly by LED to guarantee higher efficiency from the lighting.

MAPEI INTERVENTION

Mapei Technical Services was also contacted right from the very start of the project for the new infrastructure to provide support for the work carried out on site and to work alongside the main contractors, Astaldi, the Works Director and the Zaha Hadid Studio. To complete the work on Naples Afragola station, the work was divided into two phases. Phase 1 involved the commissioning of the High Speed service area of the station and the level 2 of the building where the commercial services and the west entrance are located, while the east entrance will continue to be used as the entrance to the site until at least the end of this year. Phase 2 involves completion of all the work connected to the project for the Naples/Cancello link, which is scheduled to be completed in 2022.

As far as Phase 1 which is discussed in this article is concerned, Mapei systems were used for the construction and installation of the external shell and for the floor coverings installed inside the station. Floor coverings have been installed up to Level 1 and most of Level 2, apart from the east gallery, while Levels 3 and 4 have been left in a semi-finished condition for the present time. The areas open to the general public have been cordoned off from the ones that are still closed by installing temporary barriers with a similar finish to the original ones, so that the station can remain fully operative, safeguard the overall architectural uniqueness of the structure and allow for a more rational use of the commercial areas.

The façades of the building are in exposed concrete and, initially, Mapei Technical Services suggested repairing and leveling off the surfaces where required with MAPEGROUT T60 fibre-reinforced, sulphate-resistant thixotropic mortar and

IN THE SPOTLIGHT

PLANITOP FINE FINISH

One-component, rapid-hardening, ultra fine-textured light grey coloured cementitious skimming mortar made from special binders, selected aggregates, special admixtures and synthetic polymers. PLANITOP FINE FINISH may be used to skim surfaces down to a feather edge without the need for a bonding promoter, or

may be applied in layers up to 3 mm thick.

It can be used to level surface defects in cast concrete or to smooth and finish concrete walls before painting or to skim precast concrete.



MAPEGROUT LM2K two-component, fibre-reinforced, thixotropic cementitious mortar mixed with corrosion inhibitor. To seal the cracks in the surfaces it was recommended to apply EPORIP two-component, solvent-free epoxy adhesive.

Once this phase had been completed, the delicate job of skimming the façades could commence. After discussing the opinions and specific requirements of the client, the Works Director, the contractor (Astaldi) and the artistic director (the Zaha Hadid Studio), Mapei R&D laboratories worked from June to December 2016 to develop a product with the required characteristics: PLANITOP FINE FINISH. This product is a light grey coloured one-component, ultra fine-textured cementitious skimming compound which, thanks to its special composition, gives the mortar a particularly high level of adhesion and excellent flow during application. Once the substrate was cured, it was initially treated with MALECH micronized acrylic resin-based primer, which is used to even out the absorption of substrates and promote a better bond with the layer of paint applied afterwards. The entire surface was then painted with COLORITE BETON semi-transparent, anti-carbonation paint in the colour RAL 9984 to even out the surface, which was also



9

specifically developed. The paint forms a semi-transparent film which leaves the effect of the formwork or the exposed finish of the building visible and evens out its colour.

COLORITE BETON has a special formulation that protects surfaces over the years from damage caused by carbon dioxide, sulphur dioxide and direct sunlight and ensures good water-repellence.

In certain areas of the station such as the platforms, up to a level of 1.5 metres above ground level, the walls were protected against scuff marks and scratches with WALLGARD GRAFFITI BARRIER paint.

To form the resin floors inside the station (around 8,000 m²), Mapei Technical Services suggested using MAPEFLOOR SYSTEM 31. This system is particularly recommended for floors areas where a multi-layered, non-slip resin coating with excellent mechanical properties and excellent resistance to chemicals and abrasion is required. The coating was formed by priming the floor with MAPEFLOOR I 910 epoxy binder

and then applying a layer around 0.8 mm to 1.2 mm thick of MAPEFLOOR I 300 SL two-component, solvent-free, filler-ized epoxy formulate. Where required, some of the areas were treated with MAPECOAT I 600 W two-component, epoxy resin-based-formulate. For some of the work on the roof, Mapei Technical Services proposed using waterproofing membranes made by POLYGLASS, a subsidiary company of Mapei Group. The collector channels for the rainwater on the metal roof were coated with white, high-reflectance MAPEPLAN T B flexible, waterproof polyolefin membrane.

The membrane was bonded to the metal sandwich support panels with MAPEPLAN ADS 300 adhesive. The waterproofing work was carried out in two phases. The first phase was to pre-waterproof the collector channels prior to installation in the Carrara works, which was carried out by the specialised company contracted to carry out the work. The second phase was the actual installation of the collector channels on site and then to blend in and finish off the waterproof membrane.

TECHNICAL DATA **Naples Afragola Station,** Naples (Italy)

Period of Construction
Phase 1: 2015-2017

Period of Intervention
Phase 1: 2015-2017

Intervention by Mapei:
supply of products for concrete, for finish and protection of surfaces, preparation of resin flooring, waterproofing of roofing

Project: Zaha Hadid Architects
Client: RFI-Rete Ferroviaria Italiana
Works Direction: Italferr
Contractor: Astaldi Group (via Afragola FS Scarl)
Contractor: Astaldi Group (via Afragola FS Scarl)
Installer Company for Polyglass Waterproofing Membranes: ALPHA AS Srl – Carrara (Italy)

Mapei Coordinators:
Giuseppe Mastroianni, Renato Soffi (Mapei SpA), Sacés s.r.l.

MAPEI PRODUCTS
Repair of exposed finish surfaces: Eporip, Mapegrout T60, Mapegrout LM2K, Planitop Fine Finish
Façades protection and finish: Colorite Beton, Malech, Wallgard Graffiti Barrier

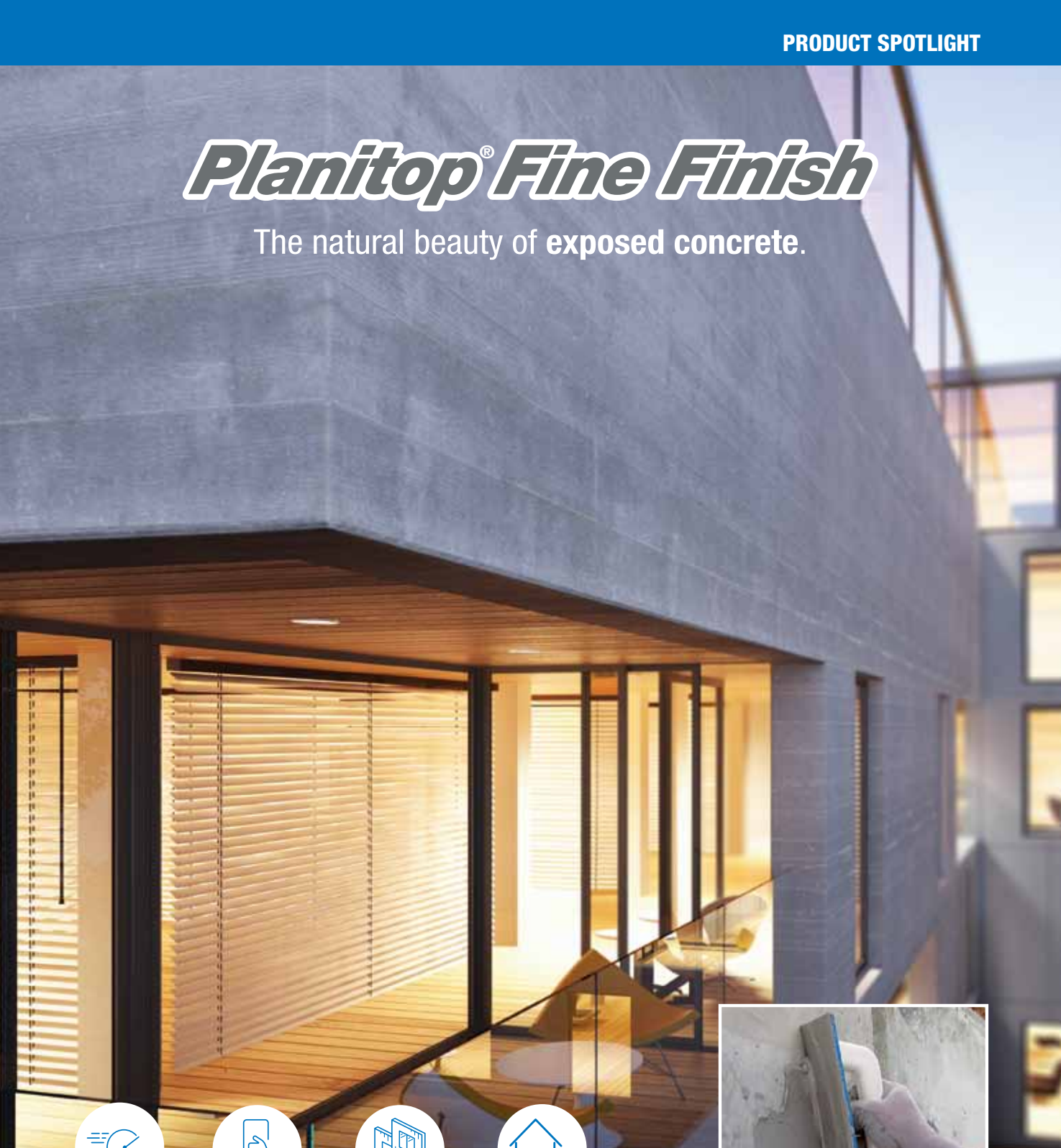
Flooring preparation: Mapecoat I 600 W, Mapefloor I 300 SL, MAPEFLOOR I 910

POLYGLASS PRODUCTS
Roofing waterproofing: MAPEPLAN T B, MAPEPLAN ADS 300

For further information on Mapei products see the websites www.mapei.com and www.polyglass.com

Planitop® Fine Finish

The natural beauty of **exposed concrete**.



RAPID
SETTING



HIGH BOND
STRENGTH



FOR PRE-FABRICATED
ELEMENTS



FOR INTERNAL
AND EXTERNAL USE

Ultra fine-textured skimming mortar to maintain the “exposed” effect finish of concrete with surface defects, such as honeycombing and construction joints. **Result: smooth, even surfaces with no imperfections.**



Learn more on www.mapei.com



Architectural experimentation and innovation



INTERVIEW WITH FILIPPO INNOCENTI, ASSOCIATE DIRECTOR AT ZAHA HADID ARCHITECTS

The official opening of Napoli Afragola Station came just a few months before the end of work on Torre Generali tower in Milan. 170 metres tall, the skyscraper was designed by the architect Zaha Hadid, who passed away in Miami in 2016, and is part of the CityLife urban and architectural redevelopment scheme. We got the chance to ask the architect Filippo Innocenti a few questions. He has been working at Zaha Hadid Architects in London since 2002, following their Italian projects.

You were involved in the design and construction work on Napoli Afragola Station right from the very beginning. What kind of problems are involved in designing and infrastructure like that?

It is extremely important to find the right balance between conflicting interests when handling intricate infrastructural designs: the architect must simultaneously set the project's basic aims and mediate between the various parties involved and their specific requirements. We always get our clients, partners and the community itself involved in the design process, informing them about the latest ways of working on and designing a project. Our philosophy is based around listening, working together and tackling all the various phases of design in a critical spirit, translating our clients' requests into designs meeting

their demands, breaking down conventional schemes and exceeding expectations.

The station has been described as "a bridge above the tracks". Why did you opt for this kind of architectural design and what did it entail in terms of building technology?

The station's architectural concept was based around the idea of finding the best way to handle passengers in transit between various means of transport. That is why it was designed like a bridge above the tracks, extending the walkway connecting the platforms so that it was transformed into the main distribution gallery. The idea of exploiting the building's form to improve passenger flows and movement around the inside of the station is one of the main themes of our design. It is easy for travellers in transit between the different railway lines to get from the passenger centre to the refreshment areas or two shopping arcades. The bridge also allows the station's public spaces to be raised to a privileged position in relation to the surrounding landscape to enjoy the best views of the area around Mount Vesuvius.

The architect, Zaha Hadid, was not able to see this work completed, but how much of her way of designing and envisaging architecture can be found in this project?

In 2003, when the tender was launched by Ferrovie Italiane (the Italian State Railway Company), bearing in mind the relative size of the firm, Zaha Hadid was constantly involved in the design work. The station's basic design scheme draws on work carried out on MAXXI Museum in Rome and the BMW headquarters in Leipzig, particularly significant in the period when the modernist stylistic repertoire was widening its horizons thanks to the new possibilities provided by digital technology. You can see the same formal-organisational logic as is found in these projects, as opposed to the contrast between the vertical and horizontal typical of modern architecture, although the complexity of the roof shape already provides a foretaste of the kind of stylistic exploration that has gone on over the last few years.

You are involved in the Zaha Hadid firm's Italian proj-



ects. Based on your own professional experience, what is the difference in working with institutions in Italy and abroad?

Every project has its own story to tell. In Italy we have had the chance to work on various projects ranging from the MAXXI building to CityLife and the Salerno Maritime Terminal, in partnership with both public and private clients. I do not think working with institutes in Italy is any different from working with foreign institutes from a cultural viewpoint. If anything, the various projects differ in terms of their tender and management procedures. Over the last few years we have often had problems with integrated final design tenders and projects awarded to the lowest bidder. It would seem that these issues have been taking a more positive turn recently, so that Italian procedures may comply with the very best European standards in this respect.

What have business relations between contractors, public clients and architects been like?

Over the last 20 years, our firm has had the privilege of taking on some extremely ambitious architectural works.

The success of these projects is due to a synergy of forces and dogged determination on everybody's part. We are proud of having succeeded in conveying our great passion for the works we build to all the various operators involved. In exchange, we have always been able to rely on our clients' professionalism and the experience of the very best firms in the industry.

Technological innovation in materials sees Mapei at the very forefront. What kind of relationship is there between building contractors and architectural designers in choosing construction materials? And between designers and manufacturers of building materials?

The most important aspect of Zaha Hadid Architects' architec-

» MEASURING UP
AGAINST SPECIFIC
BUSINESS
EXPERIENCE IS VITAL



ABOVE. Torre Generali in Milan, opposite page, the Salerno Maritime Terminal and, bottom, Maxxi Museum in Rome.

tural research lies in constant innovation.

The innovation process begins with the design work and extends to other processes, management procedures and, of course, building technology. Choosing innovative materials is one of our firm's strong points and our technological horizons have been widened through the specific experience of the firms we work with.

As an Italian living abroad for too long now, I cannot hide that I am always proud of being able to use Italian products of the very high standard.





A SUCCESS STORY

MAPEI HAS BEEN OPERATING IN CANADA FOR OVER 40 YEARS

Mapei's very close ties with Canada began back in 1976 at the Montréal Olympic Games, when the company supplied its products for installing the rubber athletics track and for restructuring the Olympic Swimming Pool. Two years later Mapei opened its first factory in Laval, Québec, where it began manufacturing adhesives for installing ceramics and resilient floor coverings. Initially working with just a chemist and two quality control specialists, Mapei Inc. (the name of the Canadian subsidiary) gradually began developing and manufacturing innovative products, becoming more and more successful on the North American market. In the late 1980s Mapei revolutionized the construction industry with the introduction of its full line of ULTRABOND ECO adhesives for carpet, linoleum, vinyl, PVC and rubber flooring. The low VOC and solvent-free adhesives were developed in the Laval Research & Development Centre of Excellence for

launch throughout North America and soon adopted globally. The Laval plant now covers an area of over 13,000 m² and houses two polymer reactors as well as production facilities, corporate offices, research and development labs and a Technical Services Department without compare in the industry. Over the years further facilities were required to support the growing business. In addition to the factory in Laval, a plant specialising in the manufacture of re-dispersible polymers was acquired in Maskinongé, Québec in 1995. In 2001 another factory opened in Brampton (Ontario), which was then extended in 2014 and now specializes in powder products for mortars for installing ceramic and stone materials, as well as products for concrete repair. In 2002, although Mapei had already been operating in British Columbia since 1989 with a factory in New Westminster, it was decided to open a new plant in Delta,

not far from Vancouver to serve Western Canada and the Prairie provinces. The Delta plant underwent a major expansion in 2009, doubling its size to 7,500 m². Finally, in 2008, a distribution centre was opened in Calgary, Alberta. Today Mapei Inc. employs nearly 300 staff and has a turnover of CAD \$145 million (98-million euros).



The official opening of the manufacturing plant in Laval



Delta (British Columbia)

» **MAPEI INC.
CONSTANTLY LOOKS
FOR THE BEST
SOLUTIONS TO
BUILD IN AN ECO-
SUSTAINABLE WAY**

RESEARCH, DEVELOPMENT AND ENVIRONMENTAL SUSTAINABILITY

Ever since Mapei Inc. was first set up, it has focused on Research & Development, producing innovative products of the highest standard. Today over 20 researchers work in the subsidiary's R&D laboratory in constant contact with other research centres belonging to the Group. Mapei is constantly looking for the best solutions for eco-sustainable building: products are formulated using innovative, light and recyclable materials, whenever possible, with a view to reducing energy consumption and keeping down emissions of volatile organic compounds (VOCs).

Mapei Inc. factories are built in accordance with the most stringent international certification standards: the Delta plant has been awarded LEED certification and the site in Brampton meets many of the requirements set by this certification body. The various manufacturing plants have also been awarded ISO 14001 (Environmental Management System) certification, and each individual plant has its own laboratory for the quality control of raw materials and finished products.

TRAINING AND DISTRIBUTION

The manufacturing plants in Laval, Brampton and Delta all accommodate Mapei Technical Institute, training centres organising courses and workshops for staff, installers and other operators in the industry. A vast distribution network right across the country ensures products arrive very quickly to the building sites where they are required.

Over the years Mapei Inc. has been

involved in many prestigious projects, providing technical assistance and supplying products: these include the Royal Ontario Museum, Champlain bridge, Jacques-Cartier bridge and Montmorency bridge in Québec, Shangri-La Toronto hotel and luxury residences in Ontario, (see *Realtà Mapei International* no. 45), Sparkling Hill Resort in British Columbia (*Realtà Mapei International* no. 42) and Toronto Pearson International Airport in Ontario.

Mapei Inc. is a recognizable and respected name in Canadian construction. With 10 product lines today, the company is well-known for its complete range of quality products touching most sectors of construction. Supported by a highly professional sales team and technical experts, the Canadian entity looks toward an even stronger future with solid growth as it continues to develop its offering to the Canadian market through the continual launch of new product lines.



Laval (Québec)



Brampton (Ontario)



Maskinongé (Québec)



JUNE 2017: CELEBRATING ITALIAN REPUBLIC DAY IN GRAND STYLE

This year Italian Republic Day was celebrated in grand style in Montréal. On 4th June the Italian General Consulate invited a number of Italian citizens and Canadian friends to Saputo Stadium for a special day's celebrations: celebrations focused around the Italian Republic - commemorated every year on 2nd June - as well as the city of Montréal on the 375th anniversary of its founding. The guest of honour was the city of Bologna (the capital and largest city of the Emilia-Romagna Region in Northern Italy) represented by its mayor, Virginio Merola. The event was hosted by the Mayor of Montréal, Denis Coderre, and the Italian General Consul, Marco Riccardo Rusconi. It was a memorable occasion celebrating the grounding values of Italy's culture and national identity. The approximately 6,000 people who took part enjoyed some Italian food and drink and watched a concert by Antonello Venditti, a famous Italian singer-songwriter, as well as lots of other entertainment. Mapei was among the day's sponsors and invited various local customers to its VIP area. The company was also clearly on display in stadium with a highly visible promotional stand.

THIS PAGE. Pictures from the event that took place at Saputo Stadium in Montréal on 4th June to celebrate Italian Republic Day. Mapei had its own stand at the event.





MONTREAL VIP EXPERIENCE

Celebrations in Canada continued with a special event organised by Mapei to commemorate its 80th anniversary and strengthen its ties with local customers and friends. On 29th June a group of customers enjoyed the thrill of a high-speed ride in a sports car on the ICAR race track in Mirabel (Québec). The day's car racing was followed by a gala evening held in Montréal: guests were welcomed on board the Amerigo Vespucci training ship, home of the Italian Military Marines' sailing school, where they enjoyed a welcome cocktail before heading off to Nelligan Hotel for dinner in the company of the Group's executive management team. Those present included Giorgio Squinzi, President of the Mapei Group, Marco Squinzi, Research & Development Director, Veronica Squinzi, Global Development Director, Nick di Tempora, Honorary President of Mapei Corp., Luigi di Geso, President and CEO of Mapei Corp., and Marco Roma, General Manager of Mapei Inc. It was a special evening providing the company with the chance to strengthen its already close ties with Canada. Mapei was also hosted onboard the Vespucci the evening before, when the President of the Italian Republic, Sergio Mattarella, was the special guest, sharing some pleasantries with Giorgio, Veronica and Marco Squinzi.



BELOW. The gala evening held in Montréal on 29th June was preceded by a cocktail onboard the Amerigo Vespucci training ship (right).



A land of opportunities

Interview with Marco Roma



ABOVE. Marco Roma, General Manager of Mapei Inc.

What is the role of Canada in Mapei's strategic growth plan?

Canada, being the first country where Mapei established a production unit outside of Italy back in 1978, is by itself a historical pillar of the internationalization strategy of the group, a strategy that initiated the positioning of Mapei as one of the world leaders in its industry.

How do new product innovations reach the Canadian market?

While working closely with the Group, Mapei Inc. is able to introduce and share new products generated from the Mapei R&D laboratories from around the world. The common goal is to maximize the use of new technologies in order to increase efficiency and productivity in the building industry sectors we serve, taking into account the voice of the customer and adapting products to local needs.

What sector of the construction industry offers the greatest opportunity for the introduction of new Mapei product lines into Canada?

Attractive new opportunities have been identified in waterproofing, industrial flooring and admixtures. One example is the recent launch of the Below-Grade Waterproofing, CPU Cementitious Flooring Systems, Admixtures for Concrete and Products for Underground Construction (tunneling) business lines and the support of such launches with the recruitment of dedicated resources. Each of these new ventures in Canada are being undertaken keeping in mind that significant room exists for further growth in the Concrete Restoration Systems market, which remains a clear priority. The ultimate goal is to establish Mapei in Canada as the supplier of reference for all major infrastructure projects.

Employee retention is high in the

Mapei sales force serving the Canadian market as well as other departments such as Technical Services, R&D and Operations. To what do you attribute this longevity?

The culture of the Group puts human resources, together with quality and product innovation, as the cornerstone to build sustainable growth. At Mapei Inc., we recruit or develop experts in each field and then we give them the chance to do what they are good at and ensure they receive the support they need from the rest of the organization. Success is a team effort, never the result of a one-man show.

What practices does Mapei Inc., incorporate to promote sustainability in Canada?

Mapei Canada shares the global corporate sustainability mission and is thereby committed to manufacturing the best products for the building industry in a way that fully respects the environment and the end-user. Our facilities operate under the rigorous standards of the ISO 9001 Quality Management System and each of our manufacturing facilities are ISO 14001 certified under the Environmental Management System. In addition to these practices, Mapei has impressive reference projects that illustrate how our products have been used to help our customers meet their objectives. A recent example is York, Ontario's Bill Fisch Forest Stewardship and Education Centre which is one of North America's first Living Building Challenge projects, striving for a LEED Platinum rating.

To what extent does Mapei Inc., access local resources?

One of the three Mapei Group tenets that was originally established by our founder, Rodolfo Squinzi, is the employment of lo-

cal people and the use of local resources. Wherever possible, Mapei, Inc. uses local/regional raw materials and resources for the production of our building solutions.

In what way does Mapei Inc., participate in cultural activities in Canada?

We participate in several activities in support of both art and culture stemming from our joint Italian-Canadian heritage. For a number of years, we have been sponsors of the ICFF (Italian Contemporary Film Festival, the largest Italian film festival outside of Italy). We were also a part of Montréal's Italian National Day hosted by the Italian Consular General. Mapei Canada supports various sporting events on a community level in the regions in which we operate. These include local cycling teams, youth hockey and youth soccer teams. We also sponsor golf tournaments to support our professional associations and special fundraising initiatives.

Why is Mapei Inc., a company to watch and support in Canada for the near and the long term?

Our long-lasting relationship with Canada and Canadians goes well beyond pure numbers. We like to believe that our history in Canada has been a wonderful winning story, in which the success of Mapei Inc., has contributed to the success of all our customers and vice-versa and also created mutual trust and respect that we are committed to honor and further enhance in the years to come. At Mapei we still look at Canada, even after 40 years of doing business here, as a land of opportunities; and we are determined to do what it takes in terms of investments in people and assets to ensure we meet new challenges and solve them together with our customers.

THE GROUP'S FIGURES



2.4

Billion Euros estimated consolidated turnover in 2016



28

Main research centres in 18 countries



more than

1.000

New formulates every year of the Mapei Group



more than

9.000

Employees, with 12% working in R&D



3.000.000

Tons of CO₂ saved thanks to Mapei additives for cement grinding



more than

5.000

Products for the building industry of the Mapei Group



more than

50.000

Tons of CO₂ offset



73

Plants in 5 continents, in 34 different countries



81

Subsidiaries in the Group



more than

66.000

Clients around the world



more than

161.000

Professionals from the sector involved in Mapei training courses



more than

25.000

Tons of products shipped every day



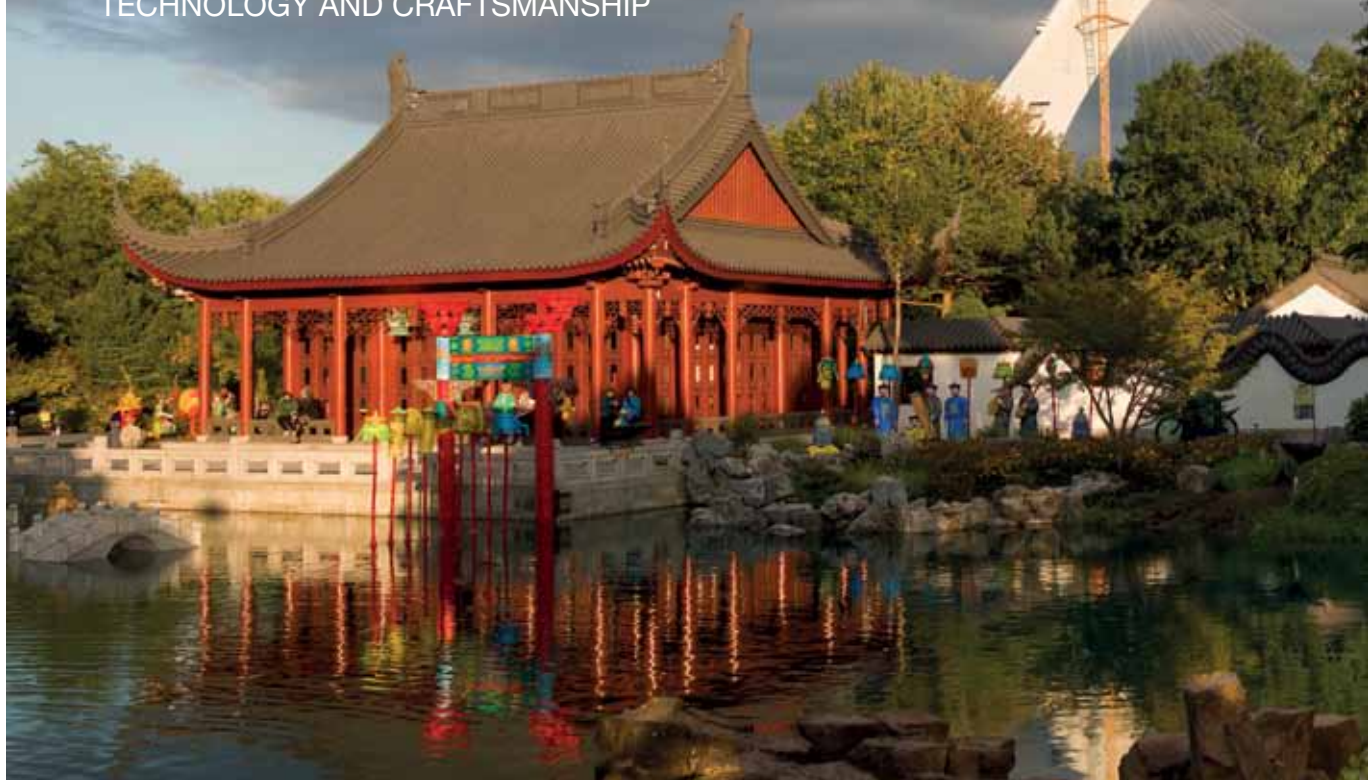
Learn more on www.mapei.com





JARDIN DE CHINE

RESTORATION OF A THEMATIC GARDEN
– A COMBINATION OF MODERN
TECHNOLOGY AND CRAFTSMANSHIP



The Jardin Botanique de Montréal (Montréal Botanical Garden) is considered to be one of the most important botanical gardens in the world, thanks to its collection of more than 20,000 different types of plants and cultivars, 10 greenhouses and 30 thematic gardens open to the general public. The garden extends over an area of 75 Hectares and, in 2008, was officially designated a National Historic Site of Canada.

Founded in 1931 by the landscape architects Henry Teuscher and Frederick Gage Todd, the Botanical Garden receives around 2 million visitors every year. Inside the garden there is also an Arboretum, a Rose Garden, a Japanese Garden, an Insectarium, the House of Trees and a Chinese Garden (Jardin de Chine). The Chinese Garden was created in 1991 by around 50 artisans brought over especially from China, from the Shanghai Institute of Landscape Design and Architecture.

The Jardin de Chine covers around 2.5 hectares. Its plantings were created along the lines of a traditional garden of the Ming Dynasty. The art of gardening in China was first established during the Ming and Qing Dynasties, when the emperors and the

noblest families invested enormous amounts of money and effort to create the most refined gardens. The garden has several paths running through it, as well as an artificial mountain and a residential building in Chinese style, which houses a collection of Japanese and Chinese bonsais donated by the government of the People's Republic of China.

The project to build the garden required 120 container ships full of plants and construction materials imported from Shanghai, including 500 tonnes of stone from Lake Tai in the Province of Jiangsu.

RESTORING THE GARDEN

More than 20 years after it was first created, the Jardin de Chine needed to be restored, starting with the roofs of the buildings in the garden. Mapei Technical Services was contacted to work alongside Jean Bouvrette, and the project manager, Richard Robillard from the City of Montréal. The same artisans who created the original garden in the 1990s returned from China to help with the restoration work.



The schedule for the restoration work had to be strictly adhered to, so a great deal of importance was given to choosing the products used. Fast-setting properties, ease of application, plus the ability to withstand Québec's harsh winter weather conditions were key selection criteria.

Mapei products were used to address a number of repair issues during the restoration of the Jardin de Chine at the Montréal Botanical Garden. As each challenge arose, the restorers turned to their Mapei representatives, who provided solutions for reconstructing areas of the roofs and garden walls, repairing and setting terracotta tiles on the roofs and providing a protective coating with ELASTOCOLOR COAT.

In detail: the roofs of the buildings were rebuilt by applying a one-inch coat of PLANITOP 12 SR fibre-reinforced mortar, which is resistant to tensile loads and abrasion, directly on the metal sheeting of the roofs. The terracotta tiles imported directly from China were installed over the surface made from PLANITOP 12 SR using MAPECEM 202 rapid-setting cementitious mortar. MAPECEM 202 was the ideal solution due to the thickness

needed to secure the curved tiles in place. The jutting gutters around the roofs, typical of Chinese architecture, were installed in some of the areas of the roofs with MAPECEM 202, while in other areas GRANIRAPID SYSTEM was used. Every border tile was installed with GRANIRAPID SYSTEM in order to accelerate the installation of the adjacent roof tiles. The artisans needed a product that would provide a firm bond with an extremely quick set capability, and GRANIRAPID was the best solution.

The roof tiles needed to be repainted because quite a number of them were damaged when they arrived from China. Mapei Technical Services proposed using ELASTOCOLOR COAT, a high-yield acrylic coating product used to decorate and protect surfaces. This product is available in a vast range of standard colours and a limitless number of tailor-made shades. It forms a waterproof film that provides excellent resistance to environmental conditions over the years. The use of ELASTOCOLOR COAT as the finish for the roof received the seal of approval from both the client and the Chinese artisans.

The walls surrounding buildings, temples and cities are very important features of typical Chinese landscapes because they offer protection and cover from the outside. The walls surrounding the Jardin de Chine needed to be restored and protected against the elements. To restore the wall to its original white colour, it was recommended to use the

pastel tint base of ELASTOCOLOR PAINT, an acrylic-based paint which is waterproof and impermeable to aggressive agents present in the surrounding air.

The surface of the wall and its decorative oval features are similar to those seen on the Great Wall of China.

The damaged areas were removed and then



ON THE FACING PAGE. A glimpse of the Jardin de Chine.

ON THE TOP. The roofs of the buildings were rebuilt by artisans brought over from China.

ABOVE. ELASTOCOLOR PAINT protective paint was used to restore the wall to its original white colour.



ON THE TOP. The surface of the roof was made from PLANITOP 12 SR.
ABOVE. The tiles were bonded to the roof with MAPECEM 202.

repaired with PLANITOP XS fibre-reinforced mortar, which is resistant to compressive and flexural loads, while the decorative features were bonded to the surface using MAPECEM 202. All these products are distributed on the Canadian market by Mapei Inc.

The City of Montreal and Chinese artisans who carried out the work were highly satisfied with the end result and highly praised the quality and reliability of the Mapei products recommended for the work.

TECHNICAL DATA

The Jardin de Chine (Montréal Botanical Garden), Montréal, Québec (Canada)

Period of Construction: 1931

Period of Intervention: 2016

Intervention by Mapei: supplying products for restoring roofings and perimeter wall, for bonding decorative and protective elements, and for finishing surfaces

Client: City of Montréal

Architect: Menaud Lapointe, Beaupré Michaud et Associés Architectes

Engineer: Jean Bouvrette

Works Direction: Richard Robillard

Mapei Distributor: Géroquip

Coordination by Mapei:

Domenic Romano (Mapei Canada Inc.)

MAPEI PRODUCTS

Repairing roofs and walls:

Granirapid System*, Mapecem 202*, Planitop 12 SR*, Planitop XS*

Protection and finish:

Elastocolor Coat*, Elastocolor Paint*

*These products are manufactured and marketed in Canada by Mapei Inc.

For further information on products see the websites www.mapei.ca and www.mapei.com

Colour and protection...
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Wall coatings for external use

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An unbeatable line-up of **wall coverings** with unrivalled cover, ease of use, filling capacity, water repellence, elasticity, resistance to UV rays, breathability and cleanability. Mapei products that **resist** and **endure** the rigours of time.....for a long, long time!



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MAPEI IN NORWAY

SPECIFIC PRODUCTS IDEAL FOR EXTREME WORKING CONDITIONS
FOR A SUBSIDIARY THAT IS GROWING ALL THE TIME



Mapei has been operating in Norway since 1999, when it took over the Norwegian company Rescon based in Sagstua (not far from Oslo). It broke onto the Norwegian market mainly supplying thermosetting plastics, special cement-based mortars and additives for concrete.

On 3rd November the company will celebrate its 40 years on the market.

Products for handling “extreme” issues on building sites, due to the distinctive climatic and geological conditions in Nordic countries.

They are used for a wide range of purposes: building underwater constructions and structures for offshore oil drilling, digging tunnels, building bridges,

preparing substrates and laying miscellaneous types of flooring.

The distribution network was strengthened in 2003, thanks to a new supply centre for Nordic countries and other facilities that opened in Norway and other northern European nations.

A new Research & Development laboratory, a brand-new factory for manufacturing additives for concrete, and another plant for manufacturing accelerants for shotcrete, all opened at the headquarters in Sagstua in 2007 (see *Realtà Mapei International* no. 25).

In October 2011, the branches of the company located on the Scandinavian peninsula officially changed name to fall in line with the Group’s tradename: the

Norwegian company Rescon Mapei AS was renamed Mapei AS (see *Realtà Mapei International* no. 37).

A new Quality Control Laboratory was built at the factory in Sagstua in 2014. Constant growth that was matched on the sales front, where the results were more than satisfactory: the trend in Mapei’s turnover in Norway has been excellent every year: it currently stands at around €95 million.

The company employs 240 staff and manufactures 10 product lines ranging from building materials, resin/cement-based floorings and products for installing resilient materials to waterproofing compounds, cement additives and products for underground constructions.



OPPOSITE PAGE. The Mapei AS factory in Sagstua not far from Oslo.

TOP LEFT. The training centre, which opened in 2015, organises over 500 training courses a year.

CENTRE PAGE. A picture taken during the Matteknekker'n mathematics competition that Mapei AS has been organising for pupils from local high schools for the last 13 years.



RESEARCH, TRAINING AND ATTENTION TO YOUNG PEOPLE

Mapei AS's Research & Development Laboratory has five sections, each focusing on research into a specific range of products. Equipped with cutting-edge instruments and incorporated in a network of Norwegian research centres of the highest standard, it keeps on developing innovative and safe solutions, partly thanks to a close working relationship with the Research & Development Centre in Milan. The section devoted to admixtures for concrete is one of the most technologically advanced research centres into concrete in any Nordic nation.

The other sections of the laboratory work on developing products of the highest quality that can adapt to the weather conditions in northern European countries, constantly focusing on sustainability and in compliance with international and local standards.

Mapei AS has always paid very careful attention to training: a new training centre opened at its headquarters in Sagstua in 2015, a building covering an area of 900 m² allowing the subsidiary to provide Mapei customers and partners

from all Nordic and Baltic nations with special training (see *Realità Mapei International* no.55). At the new facility, they can study issues linked with all kinds of building projects, learn how to provide assistance in using Mapei products and systems, and discover all the benefits these products offer in terms of quality and sustainability. The centre is now fully operational, organising about 2,000 hours of teaching each year on a total of over 400 training courses at 'Mapei Skolen'.

Working with young people is also extremely important for Mapei AS: it hires and trains young apprentices every year and is in contact with lots of schools and universities to support education in the sciences. It also organises the annual Matteknekker'n mathematics competition for secondary school pupils in the Kongsvinger region, which is always very popular. Each year about 40 of the best mathematics students in the region get the chance to find out more about Mapei and visit the factory.

FUTURE PROJECTS

The Norwegian subsidiary is already building a new factory that will open in August 2018. The 16,000 m² existing plant will be extended to cover 24,000 m², with a corresponding increase in output. It will be Mapei's fifth biggest factory in the world: *Realità Mapei International* will soon have more news about the project.





A ROYAL VISIT



THE NORWEGIAN ROYAL FAMILY VISITED MAPEI PLANT IN SAGSTUA

King Harald V and Queen Sonja celebrated 25 years on the throne in Norway in 2016, and 2017 is the year when they both turn 80. The King reached the milestone in February, while the Queen celebrated her special day in July. As a part of the celebrations, the Royal Couple set off on a five-day tour of the Interior of Norway in June, and on the last day of the trip they visited Mapei in the plant of Sagstua in Nord-Odal before bringing their journey to a close at Kongsvinger Fortress.

"We are proud and honoured that the Royal Couple chose to visit us as the only company on their jubilee tour of Hedmark and Oppland," says Trond Hagerud, Mapei CEO for Nordic and Baltic Countries.

King Harald V and Queen Sonja are popular throughout Norway, and when the Royal Couple arrived at the Mapei facility

at Sagstua, fully 1,200 people were waiting there to meet them, including 800 delighted children from kindergartens and schools in the district.

The children presented their royal visitors with all kinds of gifts, including flowers and drawings.

"It turned into a giant people's party, and we had the chance to talk about our unswerving focus on skills, apprenticeships and young people. Not only is this essential to our own development, but we also view it as a key aspect of our social responsibility."

FOCUS ON YOUNG PEOPLE

The King and Queen are extremely interested in the lives and welfare of children and young people in Norway. At the Mapei facility, they had the opportunity to meet laboratory technicians Atle Løvaas and Gro Jokumsen, who both completed their professional training at the company.

"Mapei currently has eight apprentices" says Trond Hagerud, "and takes on new ones every year. It is important for us to take the long-term approach and work with training and skills development."

We do this through initiatives such as our internal school, the Mapei Skolen, as we would call it, working relationships with different schools in the district, setting up scholarships for local young people who choose to study chemistry or construction-related subjects, focus on apprenticeships, and the annual maths competition.

The Royal Couple seemed delighted with our closely targeted initiatives to lay solid foundations for young people, and with how we work with Research and Development," adds Trond Hagerud.

"As this magnificent tour draws to a close, I would like to thank each and



every one of you for giving the King and I such wonderful memories of these past few days. And I would like to express our gratitude for everything you are doing to ensure that together, we are in a position to create the society of which we wish to be a part. Because society is created every day – by each and every one of us,” said Queen Sonja in her speech at the fortress.

APPLAUDING THE YOUNG PEOPLE

In addition to Trond Hagerud, the Royal Couple were also received by Lise Selnes, Mayor of Nord-Odal, Johan Brekke, Chief of Police, and Sigbjørn Johnsen, County Governor.

Giorgio Squinzi, Adriana Spazzoli, Veronica Squinzi and several other senior executives from Mapei S.p.A were visiting at the time, and so the Royal Couple also held a short, private meeting with the Squinzi family.

The Nord-Odal school marching band



ON THESE PAGES. Pictures of the Norwegian Royal Family's visit to the Mapei factory in Sagstua. The Royals were given a rapturous welcome by the public and were then introduced to the Squinzi family and Mapei executive staff. They then dined with the winners of the Matteknekker'n mathematics competition, which the Norwegian subsidiary of the Group organises each year for pupils from local secondary schools.

played stirring tunes, and Mapei had also arranged other entertainment for everyone who had waited so patiently. Moreover, there were refreshments for children and adults alike. The Royal Couple had the opportunity to listen to an entertaining talk about the fascinating history of Mapei in Nord-Odal, from the time the company took its first tentative steps in a barn in 1976 – a story that raised a laugh from both the King and the Queen.

All our talented apprentices introduced themselves, and following the introduction it was Queen Sonja herself who led the applause for all the young people.

LUNCH WITH THE ROYAL GUESTS

This spring, for the thirteenth year in a row, Mapei organised the Matteknekker'n maths competition for pupils at the ten secondary schools in the Kongsvinger Region.

The winner of this year's competition was Tråstad Secondary School in Kongsvinger, and each of the successful pupils received a diploma and a brand new iPad. They also won a little extra prize in the form of a lunch. The menu was prepared using fresh, local ingredients and served by staff from Milepelen Hotell & Vertshus.

“As we knew the Royal Couple would be visiting, the winners of the Matteknekker'n maths competition were treated to lunch with King Harald and Queen Sonja. We think it's important to reward good maths results and to show that the natural sciences can be fun. We are constantly seeking to forge ties with young people and to show that we have interesting jobs to offer pupils who choose to follow the natural sciences line and take advanced courses in chemistry or construction-related subjects,” concludes Trond Hagerud.





HAUKELAND PAEDIATRIC HOSPITAL BERGEN



A NEW HOSPITAL
COMPLEX WITH
ARDESIA SLABS
TO ENHANCE THE
SURROUNDINGS

The Haukeland University Hospital in Bergen, Norway, has been extended thanks to the construction of a new department dedicated entirely to paediatric care. Construction of the new building started in 2011 and was completed in 2017 and over the next few years the hospital management is also thinking about adding more wings to the structure.

The client asked the designers to combine all the babies and children's wards in a single unit so that all the patients and treatment areas could be managed more easily. One part of a new building will be reserved for the maternity ward at a later stage. The client also specified that only safe, eco-friendly products should be used: in fact, the building has been awarded Breeam certification (Building Research Establishment Environmental Assessment Method), a European reference protocol for the design, construction and management of sustainable buildings.

Mapei supplied products to build part of the new building, particularly the large reception area where patients are welcomed to the hospital, the changing rooms, the bathrooms and the three new swimming pools.

The external façades, the inside of the swimming pools and the floors and walls in the reception area, changing rooms and bathrooms were all dressed with Alta slate, a special clay-based porcelain tile which can be found in some specific zones of Norway. This type of stone requires the use of specific, durable adhesives and grouts.

The products chosen for this particular work were CONPLAN



ON THE FACING PAGE. The corridor of the hall was dressed with Alta slate, a local type of porcelain tile, which was installed using ULTRALITE S1 (above). The entrance of the Paediatric Hospital (below).

ON THIS PAGE, ABOVE. The bathrooms and showers were waterproofed with MAPELASTIC and ardesia slate was installed with ULTRALITE S1 and ULTRALITE S2.

BELOW. The area where the swimming pool and baths are located was waterproofed with MAPELASTIC and dressed with Alta slate.





ABOVE. The grout lines were filled with KERACOLOR GG and the joints were sealed with MAPESIL LM and MAPESIL AC.

ECO R rapid self-levelling mortar to form substrates from 3 to 20 mm thick, CONFIX spray-applied mortar to repair the concrete and MAPEPOXY L epoxy adhesive to repair the cracks. These products are all made and sold in Norway by Mapei AS. The concrete surfaces were restored with MAPEGROUT T40 thixotropic mortar. Where required, surfaces were waterproofed with MAPELASTIC two-component cementitious mortar, which is particularly suitable for creating highly flexible, protective waterproof coatings on structures subject to cracking. To install the slabs of ardesia, Mapei Technical Services recommended ULTRALITE S1 one-component, high performance adhesive, while ULTRALITE S2 lightweight cementitious adhesive was the preferred choice for the large format slabs. The product chosen to fill the grout lines was KERACOLOR GG high-performance, polymer-modified cementitious mortar for grout lines from 4 to 15 mm wide. The expansion joints were sealed with MAPESIL LM and MAPESIL AC.

IN THE SPOTLIGHT

ULTRALITE S1

One-component, high-performance, flexible, lightweight, cementitious adhesive of C2TE S1 class, with no vertical slip and long open time, Low Dust technology and extremely high yield. Easy to apply by trowel with excellent wetting properties, with very low VOCs. It may be used to bond all types and sizes of ceramic tiles on uneven internal and external substrates, without having to even out the surface

before fixing. Also suitable for all types of mosaic on internal and external surfaces even in swimming-pools and for natural stone on internal and external surfaces (for stone which is stable and not sensitive to humidity) and for thin porcelain tiles on floors and walls, including external façades.



TECHNICAL DATA

Haukeland Paediatric Hospital,
Bergen (Norway)

Period of Construction: 2011-2017

Period of Mapei Intervention: 2016-2017

Intervention by Mapei: supplying products for carrying out and waterproofing substrates and for installing and grouting slate slabs

Project: KHR arkitekter, Studio 4 arkitekter

Client: Helse Bergen

Works Direction: Lars Petter Smidt

Contractor: Helse-Bergen

Installer Company: Veidekke/Smistad
Mur og flis as

Mapei Distributor: Norfloor Bergen

Mapei Coordinator: Viggo Breivte & Kenneth Nilsen (Mapei AS)

MAPEI PRODUCTS

Carrying out substrates and repairing concrete: Conplan Eco R*, Confix*,

Mapegrout T40, Mapepoxy L*

Waterproofing surfaces: Mapelast

Installing ardesia: Mapesil AC, Mapesil LM, Keracolor GG, Ultralite S1, Ultralite S2

* These products are manufactured and marketed on the Norwegian market by Mapei AS

For further information on products see the websites www.mapei.no and www.mapei.com



Mapei, Sagan and Italy LIGHT UP BERGEN 2017

This year it was Norway's turn to host the UCI (International Cycling Union) Cycling Road World Championships and the Group is a long-term sponsor of the event. Mapei's communication campaign shone brightly in a nation famous for its fjords and brightly coloured Mapei banners, inflatable arches and flags were located all around the striking city of Bergen and its surroundings during the eight days' worldwide television coverage. As usual it was a great television success for Mapei. The Mapei brand was also clearly visible on the official prize-giving stage, on the rear panels during interviews and press conferences and, of course, on all the event's paper, Web and video material.

Trond Hagerud, General Manager of Mapei AS (the Group's subsidiary for Norway) and Mapei operations in the Nordic and Baltic countries, was in at-

tendance at UCI World Championships in Bergen, together with other executives, business partners and members of the sales team. The Mapei Group was also represented by some members of the mother company such as Lorenzo Pastore and Anna Calcaterra. Mapei has a very close relationship with cycling that goes way back into the past and the Mapei professional cycling team won the world championships four times, thanks to the Spanish rider Abraham Olano (1995), the Belgian star Johan Museeuw (1996), the Swiss cyclist Oscar Camenzind (1998) and the Spanish champion Oscar Freire (2001).

MAPEI HOSPITALITY

Throughout the various days' racing and at the weekend in particular, hospitality was provided for Mapei guests from Norway, Sweden, Finland and

Denmark (and even some from Belgium and Italy). As they arrived, the guests were welcomed into the Mapei bus parked in the hospitality area near the finish line, where they were given rainbow-coloured T-shirts with "Mapei Main Sponsor UCI Road World Championships" written on them and a special armband for entering the reserved zone. A special area for Mapei guests only was set up inside the lounge accommodating UCI sponsors, directly





Mapei guests outside the VIP area.



L'ex-campione del mondo Thor Hushovd intervistato da reporter televisivo Davy Wathne.

opposite the finishing straight, where the Company's guests got to watch the races on a giant screen and enjoy the special catering service. The Mapei area also hosted the former world champion, Thor Hushovd, who was interviewed by the well-known TV reporter, Davy Wahne, and chatted with clients, autographing their T-shirts. A seminar was also organised on Saturday morning at the Radisson Hotel in the old part of Bergen to introduce clients and custom-

ers to the Mapei Group, its Norwegian subsidiary, its organisation and corporate values; the meeting also included Thor Hushovd's own presentation of the World Cycling Championships.

On the same evening, guests were taken by boat to a small island, where they were offered an exclusive meal - after enjoying an outdoor aperitif - at a striking restaurant that was the only building on the island.



CYCLING, WORLD CHAMPIONSHIPS: MAPEI ALL AROUND THE FJORDS AND ON TV

TEAM TIME TRIALS

The UCI Men's and Women's Team Time Trial titles were awarded on the first day of competitive racing over a distance of 42.5 km. The men's race was won by Sunweb, a Dutch-based team that also included Tom Dumoulin born in 1990, the winner of this year's Tour of Italy. The Sunweb team also included Lenard Kamna, Wilco Kelderman, Soren Andersen, Michael Matthews and Sam Oomen. The team cover the distance at an average speed of 53.302 km/h,

beating the BMC team by 8"29/100 that include the outstanding Daniel Oss in its ranks. BMC lost most of that time over the final stretch, when the team fell apart slightly. The cyclists from Team Sky came third, 22"35/100 behind the winners.

The Sky team included Chris Froome, who won 4 editions of Tour of France, Gianni Moscon from Northern Italy, Vasil Kiryienka, Michal Kwiatkowski, Geraint Thomas and Owain Doull. Thomas



LEFT. Some of the Mapei staff in Bergen. **RIGHT.** The Mapei hospitality area crowded with guests.



Peter Sagan wins the sprint finish in the Men Elite Road race.



The podium for the Women Junior Road race: from left, Emma Norsgaard Jorgensen (second), Elena Pirrone (first), Letizia Paternoster (third).

being the weaker sex! Sunweb finished 12" ahead of the girls from Boels Dolmans, with Cervelo Bigla coming home third 28" behind the winners.

GOLDEN AND SILVER JUNIORS

Once the time trials for Elite teams were over, the Junior Individual Time Trial races began. Italy won the gold medal in the Women Junior Individual Time Trial thanks to Elena Pirrone with the silver medal going to Alessia Vigilia. Pirrone finished 6"38/100 ahead of her team mate in second place. Madeleine Fasnacht (Australia) came third in the 16-km race, 42"32/100 behind the winner. Pirrone also won the European title in the same event in 2017. "I felt good - so the Italian rider told us -. I really liked the course, I gave it everything I had and was exhausted at the finish. I am really happy and pleased for Alessia too, we are friends and it was great to be on the podium together". The Italian team manager, Dino Savoldi,

was dropped on the final climb, which slowed the team down, but thanks to the pace set by the relentless Chris Froome and Moscon, the black-and-blues held on to third place. The first day's racing was a real triumph

for Sunweb, which also won the women's race with Lucinda Brand, Coryn Rivera, Floortje Mackaij, Sabrina Stultiens, Leah Kirchmann and Ellen Van Dijk, covering the distance at an average speed of 45.786 km/h. So much for

**IN THESE PAGES.**

Brightly coloured Mapei arches, banners and flags were located next to the finish line.



mentioned just how much work has been done to develop the women's cycling movement in Italy: "This result is only surprising for people who do not know us: I picked three athletes today and all three were capable of winning. Elena proved once again what she can do. She was really in race-mode and could draw strength from the fact she had trained and prepared so well for this race".

The U23 World Championship time trial over 37 km was won by the Norwegian rider Mikkjel Bjerg, who finished 1'05"92/100 ahead of the American Brandon McNulty.

Corentin Ermenault, whose father was also a professional cyclist, came third 1'16"65/100 behind the winner. Bjerg won at an average speed of 47.380 km/h: a great performance, particularly considering the course was not entirely flat.

A GOLD MINE OF JUNIOR TALENT

Italy won an array of medals in junior races. Antonio Puppio, aged 18, came second in the Men Junior Individual Time Trial. The Italian champion in this event was only beaten by the phenomenally talented young rider Thomas Pidcock, who also won the gold medal in the 2017 World Cyclocross Championships. The British rider covered the 21.1 km in a time of 28'02", 11 seconds

ahead of the Italian.

The Polish rider Filip Maciejuk took third spot on the podium, 13" behind the winner. The pre-race favourite, the Norwegian rider Andreas Leknessund, only came eighth after starting off too fast cheered on by the fanatical crowds. After recording the fastest intermediate time, he faded at the end of the race.

The Women Elite Individual Time Trial (21.1 km) did not go very well for Italy with Elisa Longo Borghini, aged 26, only finishing 17th, 2'07" behind the winner Annemiek Van Vleuten.

The Dutch rider, famous for her terrible fall in the final descent of the Olympic race in Rio de Janeiro in 2016, finished ahead of another Dutch rider, Anna Van Der Breggen, who was 12" slower, with the Australian rider Katrin Garfoot winning the bronze 19" behind the winner.

MAGICAL TOM

First Tom Dumoulin (Netherlands), second Primoz Roglic (Slovenia), third Chris Froome (Great Britain): that was the podium for the World Championships Men Elite Individual Time Trial.

The race was over a shorter distance than usual for a world time trial, just 31.1 km, but there was a big difference at the end of the race compared to previous editions: the last part was virtually an uphill time trial.

To complete his magical year, Dumoulin

finished 57" ahead of Roglic and 1'21" ahead of Froome, mainly due to his performance over the final 3000 m, the steepest. The Italian rider Moscon came sixth, 1' 29" behind the winner.

ELENA, QUEEN OF BERGEN 2017

Elena Pirrone was in magnificent form in winning the 76.4 km Women Junior Road Race, breaking away from the pack with 28 km to go on Salmon Hill. Having just won the Women Junior Individual Time Trial championship, she again soloed to victory around the final 19.1-km lap.

The Danish rider Emma Norsgaard Jorgensen won the silver medal 12" behind the winner. Bronze went to Letizia Paternoster, completing a wonderful day for the Italian team.

Pirrone is now one of only four girls, and the only Italian, who have won the gold medal in both the time trial and road race at the same world championships. Italy had to settle for Vincenzo Albanese's fifth place in the Men Under 23



**THE CROWD
CHEERED ON
THE RIDERS
ENTHUSIASTICALLY
THROUGHOUT THE
ENTIRE RACE**



Road Race (191 km).

The gold medal went to the French rider Benoit Cosnefroy, ahead of Lennard Kamna (Germany) and Michael Svendgaard (Denmark).

SILVER AND BRONZE

The Danish rider Julius Johansen won the Men Junior Road Race (135.5 km) after soloing to victory, eventually finishing 51" ahead of the Italian riders Luca Rastelli and Michele Gazzoli. As expected the Women Elite Road Race (152.8 km) was dominated by the powerful Dutch team with Chantal Blaak winning the gold medal 28" ahead of Katrin Garfoot (Australia) and the Danish rider Amalie Dideriksen.

SAGAN, THREE IN A ROW

The fabulously talented Slovakian rider, Peter Sagan aged 27, won the Men Elite Road World Championships for the third year running. He is the only person in history to achieve this: champions of the calibre of Eddie Merckx

and Alfredo Binda have won the world title three times, but not consecutively. Moscon and French rider Julian Alaphilippe made a powerful attack towards the end of the race (over a total distance of 267.5 km), but they were caught by the pack just before the final kilometre.

In the final sprint, superstar Sagan got the better of the European champion Alexander Kristoff (Norway) and the Australian rider Michael Matthews, with Matteo Trentin finishing a respectable fourth for Italy. "I want to dedicate this victory to Michele Scarponi, who was a very close friend of mine", so Peter said after the new President of the UCI, David Lappartient, pulled the world champion's jersey over his shoulders. Moscon performed magnificently in the world championships in Bergen, confirming he is a rider of the highest order: "I had to make a real effort to re-join the group - so the rider born in 1994 explained at the end of the race in Bergen - I tried to recover over the penultimate

lap, so that I could give it everything again on the final lap. Julian Alaphilippe and I broke away on the climb, but then Julian dropped me for some reason I cannot understand: together we could have got to the finish alone and fought it out for the world champion's rainbow jersey in the final sprint. He gained some ground around a tight bend, where I decided not to take any unnecessary risks, then he sprinted away on the cobbles leaving me a few metres behind, but he paid for that too because we were caught just before the final kilometre. We knew we were in great shape and I think we raced really well, without wasting energy. It's a pity I had some bad luck and fell, I banged my elbow against the guardrails and all the energy I spent to catch up cost me in the end. I had to cycle flat out all my own for 6 km to re-join the main pack. My job at the end of the race was to cover any attacks, so I chased down Alaphilippe when he attacked and then gave it everything. I think the team raced brilliantly".

FIVE PALM JUMEIRAH HOTEL

INSTALLATION OF MARBLE AND CERAMICS IN A NEW HOTEL IN DUBAI



In certain parts of the world, and Dubai is such a place, hotels themselves are one of the attractions and in the city that is now making preparations for the Universal Exposition of 2020, one thing is certain: nobody likes to come second. The city's latest addition, the FIVE Palm Jumeirah Dubai, inaugurated this year, just goes to prove this rule.

This mammoth hotel overlooking the sea has been built on the artificial island of Palm Jumeirah according to a design by the architect firms Yabu Pushelberg and NAO Taniyama and Associates.

The FIVE Palm Jumeirah is located in a strategic position close to the Dubai business quarter and the city's numerous tourist attractions and has features which include its own private beach and three open-air swimming pools, one of which is 60 metres long and runs through the central part of the resort.

It has 477 rooms and suites on 16 floors, all with large spaces and wonderful views of the Arabian Gulf, which are furnished simply yet elegantly with luxurious touches.

The building has large, ceiling-high windows which allow natural light to enter and illuminate the inside of the building.

Most of the internal areas are finished in Italian marble, while

light and dark shades of wood perform light games with the colours of the marble, creating a sense of balance.

MAPEI'S CONTRIBUTION

Mapei made a significant contribution to the construction of this prestigious hotel and the work was carried out at various phases of its construction. Mapei supplied products to install 150,000 m² of marble and ceramics inside the hotel (for the entrance halls, corridors, rooms, bathrooms and balconies) and in the large Glass Cube – the heart and symbol of the FIVE hotel.

During the first phase, ULTRABOND ECO 375 adhesive in water dispersion with a high and rapid initial tack and long open time was used for bonding an acoustic insulation mat to the screed to reduce the transfer of sound between floors.

ADESILEX P9 a high performance, non-slip cementitious adhesive with extended open time was used to install the ceramic tiles.

The slabs of marble were installed with KERAFLEX MAXI S1, a white coloured, high performance, non-slip cementitious adhesive with extended open time for ceramic and stone material.



FACING PAGE. The FIVE Palm Jumeirah Hotel in Dubai. For this hotel, Mapei products have been used to install marble and ceramic floorings.

ON THIS PAGE. ADESILEX P9 has been used to bond ceramic tiles in the internal areas.



The movement joints between the natural stone were sealed with MAPESIL LM, a mould-resistant, neutral silicone sealant. MAPESIL AC was used to seal the movement joints in the ceramic tiling.

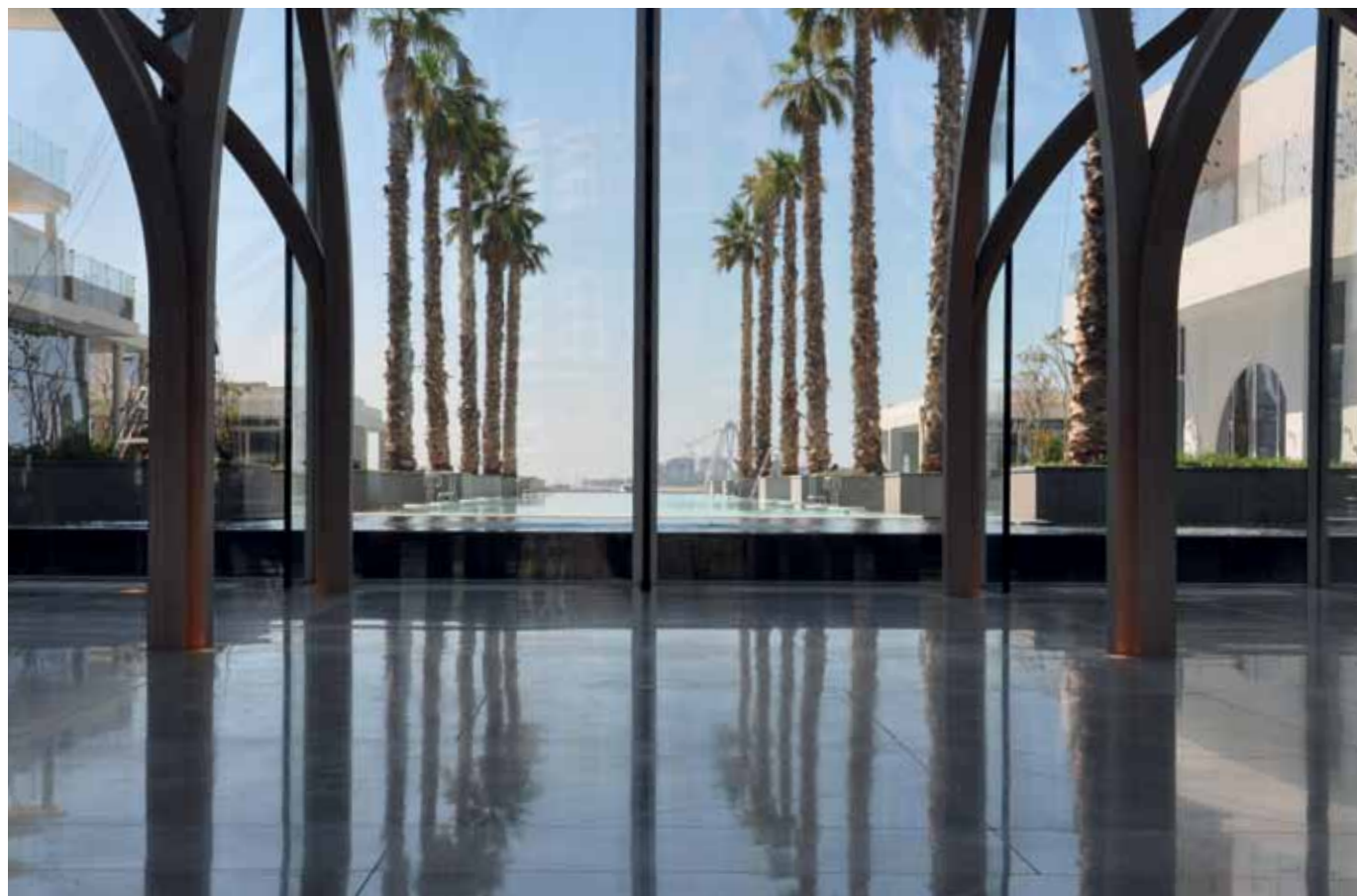
The tiles in areas exposed to heavy traffic were grouted with KERAPOXY two-component, acid-resistant epoxy mortar, designed for grout lines at least 3 mm wide, which can also be used as adhesive.

ULTRACOLOR PLUS, a high-performance, anti-efflorescence, quick setting and drying, water-repellent and anti-mould grout

was used for the tiling in all other areas.

A highly successful, eco-sustainable system was proposed by Mapei engineers for the Glass Cube's raised flooring, below which pass electric cables and ventilation systems. The products were chosen by taking into consideration the difference in temperature between the lower part of the cube, which is hotter, and the upper part of the structure where it gets cooler, as well as to allow for installation of large-format artificial stone tiles on top of the raised floor system.

MAPELASTIC SMART, a two-component cementitious mortar





with high elasticity, was used to protect the plywood boards and the flooring against rising damp.

ECO PRIM GRIP, a multi-purpose, synthetic resin-based adhesion promoter with selected inert materials and very low VOC, was used to facilitate application of ULTRAPLAN FIBER KIT self-levelling, fibre-reinforced, ultra rapid-hardening smoothing compound, which is distributed in the UAE, on the upper part of the plywood boards.

To complete this system, KERALASTIC T, a two-component, high performance polyurethane adhesive was used to bond soundproofing panels and to install large-format slabs of artificial marble on to the prepared sub floor.

Last, but not least, ULTRATOP, ultra-fast setting, self-levelling mortar based on special hydraulic binders for abrasion-resistant flooring, thickness from 5 to 40 mm was installed as a finished floor for Maiden Shanghai Chinese restaurant.

ULTRATOP was selected for its ability to create a range of designs as well as for its durability.

Enjoy the view of this spectacular venue!

IN THE SPOTLIGHT

KERALASTIC T

Two-component, high-performance, polyurethane adhesives for ceramic tiles and stone material. Once mixed, KERALASTIC T forms a special paste which has good workability, excellent durability and resistance to ageing and which hardens without shrinkage.

KERALASTIC T is highly thixotropic: it can be applied vertically without slump and without letting even heavy or large tiles slip. The slipping strength is in compliance with EN 1308.



TECHNICAL DATA

FIVE Palm Jumeirah Hotel, Dubai (UAE)

Period of construction: 2014-2016

Period of intervention by Mapei: 2015-2016

Intervention by Mapei: supply products for the installation of ceramics and of natural stone and Ultratop decorative floor finishing

Client: FIVE Holdings LLC

Project: Yabu Pushelberg and NAO Taniyama and Associates

Consultants: P&T/ECG
Installer Company: Ishwar Tiling/Emirates Marble/In Out Concepts

Mapei Coordinator: Alia Khawaja (Mapei Construction Chemicals LLC)

MAPEI PRODUCTS

Substrates preparation:

Ultrabond Eco 375, Eco Prim Grip, Ultraplan Fiber Kit*

Waterproofing: Mapelastic Smart

Installation of ceramics and stone material and grouting: Adesilex P9, Mapesil AC, Mapesil LM, Kerapoxy, Ultracolor Plus, Keralastic T, Keraflex Maxi S1

Finished concrete flooring: Ultratop

* This product is distributed in the UAE market by Mapei Construction Chemicals LLC

For further information on products see the websites www.mapei.ae and www.mapei.com



LEFT. The ceramic tiles have been bonded with ADESILEX P9, while KERAFLEX MAXI S1 has been chosen for the marble.

ABOVE. One of the swimming pool of the hotel, running through the central part of the resort.
ON THE OTHER PAGE. The internal areas inside the Glass Cube and the Maiden Shanghai Chinese restaurant.



INTERCONTINENTAL LOS ANGELES DOWNTOWN HOTEL

INSTALLATION OF CARPET IN THE TALLEST SKYSCRAPER IN THE CITY AND IN THE WHOLE OF CALIFORNIA

The Wilshire Grand Center is a luxury, mixed-use skyscraper in the heart of Los Angeles. It has been constructed on the same site as the old hotel, which was demolished in 2012. Work on the skyscraper started on the 15th of February, 2014 with a 20-hour pour of 16,500 m³ of concrete to form the foundation for the structure.

With its ornamental spire, 73 floors (plus 5 more below ground level) and a maximum height of 335.3 metres, it is the tallest building in the city and in the whole of California. The skyscraper was completed this summer and now houses the 900-room InterContinental Los Angeles Downtown Hotel, more than 37,000 m² of office space, various restaurants, shopping and commercial areas and a garage with 1,089 parking spaces on the lower floors.

Mapei played an important role in the installation of carpet flooring in the hotel. To ensure the work was carried out to perfection in compliance with eco-sustainable criteria, and that the flooring remains durable over the years, different products were used to prepare the surfaces and bond the floorings.

PREPARATION AND WATERPROOFING OF THE SURFACES

All the floors in the hotel were treated with ECO PRIM GRIP, a low odour, ready-to-use bonding promoter with very low emission of volatile organic compounds (VOC).

Once the surfaces had been treated, they were smoothed over and levelled with NOVOPLAN 2 PLUS, a self-levelling, rapid-hardening smoothing and levelling compound for new and existing substrates, to make them suitable for resilient and textile flooring in areas requiring good resistance to loads and the levels of traffic typically found in offices and public areas.

MAPECEM QUICKPATCH ready-mixed, ready-to-use mortar, which is used to make controlled-shrinkage, rapid-setting and drying screeds, was used to repair the concrete surfaces, while PLANIPREP SC controlled-shrinkage, rapid-setting, fibre-reinforced cementitious mortar, was used as a final smoothing and levelling layer to guarantee the substrates were perfectly smooth and flat.





IN THESE PICTURES. Shaw and Alarwool carpet floorings have been installed respectively with ULTRABOND ECO 810 and ULTRABOND ECO 185. The first product is solely sold on the American market.

To alleviate the problem of moisture in certain areas of the cast concrete, the surfaces were treated with PLANISEAL VS before installing 450 m² of vinyl flooring by Altro. This is a two-component, alkali-resistant epoxy product specifically developed to form a protective barrier against rising damp before installing floor coverings. PLANISEAL VS eliminates the waiting time for uncured concrete to dry out and enables installation of floor coverings to be anticipated. Apart from ECO PRIM GRIP, all these products are available on the American market.

INSTALLATION OF THE FLOOR COVERINGS

Once the preparation work on the substrates had been completed, two types of floor covering were installed in the hotel.

Around 800 m² of Shaw self-laying carpet tiles were installed using ULTRABOND ECO 810 adhesive. Apart from guaranteeing rapid drying times, ULTRABOND ECO 810 may be used for both "wet installation", to bond carpet permanently in place, or left to dry and remain permanently tacky, if you wish to remove the carpet tiles and then reposition them to carry out maintenance work. The special formulation of ULTRABOND ECO 810 provides excellent resistance to moisture, which means flooring may also be installed on the surface of concrete before it is fully cured, as in this case. This product is available on the American market.

Most of the work went into the installation of almost 10,000 m² of Axminster carpet which had been imported by the Spanish company Alarwool. The flooring installers used ULTRABOND ECO 185, an adhesive in water dispersion with high initial tack and very low emission of volatile organic compounds (VOC).

Thanks to its characteristics, ULTRABOND ECO 185 ensures rapid, secure installation of carpet.

The logistics for the work was conditioned by the very tight delivery schedule and the versatile, reliable products supplied by Mapei was one of the decisive factors in guaranteeing completion of the work within the specified timeframe and preparing the hotel for its grand opening in the summer of 2017.





IN THE SPOTLIGHT

ULTRABOND ECO 185

Specific for installing textile wall and floor coverings, it is a solvent-free, easy-spread, synthetic polymer-based adhesive in water dispersion supplied in the form of a ready-mixed, light beige paste. ULTRABOND ECO 185 is non-flammable and has very low emission of volatile organic compounds (VOC), which means the adhesive is completely hazard-free for both users of the product and users of the areas where it is applied. Once hardened, its level of adhesion makes it suitable for installing carpet in areas subjected to intense traffic and wear caused by wheelchairs.



TECHNICAL DATA

InterContinental Los Angeles Downtown Hotel, Los Angeles, California (USA)

Period of Construction: 2014-2017

Period of Mapei Intervention: 2017

Intervention by Mapei: preparation and waterproofing of substrates, installation of carpet

Client: Hanjin Group

Main Contractor: Turner Construction

Works Director: Jeremy Manuel

Project: AC Martin Partners

Flooring Contractor Tangram Interiors (Santa Fe Springs, CA)

Mapei Distributor: Big D

Mapei Coordinator: Lisa Fyke (Mapei Corp.)

MAPEI PRODUCTS

Preparation and waterproofing of the surfaces:

Planiseal VS*, Eco Prim Grip, Novoplan 2 Plus*, Planiprep SC*, Mapecem Quickpatch*, Planiseal VS*

Installation of carpet:

Ultrabond Eco 185

*Products available on the American market

For further information about Mapei products visit our websites at www.mapei.us and www.mapei.com



SAINT PETERSBURG STADIUM

A NEW SAFE AND HIGH-TECH HOME
FOR THE 2018 FIFA WORLD CUP





The Saint Petersburg Stadium is an innovative modern football stadium built in St. Petersburg to be the home of the FC Zenit soccer team and to host international events, such as the 2017 FIFA Confederation Cup and the 2018 FIFA World Cup.

The project provided a comprehensive improvement of the territory of the Western part of the Krestovsky Island. Today the stadium is recognized as the highest one in Russia: its height without pylons is 75 m, which allows combining high capacity with excellent visibility. The author of the project is the Japanese architect Kisho Kurokawa.

The stadium is intended to be multi-purpose and used all year round. The capacity of the complex is now approx 68,000 seats and the total area of the project is 287,600 square meters.

NEW TECHNOLOGIES

The new stadium sports the most advanced technologies. It is probably the most technologically sophisticated stadium in Europe. It also has a special rolling-out field: the football pitch is able to «travel» outside the arena on special rails, so that it can be ventilated. This solution can be explained by the fact that weather conditions in St. Petersburg are not suitable

for the growth of grass in winter, and the city is the northernmost member of the Russian Premier League. This technology keeps the surface quality at high level. Moreover, the roof of the stadium is able to slide and cover the field during bad weather and the cold season. The entire set of engineering solutions used at the facility makes it not only one of the most high-tech stadiums in the world, but also a very safe and most convenient one for visitors.

The construction works have already been completed. Now we should wait for the World Cup 2018 to see the stadium in action.

MAPEI SOLUTIONS FOR THE PROJECT

Mapei products were involved in the levelling of the stands substrates, the preparation of the substrate in common areas and the technical support for the installation of the stone covering. Mapei proposed a comprehensive approach to create a high-quality surface, in line with the level of the project.

It is important to note that during the construction of the stadium, 486 thousand cubic metres of concrete were used. Since construction works started 10 years ago some old concrete areas needed repair and Mapei experts proposed MAPEGROUT 430 fine-grained, fibre-reinforced, normal-



LEFT. The Saint Petersburg Stadium after the completion of works. The new stadium which will host the 21st FIFA World Cup, is characterized by its high level of technology: a retractile roof and a rolling-out field, to mention a few.

BELOW. Mapei products have been used to repair and level the concrete, to prepare the substrates of the stands and for installing natural stone.

IN THE SPOTLIGHT ULTRAPLAN

Self-levelling, ultra quick-hardening smoothing compound with very low VOC for thicknesses from 1 to 10 mm. ULTRAPLAN is used in interiors for levelling and smoothing differences on new or existing substrates, preparing them to receive all kinds of flooring where a high resistance to loads and traffic is required.



setting thixotropic mortar for levelling and repairing concrete structures. Thanks to this product it is possible to eliminate any surface defects and fill rigid joints. In the hardened state, MAPEGROUT 430 is a medium strength mortar that has excellent adhesion to steel and concrete, as well as high water resistance.

To eliminate the defects of concrete surfaces, the one-component cementitious mortar MONOFINISH was used. MONOFINISH is characterized by high mechanical strength, provides an ideal grip with all concrete surfaces and forms a durable coating.

In order to prepare the stands substrates for laying the subsequent coating, PRIMER G, a water dispersion primer based on synthetic resins, was used. After drying, it forms a thick film that reduces water absorption of porous substrates and strengthens them. For levelling off the stands substrates, ultra quick-setting, self-levelling very low VOC mortars ULTRAPLAN and ULTRAPLAN ECO were used on an area of respectively 2,500 m² and 300 m².

When facing the 400 m² of the common areas, for the 60x60 cm ural granite slabs the builders chose KERABOND T, a cementitious adhesive without vertical slip, KERACOLOR FF grout and ULTRACOLOR PLUS mortar, both high-quality, cement-based, polymer-modified products with water repellent DropEffect®, which makes joints less prone to dirt collection and more durable.

The arena is now set to be ready and waits for the upcoming sports events: stay tuned with us for the 2018 Football Cup!

Our thanks goes to ZAO Mapei for their kind permission to use this article which first appeared in MIP MAPEI no. 20/2017.



TECHNICAL DATA

Saint Petersburg Stadium,
Saint Petersburg (Russian Federation)

Period of Construction:
2006–2017

Period of Intervention by Mapei: 2016

Intervention by Mapei:

supply products for concrete repair, for substrate preparation, for the installation and grouting of stone materials

Client: City Administration of Saint Petersburg

General Contractor: Metrostroy

Mapei Distributor: X-Trade

Designer: Kisho Kurokawa, Mosproject-4

Mapei Coordinators: Denis Krutilin (ZAO Mapei)

MAPEI PRODUCTS

Repair and level of concrete structures: Mapegrout 430, Monofinish

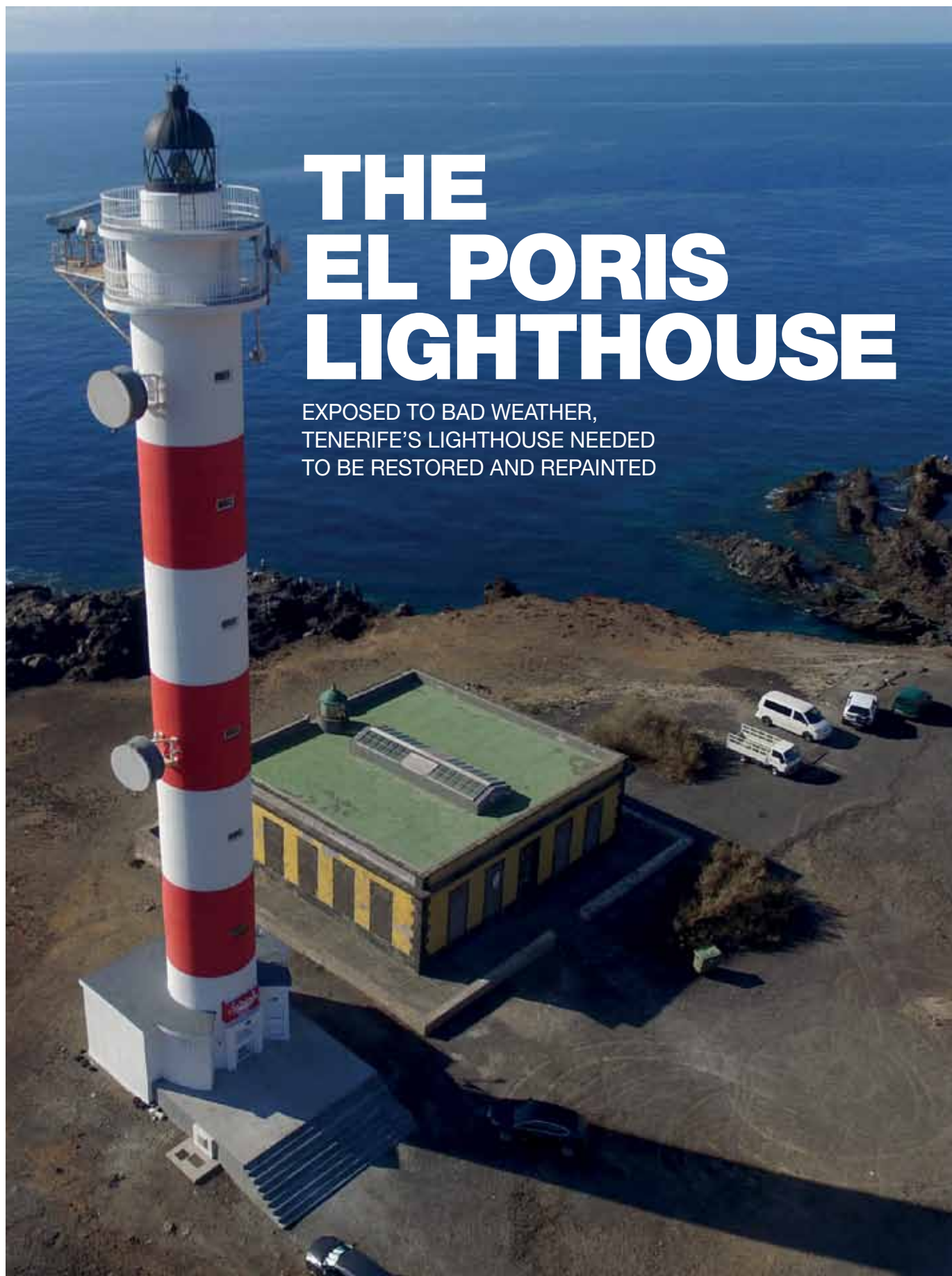
Substrate preparation: Primer G, Ultraplan, Ultraplan Eco

Installation of ural granite: Keracolor FF, Kerabond T, Ultracolor Plus

For further information on Mapei products see www.mapei.ru and www.mapei.com

THE EL PORIS LIGHTHOUSE

EXPOSED TO BAD WEATHER,
TENERIFE'S LIGHTHOUSE NEEDED
TO BE RESTORED AND REPAINTED



Situated between the cities of Abades and Poris de Abona, on the south-east coast of Tenerife in the Canary Islands, the El Poris lighthouse falls under the administration of the Autoridad Portuaria de Tenerife.

The previous lighthouse at Punta de Abona was inaugurated in 1902 to help ships navigate the route between Santa Cruz de Tenerife and the ports of the western Canaries. Over the years the lighthouse fell into disrepair and was finally abandoned in the 1970's when a new lighthouse tower was built. The need for a lighthouse in this area had been underlined a few years before, following the sinking of a ship between Punta de Abona and Punta de la Rasca. Also, the beacon on the old lighthouse was only 6.5 metres above the ground. It was decided, therefore, to build a new lighthouse with a beacon set at a higher level.

The new lighthouse, which sits right next to the old one, was inaugurated in August 1978: a cylindrical tower in concrete characterised by its red and white horizontal stripes with an automatic beacon set at 39 metres above the ground. Two years ago, after realising the extent of the damage due to its constant exposure to atmospheric agents and the level of corrosion caused by the marine aerosol, the port authorities decided to restore the lighthouse.

The first step was to remove all the damaged and deteriorated concrete from the surface of the tower with power tools until the steel reinforcement was exposed. It was recommended to passivate the reinforcement with two coats of MAPEFER 1K protective cementitious mortar.

Once the MAPEFER 1K was dry, the surface of the tower was restored with the



thixotropic mortar MAPEGROUT T40, which is easy to apply in thick layers on vertical surfaces without using formwork, mixed with MAPECURE SRA 25 (this product has now been replaced in Spain with MAPECURE SRA). On some of the smaller areas, on the other hand, PLANITOP SMOOTH & REPAIR fibre-reinforced, thixotropic cementitious mortar was applied.

The entire surface was then treated with MALECH micronized acrylic resin-based primer in water dispersion. This product was used to even out the absorbency of the substrate and as an adhesion promoter for the paint to be applied afterwards. For the final painting cycle, Mapei Technical Services recommended applying SILEXCOLOR PRIMER and, once it was completely dry, it was then finished off with SILEXCOLOR PAINT, a silicate-based coating product permeable to vapour which is available in a wide range of colours.

FACING PAGE. A view of the lighthouse upon completion of the work: its white finish was created by applying SILEXCOLOR PRIMER followed by SILEXCOLOR PAINT.

ON THIS PAGE, ABOVE. The lighthouse as it was before work started, forty years after its inauguration.

BELOW, LEFT. The first stage of the intervention was to remove all the damaged and deteriorated concrete and to clean the steel reinforcement.

CENTRE. The steel reinforcement was passivated with MAPEFER 1K.

RIGHT. The surface of the lighthouse was restored with MAPEGROUT T40 and PLANITOP SMOOTH & REPAIR.



TECHNICAL DATA

El Poris Lighthouse, Tenerife, Canary Islands (Spain)

Year of Construction: 1978

Year of Intervention: 2016

Intervention by Mapei: supplying products for reinforcing rods, for concrete repair and for coloured finishes

Project: Intemac

Client: Autoridad Portuaria de Tenerife

Contractor: Área Construcción

Mapei Distributor: A. Feliciano S.A. (Afelsa)

Mapei Coordinators: Antonio Montoro, Manuel Angel López (Mapei Spain SA)

MAPEI PRODUCTS

Repair of concrete: Mapefer 1K, Mapegrout T40, Mapecure SRA 25, Planitop Smooth&Repair

Protection and finish: Malech, Silexcolor Primer, Silexcolor Paint

For further information on products see www.mapei.es and www.mapei.com

IN THE SPOTLIGHT

MAPEGROUT T40

Medium strength (40 MPa), shrinkage compensated, fibre-reinforced, thixotropic mortar. Used for the repair of degraded vertical or horizontal concrete surfaces with mortar possessing medium mechanical performance characteristics.

MAPEGROUT T40 is a premixed powdered mortar composed of cement, graded aggregates and special additives. When mixed with water MAPEGROUT T40 forms an easy to apply mortar that can be applied without slumping even in substantial thicknesses on vertical surfaces without formwork.





APOLLO THEATRE LECCE (ITALY)

THE HISTORICAL THEATRE OF THIS APULIAN CITY HAS BEEN REOPENED AFTER LENGTHY RESTORATION WORK

After being closed for 30 years, and a 8 year restoration intervention costing 12 million Euros, the Apollo Theatre in Lecce was reopened this year at the beginning of February in the presence of Italy's President of the Republic, Sergio Mattarella, and of the Minister for Culture and Tourism, Dario Franceschini.

The inaugural evening, under the artistic direction of Katia Ricciarelli, famous in Italy as former soprano and actress, and directed by Pierluigi Pizzi, kicked off with the Italian National Anthem and the Ode to Joy from Beethoven's Ninth Symphony performed by the Tito Schipa Symphony Orchestra of Lecce conducted by Maestro Gianluigi Gelmetti and the Opera Choir of Lecce conducted by Maestro Emanuela Di Pietro. The guest of honour was the actor Giancarlo Giannini, who told the story of the Apollo Theatre.

A CENTURY-LONG STORY

Located in the old part of the centre of Lecce, the Apollo Theatre is considered one of the most important monuments of this Apulian city. Its current structure dates back to the early 1900's when the owner, Vincenzo Cappello, who had been granted use of a stretch of land along Via Trinchese, decided to build a theatre in that very spot. Up until the 1980's, when it closed its doors for the last time, the main hall had been used for concerts, operas, variety shows and as a cinema.

In 2007 the local council issued a tender to restore the theatre and, around 100 years after its inauguration in 1912, the Apollo Theatre was reborn.

From the outside, the theatre is characterised by its Neo-classical style, with an architrave sitting on an imposing row of columns. The inside of the theatre is

decorated in Hellenistic style, with Murano glass lampshades and wall-lights and wooden columns.

When the theatre is featuring operas, classical music and other shows it can seat 719 spectators, with 477 in the stalls, 184 in the two rows of boxes and 58 in the gallery. There is also a conference hall at gallery level with seating for up to 90 people. The stage is mobile and has a 25 meter scenery tower, while the orchestra pit can house up to 60 musicians. The designers opted for pale shades to decorate the theatre, playing on a colour scheme of brown, grey, white and beige, and chose to get rid of the red stage curtain.

It was also decided to renovate the characteristic zinc cupola, which at the start of the last century was mobile. The upper part of the foyer has been decorated with an archaeological pathway along which the various finds unearthed during the work are exhibited.

CUTTING-EDGE TECHNIQUES AND COMPOSITE MATERIALS

Mapei Technical Services carried out a series of technical surveys on site, followed by an in-depth analysis of the various problems they had found.

Work started with the static consolidation of all the Lecce stone pillars on the ground and first floors and of the pillars in Carparo stone (both typical types of limestone from the Apulia Region) on the second floor and of the concrete pillars of the last floor.

The concrete pillars on the 2 upper floors, which during the site survey were found to have structural problems, were statically confined with a system comprising PLANITOP HDM MAXI cementitious mortar with Pozzolan reaction binders and MAPEGRID G 120 alkali-resistant glass fibre mesh, which is used to provide localised reinforcement for masonry and concrete substrates.

Choosing composite materials proved to be decisive from a structural point of view for several reasons: there is only slight increase in weight and, as a result, overall mass is hardly affected, this strengthening technique is sustainable, is non-invasive and is compatible with renovation work aimed at safeguarding historical and monumental structures of



this kind, the materials used are durable over the years and are characterised by high mechanical performance characteristics and, finally, this type of strengthening system, using PLANITOP HDM MAXI mortar, is extremely reliable and is easy to apply and work with.

WORKING ON AN HISTORICAL BUILDING

To carry out the restoration work the contractor used various building materials, including special U-shaped profiles which were welded to the old steel annular beams on the first three floors. This was followed by the application of a layer of MAPEFILL ready-mixed mortar with high-strength cement and special additives, including an expansive agent to completely eliminate the risk of shrinkage during the plastic phase and once the mortar had hardened.

To fill all the cracks, gaps and internal cavities between the Lecce and Carparo stone elements, including the larger ones, and to consolidate the Lecce stone pillars on the ground and first floors and the Carparo stone pillars on the second floor, the product recommended was MAPE-ANTIQUE I fillerized, super-fluid, lime and Eco-Pozzolan based hydraulic binder. This product was proposed because, once hardened, slurry made from MAPE-ANTIQUE I has very similar characteristics in terms of mechanical strength, modulus of elasticity and porosity to mortar made from

LEFT. A view of the external façade of the Apollo Theatre in Lecce.

FOTO 1. The existing screeds in the stalls were consolidated with PROFAS and the cracks were sealed with EPORIP.

PHOTO 2. TOPCEM PRONTO was used to make the screeds.

PHOTO 3. The underground passageways which allow you to view the foundations of the old council houses on which the theatre was built at the time.

lime, lime-Pozzolan or hydraulic lime originally used for the construction of historical buildings.

THE IMPORTANCE OF CONSOLIDATION WORK

Static consolidation of the beam below the cupola, and between the concrete pillars and the floor slab in the stalls area, was carried out using Mapei systems, and in this specific case, MAPEFER two-component, anti-corrosion cementitious mortar to protect the rebar that had previously been exposed and brought to a bare metal finish, and MAPEGROUT THIXOTROPIC fibre-reinforced, shrinkage-compensated cementitious mortar, which is used to restore deteriorated concrete.

Static consolidation of the annular beams between the pillars was carried out with MAPEFER to passivate the metal elements and MAPEGROUT HI-FLOW shrinkage-compensated mortar to reintegrate the concrete.

In the stalls area on the ground floor, Mapei Technical Services recommended to

IN THE SPOTLIGHT

TOPCEM PRONTO

Ready-to-use, normal setting, quick-drying mortar with high thermal conductivity ($\lambda = 2 \text{ W/mK}$), used to make quick-drying, floating and bonded screeds (4 days) on new and old internal and external floor slabs for installing wooden, PVC, ceramic, stone and carpet floor coverings. Screeds made from TOPECM PRONTO are classified as CT - C30 - F6 - A1_g in compliance with the European Standard EN 13813.





AN EXPERT'S VIEW OF THE RESTORATION OF THE APOLLO THEATRE

Giovanni Dell'Anna (Project Manager for the restoration work on the Apollo Theatre):
Engineering Officer for the Public Works Department of Lecce City Council.

While restoration work was being carried out on the Apollo Theatre in Lecce, and during the archaeological dig in particular, several critical areas were found in the structure of the building itself due to various unforeseeable conditions, as well as the discovery of various artefacts. After unearthing the first interesting artefacts, the local Archaeological Authority asked for the excavation work to be extended to a lower level than originally required for the restoration work to be carried out, as well as a graphic and photographic survey and a complete laser scan of the site in order to identify the most appropriate solutions to be adopted. A stratigraphic map of the ground down to the level of the bedrock was made for every work area, following which all the exposed rocks and cavities were carefully cleaned and all the finds and artefacts unearthed were thoroughly analysed: masonry storage tanks, the foundations of ancient factories with walls made from large blocks of stone, natural caves and cavities and rectangular ditches and channels dug out from the actual rock. The modifications to the initial project affected several areas of the Theatre: the archaeological dig underneath the stage went down to the level of the bare rock, uncovering evidence of activity by previous inhabitants that proved difficult to catalogue. The foundation structure for the stage, which originally was going to be a single, solid slab, was modified into a structure of connecting beams with twelve viewing portals for the finds below. The finds unearthed between the stairs adjacent to the foyer and the portico to the left of the pronaos have been preserved using sheets of PVC and gravel to separate the mortar and supporting concrete for the structures and floors. The archaeological dig below the foyer unearthed a large pit that had been used as a well during construction of the nineteenth century structure, which at the time had been used as a soup kitchen for the poor, and it was proposed to use it as a storage tank for the anti-fire system, which is exactly what was done.

The parts of the project that had been taken out, have been postponed until new funds have been allocated for the completion project approved in 2014. The aim of this part of the project is to completely salvage all the finds and artefacts unearthed during the dig and to open them to the public.

The exhibition "The archaeological dig of the Apollo Theatre in Lecce", a scientific project with the full backing of the Ministry of Cultural Heritage and Tourism on display at the Apollo Theatre, has been divided into two distinct sessions. The first session, which is on show in the gallery of the foyer, is a review of the archaeological finds and artefacts unearthed during the course of the work and includes the most significant items, along with a series of graphic and photographic displays illustrating the various phases of the dig. The second session, meanwhile, is a path leading through the areas below ground under the theatre, where it is possible to see up close some of the monuments brought to light during the work. For the display part of the exhibition, a large amount of space is occupied by graphic and photographic displays to provide visitors with a topographic view of the periods of history present in the area where the actual structure of the theatre is located.

PHOTO 4. The oak flooring in the stalls and on the three spectator levels was installed with ULTRABOND ECO S955 1K, which is suitable for heated floors.

PHOTO 5. The textile wall coverings in the boxes were bonded with ADESILEX MT 32.

PHOTO 6. The wooden floors on the stairways were bonded with ULTRABOND P990 2K.

the contractor to apply a de-humidifying system comprising MAPE-ANTIQUE RINZAFFO breathable, salt-resistant, lime and Eco-Pozzolan scratch-coat mortar and MAPE-ANTIQUE MC macro-porous, de-humidifying, rendering mortar, which is used to renovate old masonry.

For the areas without rising damp – the foyer, the remaining part of the stalls and the intrados of the floors in the gallery – the product used was MAPE-ANTIQUE INTONACO NHL breathable, natural hydraulic lime and Eco-Pozzolan base mortar, which is recommended for new and existing masonry, including in build-ings of historical interest, such as in this particular case.

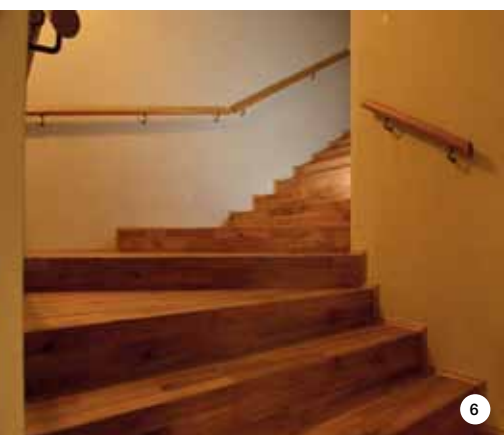
For the two main concrete stairways leading to the boxes, the service areas below the foyer and the dressing rooms under the stage, the product used was INTOMAP R1 aerated lime and hydraulic lime based base render, while PLANITOP 530 fine-textured mortar for render and concrete and PLANITOP 560 ultra fine-textured mortar for render were used to smooth the relative areas of lime-cement based surfaces.

INSTALLATION OF WOODEN AND TEXTILE FLOOR AND WALL COVERINGS

The internal floors in the Apollo Theatre (around 1,200 m² in total, including the heated floors in the stalls, the 48 boxes, the gallery and the various connecting stairways) were also renovated.

The design included a heated screed with underfloor heating for the stalls area made from TOPCEM PRONTO ready-mixed, normal-setting, controlled-shrinkage mortar, which is used to make rapid-drying screeds.

The existing screeds in the boxes were restored and consolidated with PROS-FAS solvent-free consolidator with high penetration capacity for cementitious substrates. It helped improve the adhesion between the new render carried out with TOPCEM PRONTO and the old ex-



isting substrate. EPORIP epoxy adhesive was used to seal the cracks.

Once work on the installation substrates had been completed, the wooden flooring was installed. The first step was to waterproof all the surfaces with ECO PRIM PU 1K solvent-free, moisture-hardening primer with very low emission of volatile organic compounds (VOC). For the stalls and the three floors of the theatre, including the boxes, oak floorboards (measuring 1,830mm x 129mm x 22mm) were installed with ULTRABOND

ECO S955 1K solvent-free, silylated polymer-based adhesive with very low emission of volatile organic compounds (VOC), which is suitable for use with heated floors, while for the flooring on all the stairways, again in oak, ULTRABOND P902 2K epoxy-polyurethane adhesive was the preferred choice.

The polyester textile wall coverings for the boxes were bonded in place with ADESILEX MT 32 adhesive in water dispersion, which is ideal for installing wall coverings.

TECHNICAL DATA

Apollo Theatre, Lecce (Italy)

Original Project: Tassoni

Construction Period: 1912-1926

Period of Intervention: 2008-2016

Intervention: restoration and static consolidation of the Apollo Theatre with the promotion of the archaeological dig and access to view the various finds

Intervention by Mapei: supply of products for the static consolidation of structures, to re-make screeds, to waterproof walls and to install wooden floors and textile wall coverings

PM: Giovanni A. Dell'Anna/
Lecce City Council

Design: Pier Luigi Cervellati, Studio Barletti Del Grosso & Associati, Franco Malgrande, Etacons s.r.l., Studio R.P. Engineering, Vito Alvino, Batimat s.r.l., Mario Catania (conservation/restoration specialist) and Daniele Paolin

Client: Lecce City Council

Works Directors: first design: Luigi del Grosso; second design: Silvio Cillo/
Lecce City Council

Main contractors: ATI: Nova Urbs srl; Oprar Div. Impianti Srl; Giovanna Izzo Restauri Sas

Flooring and Wall Covering

Contractors: wall coverings:

Operapulia Soc. Coop.; wooden flooring: Gravina Parquet Srl; Indennitate Agostino

Mapei Coordinators: Achille Carcagni, Giammario Dispoto, Michelangelo Occhiogrosso, Danilo De Matteis and Giovanni Villani (Mapei SpA)

Photos: Video Foto Spot, Lizzanello (Lecce, Italy)

MAPEI PRODUCTS

To make screeds: Eco Prim PU 1K, Eporip, Prosfas and Topcem Pronto
Static consolidation and

renovation of render: Mapefill, Mape-Antique I, Mapefer, Mapegrid G 120, Mapegrout Hi-Flow, Mapegrout Thixotropic and Planitop HDM Maxi

Renovation of render:

Intomap R1, Mape-Antique Intonaco NHL, Mape-Antique MC, Mape-Antique Rinzafo, Planitop 530 and Planitop 560

Installation of wooden flooring:

Ultrabond P902 2K and Ultrabond Eco S955 1K

Installation of textile floor covering: Adesilex MT 32

For further information on these products see our website at www.mapei.com

GEV: 20 YEARS IN BUSINESS

MAPEI HAS BEEN WORKING ALONGSIDE THIS RENOWNED PROFESSIONAL NETWORK FOR YEARS

GEV (an acronym for 'Gemeinschaft Emissionskontrollierte Verlegewerkstoffe, Klebstoffe und Bauprodukte e.V.'), the Association for the Control of Emissions in Products for Flooring Installation, Adhesives and Building Materials, was set up in Germany 20 years ago. Over the course of two decades it has set new safety regulations for the building industry through a certification system guaranteeing high safety standards for both product installers and end users.

The association, which is based in Düsseldorf, has created EMICODE, a system for meticulously assessing building products, certifying those with low emissions of volatile organic compounds (VOCs). Until GEV was set up, there were no standards for assessing the emissions given off by installation materials. EMICODE is now a well-established system providing useful guidance in choosing products for: craftsmen, designers and distributors, who can clearly decipher what the market has to offer in terms of low-emission systems and technology, with the additional benefit of EMICODE being a safe and unbiased classification system.

SAFEGUARDING HEALTH

Architects and designers need certified products for environmentally-friendly, eco-sustainable buildings. Mapei was soon aware of this requirement and joined GEV back in 2005. Protecting the environment, sustainability, health and safety have always been focal points for the company that has consistently developed its business and environmental philosophy around these issues.

The Mapei Group is currently the company with the highest number of GEV licenses, offering its customers an extensive portfolio of class EC1^{PLUS} ("very low emission") products. Uwe Gruber, General Manager of the Mapei Group's Ger-

man associate company, has also been on the GEV Board of Directors since 2012 and was appointed Vice-President in January 2016.

According to Uwe Gruber, "EMICODE has had a major influence on providing artisans, designers, users and distributors with a system for helping choose low-emission products and systems. EMICODE is an absolute guarantee of quality and health protection in any setting, as far as installation materials and products used in building are concerned. It is worth pointing out that manufacturers' efforts both nationally and internationally are of enormous importance in helping develop new technologies for

RIGHT. Uwe Gruber, General Manager of Mapei Germany and vice-president of GEV (second from the right) took part in a roundtable together with other leading figures from the industry, answering people's questions.



Manufacturers' efforts are of enormous importance in helping develop new technologies

the benefit of both operators and consumers”.

124 manufacturers now belong to GEV, half of them from outside Europe and overseas. Over 5,000 products are certified through this process, and the number is on the increase.

A BIT OF BACKGROUND INFORMATION

Why was GEV set up? The situation was very different at the end of the 2nd World War: in the 1950s damage due to materials for installing floors was not of any real concern. Protecting workers and end users took second place to economic growth. Over subsequent decades, the percentage content of solvents was slowly decreased until they were virtually completely banned from products. This was enforced in Germany by BG Bau (a legal insurance company against accidents and injuries based in Berlin, which operates in the building industry and other associated services, aimed at both companies and workers) through “Gisbau”, an information system about dangerous and hazardous materials. This system provided initial guidelines for protection at work until technological progress in the 1990s resulted in a drastic re-

duction in volatile organic compounds. Some of the leading manufacturers of materials for installing floors met on 24th February 1997 to set up EMICODE to provide all the necessary protection for workers in the industry, consumers and the environment. EMICODE went on to exceed all expectations. The label sets assessment standards for product emissions verified through unbiased, non-rival laboratory testing. Compared to other certification systems, it carries out more careful monitoring thanks to checks carried out on product samples after they have been certified.

Market pressure has resulted in EMICODE expanding from its original range of products for installing floors to include almost all interior building products. EMICODE has defined new sets of products based around categories of goods. Manufacturers are also responsible for the project's notable success: it is important that they are willing to submit their products to these tests. “A vital factor in GEV's success is being in line with the market”, so Klaus Winkels, GEV's managing director, notes. “It is not a matter of manufacturing the best possible products but of backing an enterprise in the industry that benefits everybody involved. Measuring and testing carried out by private bodies will never be unbiased and inevitably lead to errors of judgement, while classification into different categories of emissions has meant that both artisans, craftsmen, and consumers have placed their trust in the EMICODE label over the last 20 years.

BIG CELEBRATIONS IN DÜSSELDORF

At the end of April, GEV celebrated 20 years of good living in the famous Dreischeibenhaus skyscraper complex in Düsseldorf, together with over 100 delegates from some of the leading players in the construction materials and chemicals for building industries.

A number of speakers took the stage and there was also an interesting roundtable. Dirk Mayer-Mallmann, Marketing Manager of Mapei's German associate company Mapei GmbH, explained (with case studies to hand) how Mapei products receive EMICODE certification as part of corporate procedure and how people can be suitably informed about



FROM TOP DOWN. Klaus Winkels, president of GEV, greeted over 100 delegates from leading international companies in the industry at the event organised to celebrate the association's 20th anniversary.

IN THE MIDDLE. The famous Dreischeibenhaus building in Düsseldorf hosted a schedule of extremely interesting events focusing on key issues.

DOWN. Dirk Mayer-Mallmann, Marketing Manager of Mapei Germany, illustrated how GEV certifies products and how information can be provided about this procedure.

these matters.

During breaks in proceedings, guests chatted in good company while enjoying a delicious buffet and fabulous view of the city from the 94-metre-high terrace of Dreischeibenhaus skyscraper.

This article was taken from the German Realtà Mapei 20/2017 published by Mapei GmbH, whom we kindly thank.

Further information can be found at www.emicode.com, www.mapei.de and www.mapei.com

BELOW. Italian colleagues also joined in GEV's 20th anniversary celebrations: the photo shows Mikaela Decio and Roberto Leoni from Mapei's Environmental Sustainability team.





INTERNAL AIR QUALITY: A DRIVE FOR MAPEI

We now spend around 80 to 90% of our time in closed environments and we breathe in up to 20 cubic metres of air every day: a valid reason to be worried about the quality of the air around us and that it does not have a negative impact on our wellbeing and health.

Proof of a growing awareness on this topic are the new strategies in the field of eco-sustainability launched by national and international governments, but also through regulations issued by individual countries, such as GPP: Green Public Procurement, for the management of tenders for the design and construction of new builds and for restoration work on existing buildings (such as schools) by local councils.

Also worth remembering is that users and clients are becoming increasingly sensitive to all types of odours. And they are quite right: unpleasant odours can be annoying or become the cause

of conflict between people who need to interact within the same surroundings. These reasons explain the growing importance of the development of products for installing flooring with low emission of volatile compounds that give off as little odour as possible. In that sense, we have an enormous amount of power in our hands in determining the quality of indoor air, which is precisely why, in this particular field, MAPEI products with low emission levels can make a significant contribution: from primers to skimming compounds right up to adhesives, we are able to determine whether the installation of flooring is sound and, at the same time, has a low level of emissions and gives off very little odour.

QUALITY INDOOR AIR FOR OUR WELLBEING

Indoor Air Quality, or IAQ, is an important factor when evaluating our wellbeing:

approximately 20% of Europeans suffer from asthma and other allergy-related illnesses caused by substances normally found in internal environments.

Numerous factors can have an effect on the quality of the air inside our homes: human behaviour, things that we burn (cigarettes, candles, incense, etc.), ventilation, detergents, perfumes, furniture and even building products give off volatile organic compounds (VOC) that have an influence on the air in confined spaces.

Some types of VOC may be cancerogenic, such as benzene from fuel or formaldehyde in certain types of furniture. Other types of VOC may have no effect on our health, while other types may be toxic or hazardous.

It is indispensable, therefore, that the quality of indoor air is preserved, and it is good practice to only use materials that do not contain hazardous substances when designing and restoring structures, or at least use materials with a very low level of harmful substances.

SENSES AND PERCEPTION: WELL-BEING STARTS FROM ODOURS

As far as indoor air quality is concerned, the development of odours plays an extremely important role: perceiving odours is a part of one of the principal and most elementary senses of human

beings. The effect that odours have on us is registered in many different ways, is highly subjective and depends on our emotions.

Also, the level of importance placed on the sensory perception of air quality has increased even more over the last few years: odours in internal environments seem to be perceived more intensely and persist for longer in new constructions built according to energy savings criteria. Since both users of products and end users of the areas where the products have been applied are becoming less incline to accept odours and sources of unknown or unpleasant odours, their evaluation is becoming even more important. This is perfectly understandable: unpleasant odours may lead to conditions that can be perceived as stress factors and are often the cause of arguments or a sense of discomfort. And it is precisely because people are spending more and more time in closed environments that the quality and quantity of emissions given off by construction materials into the air

in internal environments is being studied.

THE SOURCES OF ODOURS FROM VOC IN INTERNAL ENVIRONMENTS

The emission of volatile organic compounds (VOC) in internal environments may only be perceived by our sense of smell if they reach a certain level of concentration. It does not necessarily mean, therefore, that the source of an odour can be determined using methods to measure VOC emissions. It is correct to say, however, that the use of products with certified low emission levels give off odours that are already almost imperceptible during use and, once hardened, are practically odourless.

This issue is becoming increasingly present and has now become of fundamental importance, starting with the strategy for eco-sustainability issued by the Ministry of the Environment (the aforementioned GPP), right up to buildings certified in compliance with the international protocols LEED and BREEAM.

Low emission products help earn the aforementioned certification protocols in the indoor environmental quality sector.

A sure, reliable way of evaluating building products with low emission of volatile organic compounds has been offered for more than 20 years by GEV through its EMICODE® mark, which is proposed as an independent, non-competitive environmental standards mark (see the article we have dedicated on GEV on this issue of our magazine).

Mapei has developed solvent-free products with low emission of VOC, which, since 2005 have earned the right to carry the EC1 mark (very low emission of volatile organic compounds) and, since 2010, the EMICODE EC1 PLUS mark (very low emission of volatile organic compounds-PLUS). Both these marks are issued by GEV.

Our thanks go to Mapei GmbH for their kind permission to use some of their published materials which appeared on the German Realta Mapei No. 20/2017.

ULTRABOND ECO 195



Convinces even the most refined noses

ULTRABOND ECO 195 is an adhesive in water dispersion with extended open time, very little odour and very low emission of volatile organic compounds (VOC) for textile flooring. It is suitable for static and dynamic loads in residential and commercial areas and for stresses from chair castors (according to EN 12529) and for underfloor heating systems. It is very easy to apply and odorless during application and use (according to ISO 1600-28) and has a long open time which makes it particularly suitable for patterned carpets. It has excellent wetting properties, high and tough final strength and prevents seam shrinkage and open joints. It has been awarded as EMICODE EC1 PLUS (very low emission) and Blauer Engel (RAL UZ 113) and it is therefore harmless to the health of the installer and the end-user.

How did the test work and why Ultrabond Eco 195?

In order to meet the requirements of the market, our R&D laboratories have developed a new adhesive for textile flooring with low emission of volatile organic compounds and very little odour. After choosing the two with the best technical characteristics from amongst numerous formulations, they were analysed by an independent laboratory to measure both their VOC emissions and their odour.

- **VOC EMISSIONS:** "ISO 16000 –Indoor Air parts 3, 6 and 9 and EN 16516 - Construction products - Assessment of release of dangerous substances - Determination of emissions into indoor air"

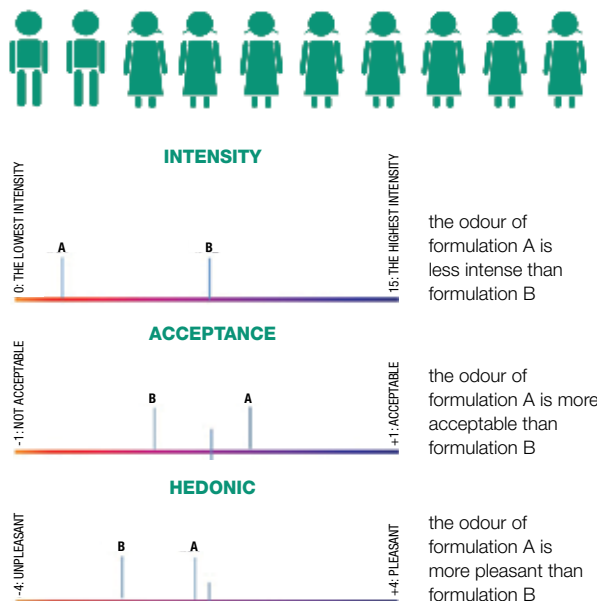
Formulation A had very low emission of VOC and could obtain the GEV EC1 PLUS certification and the Blue Angel ecolabel.



- **ODOUR:** "ISO 16000-28 Part 28: Determination of odour emissions from building products using test chambers"

Both formulations (A and B) were examined by a mixed panel of men and women who assessed their odour in terms of intensity, acceptance and hedonic tone (more or less pleasant odour).

Formulation A, therefore, was found to be better than formulation B in terms of VOC emissions and odour. Formulation A, therefore, was chosen for the adhesive with low VOC and low odour:





48 RESTAURANT & BAR HUNGARY

IN KECSKEMÉT A BUILDING DATING
BACK TO THE BEGINNING OF THE
1900'S HAS BEEN RENOVATED
USING APPROPRIATE ADHESIVES
FOR TOP OF THE RANGE TILES

"My initial reaction when I saw this building for the first time was of amazement. Since it had been built it had already undergone so many changes and now I was the one behind yet another change in use! There are traces of the past, present and future to be found in every corner of this building. It has a very unique history which deserves to be told, layer after layer, just like the history of the piazza and the city where it is located. The building should really have been demolished but a committee decided to salvage it and, by working together, we managed to create a new world from the ruins of the old world". The words of Ottó Hoffer, the interior designer who designed all the interiors for this new restaurant and bar in the Hungarian city of Kecskemét, are a perfect example of his commitment when taking on the renovation of this building dating back to the beginning of the last century and which, over the years, had been extended and renovated a number of times. Before the most recent intervention two years ago, the building was in a state of disrepair and general decline. Also, the numerous renovation works carried out in the

past had mixed its original Secession style with additions and demolitions and its past glory was something that only the imagination could have envisaged.

BESPOKE TILES AND DECORATIONS

For the internal walls and floors, the interior designer and client chose tiles from a Hungarian company specialised in the production of tiles and mosaics with decorative features and unique colours. The manufacturer of the tiles recommended using Mapei products and systems – with whom it had already worked on other sites with great success – not only to install the tiles in various sizes and thicknesses, but also to install and waterproof 600 m² of substrate.

The substrate was made from TOPCEM, a special hydraulic binder for normal-setting, rapid-drying, controlled shrinkage screeds. Thanks to the skill of the tilers and the quality of the products, once the screed was cured and dry, it was ready for the next stage of the intervention without having to do anything else to level off the installation bed.



For the bar and the restaurant area, 2 cm thick Art Déco tiles were chosen in two different formats (10x10 cm and 12.5x12.5 cm). KERAFLEX MAXI S1 high-performance, non-slip cementitious adhesive with extended open time was used to install the tiles. The final phase was to fill the grout lines with ULTRACOLOR PLUS high performance, rapid-drying mortar which, over the years, remains perfectly water-repellent and resistant to the formation of mould. Preference was given to MAPESIL LM silicone sealant to make the expansion joints. In the restaurant area there is an English style fireplace and surround. To comply with safety regulations, a wooden insert was installed in the old fireplace, a special hearth designed to be placed in old fireplaces during restoration work. The new structure was made from Ytong concrete blocks which were reinforced with a cementitious mortar, reinforced with MAPENET 150 alkali-resistant glass fibre mesh before installing the tiles. The natural stone surface was bonded with ADESILEX P9, while for the grout lines, which needed to have a rustic look, preference was given to KERACOLOR RUSTIC high performance mortar, a product manufactured in Hungary exclusively for the Hungarian market, which has good compressive and flexural strength and resistance to abrasion and is used to fill internal and external grout lines from 5 to 50 mm wide.

THE PROBLEM OF DAMP IN THE WASHROOMS AREA

Some of the walls in the washrooms and in the stairwell were tiled with square Pietra Kvåder tiles which look like natural stone (21x21 cm). Before installing the tiles, the surface was treated with PRIMER G synthetic resin-based primer

in water dispersion diluted 1:2 with water. PRIMER G is a product that encourages adhesion, anchors surface dust and evens out the absorbency of substrates before bonding tiles. The tiles were installed with ADESILEX P9 and again grouted with KERACOLOR RUSTIC in the stairwell and with

ABOVE. After making new screeds from TOPCEM, the bar and restaurant areas were dressed with tiles bonded with KERAFLEX MAXI S1 and grouted with ULTRACOLOR PLUS.

BELOW. The natural stone surface around the fireplace was bonded with ADESILEX P9 and grouted with KERACOLOR RUSTIC.





ABOVE. The surface of the decorative features and the engraved natural stone surrounds were cleaned with KERANET and then treated with MAPECRETE STAIN PROTECTION.

BELOW, LEFT. The walls in the stairwell were dressed with square tiles. Before installing the tiles with ADESILEX P9 and KERACOLOR RUSTIC, the surface was treated with PRIMER G. **RIGHT.** Before installing the tiles, the area for the washrooms was waterproofed with MAPELASTIC FOUNDATION and reinforced with MAPENET 150 and MAPEBAND tape.



RIGHT. To obtain a satin effect finish for the tiles, the final treatment was a mixture of MAPELUX OPACA and MAPELUX LUCIDA protective wax.

ULTRACOLOR PLUS in the washrooms. The joints were sealed with MAPESIL LM.

The public washrooms were located in the original vaulted cellar but had problems of damp and had often suffered from flooding. They had been badly damaged by water in the past and the surface needed to be coated with a waterproofing membrane before installing the tiles. So, after installing new screeds made from TOPCEM, the waterproofing work could be carried out. The first step was to create fillet joints between the floors and walls with MAPEBAND alkali-resistant, rubber-backed felt tape.

MAPELASTIC FOUNDATION two-component cementitious mortar, which is used to waterproof facing walls, was applied on the surfaces, and this was also reinforced with MAPENET 150 mesh.

Two types of tiles were installed on the walls: the Victorian model in black for the men's washrooms and the Moorish model in terracotta for the ladies' washrooms. For the floors, on the other hand, preference was given to the Art Déco model of tiles in a similar size (20x5 cm) to the planks used for the wooden flooring. The wall tiles were installed with ADESILEX P9 non-slip cementitious adhesive and the floor tiles were installed with KERAFLEX MAXI S1.

In order to create a rustic yet elegant look, it was very important to choose the right grouting product: KERACOLOR GG polymer-modified cementitious mortar proved to be the perfect choice. This product is resistant to acids and is ideal for grout lines from 4 to 15 mm wide.

The Terracotta Castle model tiles, characterised by their decorative textured finish, were installed with ADESILEX P9 in the stairwell leading to the gallery.

FINAL TREATMENT

The efflorescence that had formed on the existing surfaces dressed with natural stone was removed with KERANET acid-based cleaner, which is available in both liquid form (15% in solution) and in a concentrated powder form. MAPECRETE STAIN PROTECTION was then applied over the stone, an hydro-oil repellent and anti-stain treatment made of modified organic polymers in a watery solution for surfaces in concrete, stone material and natural stone.

For the final treatment of the floor tiles, the designers were looking for a finish that was neither shiny nor matt, but rather a satin finish, which is not particularly easy to obtain. Mapei Technical Services proposed mixing MAPELUX OPACA and MAPELUX LUCIDA, double-reticulating, high-strength metallic waxes with a matt and shiny finish, which is used to protect floors exposed to highly intense traffic, such as in this case. After applying two coats of the wax mixture, both the client and the designers said that it was "...exactly the finish we were looking for, as if we had gone back in time!"



IN THE SPOTLIGHT

ADESILEX P9

High performance cementitious adhesive with no vertical slip and extended open time for ceramic tiles and stone materials. Suitable for both interior and exterior bonding of ceramic tiles and mosaics on floors, walls and ceilings. Also suitable for spot bonding of insulating

materials such as expanded polystyrene, rock and glass wool, sound-deadening panels, etc.



TECHNICAL DATA

48 Restaurant & Bar,

Kecskemét (Hungary)

Period of Costruction: XIX century

Period of Intervention: 2014-2015

Intervention by Mapei:

supply products for the screed preparation, for the surface waterproofing, for the wall and floor installation of tiles of different sizes, for the final protection of the coverings

Project: Endre Szabó, Ottó Hoffer, Viktória Lovász

Client: Lajos Benkovics

Contractor: Kecskemét General

Installer Company: Otti-Manufactura LLC

Mapei Distributor: Otti-Manufactura LLC

Mapei Coordinator: Mihály Juhász (Mapei Kft.)

MAPEI PRODUCTS

Screed preparation: Primer G, Topcem

Waterproofing: Mapeband, Mapelastik Foundation, Mapenet 150

Tiles installation: Adesilex P9, Keracolor GG, Keracolor Rustic*, Keraflex Maxi S1, Mapesil LM, Ultracolor Plus

Covering protection: Keranet, Mapecrete Stain Protection, Mapelux Lucida, Mapelux Opaca

* These products are manufactured and distributed in Hungary by Mapei Kft.

For further information on products see the websites www.mapei.hu and www.mapei.com



TOUR DE ZALAKAROS IN THE NAME OF SOLIDARITY

GREAT SUCCESS
FOR THE CYCLE
RACE SPONSORED
BY MAPEI KFT. IN
HUNGARY





The Hungarian associate company, Mapei Kft., sponsored the Tour de Zalakaros 2017 cycle race for the third year running. The race has been taking place for 10 years in the Hungarian town of Zalakaros in the western part of the country. A chance for friends and customers to get together in the name of sport and solidarity.

The race provided the chance to fundraising for the Gézengúz Foundation that provides aid for premature or disabled babies.

Competitors could choose between three different races depending on their training and physical shape: a 33 km race for families and two harder races around a 60 km and 127 km circuit.

A SPECIAL GUEST

The Italian cycling champion Andrea Tafi, who won prestigious races like Paris-Roubaix and the Tour of Flanders in the 1990s, took part in both the 33 km and 127 km races.

"Tafi was wonderful", so Lázló Kis from Mapei Kft. told us, "he fit into the Mapei team perfectly. His race time was crucial, but he also made sure everybody had fun and rode at their own pace. Riding together was a wonderful experience".

Tafi also donated an autographed cycling jersey for the charity auction held after the race.

Over 300 Mapei customers and friends then enjoyed some delicious refreshments livened up by children's games and other kinds of family entertainment. Once again Mapei managed it: it combined sport, solidarity and close ties with the local territory in the most impeccable manner.



ON THESE PAGES. Some pictures of the tour held in Zalakaros, Hungary, organized by Mapei Kft. The Italian cycling champion Andrea Tafi also took part in the event (above).





©Foto Vignoli

EUROPA LEAGUE:

ATALANTA PUT ON GREAT DISPLAY AT MAPEI STADIUM

THE "GODDESS" MAKES ITS DEBUT IN REGGIO EMILIA BEATING EVERTON

Just like the Mapei Group, its stadium in Reggio Emilia (Central Italy) also has an international vocation. Last season Mapei Stadium- Città del Tricolore hosted Sassuolo's home games in the Europa League and was highly praised by UEFA officials for the general appearance of the ground and the quality-functional standards of its facilities. This season the Italian team Atalanta is playing its home games in the Europa league in Reggio Emilia. The Azzurri d'Italia Stadium in Bergamo is undergoing alterations and at the moment does not meet the standards set by UEFA.

Mapei has owned the stadium in Reggio Emilia since 2013; the Group headed by Giorgio Squinzi has completely modernised and restructured the facility. On 14th September, Atalanta played its first game in Europa League for 26 years at Mapei Stadium, beating the English team Everton 3-0. Everton, a top club based in Liverpool, is a prestigious team: it has won a UEFA Cup Winners Cup, 9 English League Championships, 9 Charity Shields, and 5 FA Cups. The "Blues" from Liverpool are coached by the legendary Dutch player, Ronald Koeman, and the team's star player is Wayne Rooney, who was England's leading striker over the last few years. Even though this was just the first match in the qualifying group, Atalanta, named after the Greek god-

dess of speed and running, attracted 13,000 fans to Mapei Stadium. The black-and-blue fans enjoyed their "day out" from Bergamo to Reggio, making plenty of noise right from early in the afternoon. When Atalanta plays its home games at Azzurri d'Italia Stadium, its hardcore fans congregate at the north end of the ground but at Mapei stadium they filled the south end with the English fans at the other end of the ground. In a stadium packed with cheering fans and bright colours, the black-and-blues pushed Everton back into their own penalty area in the first 10 minutes. Sigurdsson then had a good chance for Everton, but his shot was pushed away by Atalanta's goalkeeper, Berisha, and shortly afterwards Rooney lobbed the ball just over the bar. Atalanta took the lead in the 26th minute when Masiello struck the ball into the back of the net from a corner.

A few minutes later Atalanta had another great chance, but this time Masiello struck the ball straight at the goalkeeper, Stekelenburg. The second goal soon arrived in the 40th minute thanks to some wonderful play by Alejandro Gomez (known as "Papu"), who slammed the ball into the top corner of the net with a fantastic right foot shot that Stekelenburg could do nothing about. Everton were now on the back foot and in the 44th minute conceded a third goal to make the score 3-0. Atalanta's centre forward, Andrea Petagna, laid on a perfect ball for Cristante, who took his chance. Everton came out more strongly at the beginning of the second half with Rooney looking lively and Berisha was forced to make a good save. But a minutes later Atalanta regained control of the game and Gomez and the midfielder player Freuler both had good chances to score a fourth with Freuler clipping the top of the crossbar. Despite Everton's best efforts Atalanta controlled the game comfortably. "Mapei Stadium brings good luck - so the Atalanta fans said after the game - it is a great second home for our team". As well as Everton, Europa League Group E includes the Cypriot team Apollon Limassol and the French team Olympique Lyonnais.



©Foto Vignoli



ITALY-ISRAEL

AT MAPEI STADIUM

THE ITALIAN NATIONAL TEAM BEATS ISRAEL 1-0 IN THE QUALIFYING ROUNDS FOR THE 2018 WORLD CUP

The Italian national team coached by Ventura played a key qualifying match for the 2018 World Cup in Russia at Mapei Stadium-Città del Tricolore in Reggio Emilia (Central Italy).

Italy beat Israel 1-0 with a goal by its top striker *Ciro Immobile*. 16,000 fans turned up to watch this highly successful Group G qualifying match.

It was a delicate match, even though Israel is not a team with a big international reputation.

Italy began the match well with *Belotti* almost scoring in the second minute, but then the team faded and Israel looked dangerous on more than one occasion. The AC Milan full-back *Conti* prevented *Buffon* from conceding a goal on several occasions.

On the 25th minute mark, the Israeli full-back, *Davidzada*, broke away on the left and laid on a perfect cross for *Shechter*, who managed to get the ball stuck between his feet, much to Italy's relief. Israel had another chance in the 41st minute with *Cohen* getting in a good shot from the edge of the area, but Italy's goalkeeper, *Buffon*, deflected the ball

away for a corner. Then *Insigne* almost scored for Italy on the stroke of half-time. After Ventura gave the team a good talking to in the changing rooms at half time, Italy looked much more aggressive and attack-minded in the second half. *Immobile* almost scored twice in two minutes from good positions.

The Israeli team now had their backs against the wall and, driven on by the fans at Mapei Stadium, Italy eventually took the lead in the eighth minute through a cleverly crafted move finished off with a great cross by *Candrea*: *Immobile* timed his jump to perfection and headed the ball into the back of the net. Scoring seemed to really take the pressure off the Italian team, particularly *Belotti*, who almost scored a second goal. Although there were no more goals, these were three extremely important points towards qualification.

ITALY WINS AT MAPEI STADIUM

The stadium in Reggio Emilia changed its name to Mapei Stadium in 2013, when it was taken over by *Giorgio Squinzi's* Group.

ON THIS PAGE. Some pictures of the match played by Italy and Israel.

ABOVE. The team before the match began.

ABOVE, RIGHT. The head coach *Giampiero Ventura*.

Italian teams of all different levels and ages have beaten everybody at the stadium since it was built in 1995 (back then it was known as "Giglio" Stadium after its main sponsor).

The Italian team played its first match of the ground just a few months after it opened on 15th November 1995, beating Lithuania 4-0.

On 24th October 1998, an Italian team represented by second-division players won 2-0 against a team of second division players of various different nationalities.

On 24th March 2011 Italy Under 21 won 2-1 in a friendly against Sweden Under 21.

In an U21 European Championships game played on 14th November 2011, Italy beat Northern Ireland 3-0 and, in the same European Championships, Italy also beat Slovakia 3-1 on 14th October 2014 at Mapei Stadium.

Mapei Stadium has also brought good luck for the Italian women's team, who beat Northern Ireland 3-1 on 12th April 2016.

Mapei clearly brings good luck to Italy.

ON THE RIGHT. Giovanni Carnevali, CEO and General Manager of Sassuolo Calcio.



CARNEVALI:

“MY VIEW ON SASSUOLO”



THE CEO AND GENERAL MANAGER OF SASSUOLO SHARES WITH US HIS THOUGHTS ABOUT THE TEAM'S FIRST GAMES OF THE SEASON

Sassuolo's fifth season in the Italian Serie A got off to a bad start but the team is now trying to climb up the league table. “We hope to gain ground quickly”, so Giovanni Carnevali told us, Sassuolo's CEO and General Manager. The new season began on 20th August, when Mapei Stadium hosted Sassuolo-Genoa that ended in a 0-0 draw. Perhaps the black-and-Greens were not ready to fight for three points in the middle of August?

“That is not really the case, it has got nothing to do with having rushed our preparations”, so Carnevali assured us. “When two teams meet on the first day of the new season, they are always

a little insecure” - so he went on to say. “Nobody wants to start with a defeat for all kinds of reasons and not just because it might be seen as a bad omen. So, fear of losing inevitably gets the upper hand over the will to win. We have no regrets, even though with our players we could have won”.

The Mapei-owned club played its second game of the season at Grande Torino Stadium, losing 3-0 to Torino. Torino took the lead with a fabulous goal by Belotti in the 45th minute. As Carnevali noted, “we were the better team for the first 40 minutes. The truth is that Belotti's goal came from a bad mistake by one

ON THE FACING PAGE.

Berardi celebrates scoring at the Olympic Stadium.

ON THE RIGHT.

Alessandro Matri in action against Juventus.

of our midfielders. If we had gone in 0-0 at half-time, it would have been a great fillip for our team, nevertheless we still played better than Torino for much of the second half". Unfortunately, Sassuolo conceded second-half goals by Ljajic in the 39th minute and Obi in the 43rd. "It was a real pity, we could easily have drawn".

In the next game Sassuolo lost 2-1 to Atalanta at Azzurri d'Italia Stadium in Bergamo. "I did not expect us to lose. We were really disappointed with the result of the game in Bergamo: we played really well against a wonderful Atalanta side that easily defeated Everton in the Europa League and is doing really well in the Italian championship. We lost a match we could have won". Sassuolo opened the scoring in the 20th minute with a goal by the young midfield player Sensi; Atalanta equalised seven minutes later with a goal by Cornelius. "With the scores even - so the General Manager went on to add - we frequently had the upper hand and went close to taking the lead". Unfortunately, Petagna punished Sassuolo in the 32nd minute to give victory to the black-and-blues.

The team sponsored by Mapei then took on the mighty Juventus in Reggio Emilia. The black-and-whites won 3-1 in the end. The Argentinian star Dybala scored in the 16th minute of the first half and then again in the 4th minute after the break. Politano's goal in the sixth minute of the second half brought Sassuolo back into the match, but the unstoppable Dybala completed his hat-trick in the 18th minute to make sure Juventus took all three points. "Against a wonderful Juventus team - so Carnevali admitted - there was nothing more we could have done. They were simply better than us all over the pitch".

VICTORY AT LAST

The first win of the 2017-18 season finally came against Cagliari. Sassuolo beat the red-and-blues 1-0 at the Sardegna Arena. Sassuolo's star player against the team from Sardinia was Alessandro Matri, a centre forward playing his second season for the team. "It was a wonderful performance. - so the CEO noted - Alessandro was a true leader and driving force behind the whole team, even after missing a penalty in the first half". The referee awarded a second penalty to Sassuolo in the second half. "Politano offered to take it - so Carnevali informed us - but Matri was keen to take the penalty despite his first-half mess. He showed great character: if he had missed a second time it would have been disastrous. But he made up for his earlier mistake by scoring the winning goal".

STRANGE DEFEAT

In the next game in Reggio Emilia against Bologna, things turned out badly and Sassuolo lost 1-0. "The Bologna team were playing well and had just put in a great performance against Inter Milan. This was another match Sassuolo should have won but ended up empty-handed". Bologna brought on Okwonkwo in the 41st minute of the second half and he turned out to be the matchwinner: the African scored three minutes after coming on. "The end of the match was rather frantic and



Bucchi substituted a couple of players. But what really penalised us was Magnanelli's sending off that left us with 10 men at a crucial point in the match".

BAD DAY AT THE OLYMPIC STADIUM

The next game at the Olympic Stadium against Lazio ended very badly for Sassuolo, who crashed to a 6-1 defeat. The game began well with Sassuolo taking the lead in the 28th minute with a goal by Berardi and the team was playing some great football. Lazio equalised in the 46th minute of the first half with a goal by Luis Alberto during time added on. Lazio then went on a goal spree in the second half scoring through De Vrij (11'), Luis Alberto (12'), Parolo (19' and 24') and Immobile (36'). It was a heavy defeat. "In the first half - so Carnevali pointed out - Sassuolo played its best football all season and could have been 2-0 ahead at half-time. Unfortunately, that is not what happened, but we did play some really creative football and everybody worked really hard and showed real grit".

INJURIES

Bad luck raised its ugly head against Sassuolo at the Olympic Stadium: "Two injuries affected us. Letschert got injured in the first half and was replaced by Peluso, who then got injured himself in the second half: that left us with nobody to play their position in defence. It is one of the reasons why we collapsed". Unfortunately for Letschert, he will be out for a long time, probably until March. Carnevali went on to talk about the injury to his striker Berardi. "He needed eight stitches after the game against Atalanta. He missed some training and was not fully fit for the Sassuolo-Bologna game. Let's hope that the goal he scored against Lazio raises his morale, we need him if we are to climb up the table".

A lot more was expected of the other strikers, Politano and Ragusa, at the beginning of the season. "Changing our manager resulted in some changes in how the team plays and these players have not had as many opportunities to shine compared to last season. In any case, hard work is always rewarded and Ragusa and Politano will certainly have more opportunities to help the team climb up towards the top of the table from now onwards".



CRISTIAN BUCCHI:

"WE WILL ALWAYS PLAY OFFENSIVELY!"

THIS ATTACK-MINDED MANAGER IS ENTHUSIASTIC ABOUT THE SET-UP AT SASSUOLO

2017-18 is Sassuolo's first season with Cristian Bucchi on the bench. It has not been the best start to the season for the club, partly due to the international break after the first two games. "My team – according to Cristian, aged 40 from Rome, who used to play at centre forward for Modena and Naples – was still at an experimental stage and getting used to playing together. We needed a few games to find the right formation".

Cristian, you took over Sassuolo when the transfer market was still in full swing. Did the fact that the transfer window was open until the second game of the season create problems for a club with so many bright young prospects like Sassuolo?

"My players are true professionals and our managing staff are all strong characters. Nevertheless, I agree with my colleague Max Allegri: the transfer market should close earlier, because rumours about possible transfer deals can cause distractions".

What is your first impression of the club set-up at Sassuolo?

"Exciting. Sassuolo is a great club that I am still getting to know. Sometimes there can be a rather stressful atmosphere at ambitious clubs. I am lucky enough to be at an ambitious

club that is also extremely classy, where there is no stress and a very tightly knit group. I am extremely fortunate to be working for the Mapei Group, the owner, Giorgio Squinzi, is very enthusiastic".

But Squinzi made himself very clear: he is not interested in playing just to take part. In the medium term he would like to see Sassuolo in the Champions League. Does that worry you?

Although Giorgio Squinzi's team has not been playing at the top level for very long, it has already taken part in the Europa League. And before Sassuolo, he was in charge of an extremely successful cycling team. It is normal and quite right that he should be so ambitious, driving us on. I realise that taking part in the 2016-17 Europa League was just the first stepping stone".

Generally speaking, the manager of a team that is not from a big city plays defensively. What kind of manager are you?

Offensive-minded, without a doubt. I always play with two strikers, sometimes even three, plus an attacking midfielder. I think you should attack your opponents without exposing

» I ALWAYS PLAY WITH TWO STRIKERS, SOMETIMES EVEN THREE, PLUS AN ATTACKING MIDFIELDER. I THINK YOU SHOULD ATTACK YOUR OPPONENTS WITHOUT EXPOSING YOUR DEFENCE

your defence”.

Over the last few seasons Sassuolo have played with Defrel up front. Falcinelli or Matri now play as the central striker. Is there any difference?

Yes, Defrel is more used to drifting out wide, whereas Falcinelli and Matri play deeper, they are penalty-box strikers”.

Matri has already played for some big-name teams, which is why the Sassuolo fans expected him to score lots of goals last season.

“Alessandro played his part last season, scoring eight goals. He did well and, leaving aside his goal-scoring feats, his charisma is also extremely important. Matri may not throw his arms about or shout, but he knows how to urge his teammates on. He knows how to do it without making a fuss. Alessandro is an important player”.

Berardi is now 23; is he still just an emerging player?

“At the age of just 23 he cannot be considered a youngster. This is his fifth season in the Italian Serie A. He could be considered a youngster during his first or second season, but now he must really give 100% and show us what he can do”.

This season Sassuolo will only play in Italy. Do you often talk about the Italian Cup with your players?

“I think the Italian Cup is really important for us. Over the last few years, Sassuolo has not been very lucky in the Italian Cup. This year we will give it our very best shot: it is extremely exciting to take part in a knock-out competition”.



Would you like to make a few suggestions to Ventura, the Italian team manager?

“Ventura is an excellent head coach and national team manager, he will certainly make the right decisions. Here at Sassuolo, for example, we have Politano and Berardi, who we can always rely on, and they could also be useful to the Italian team. Ventura certainly has a high opinion of Francesco Acerbi, who has already played for the national team and is a real star of our squad. I know that a number of teams have made big-money offers for him, but Francesco decided to stay here at Sassuolo. He knows that our project suits him imperfectly and he has signed a five-year contract”.

There were also plenty of offers for your goalkeeper Andrea Consigli.

“He also likes our program. I think Andrea is an exemplary professional with a great desire to do well. He is always spectacular”.

The centre forward, Gianluca Scamacca, born in 1999, played a key part in Sassuolo's great win in the Viareggio Youth Cup last February. Will he be this season's revelation?

“He is fast, acrobatic and good in the air. And, most importantly, he knows that being in the first-team squad does not mean he has made it. He knows he still has to do a lot more to be considered a revelation or make his mark in the Serie A”.

Bucchi, you have a midfield “wall” like Alfred Duncan, who came from Inter Milan. Is he performing to the best of his ability?

“At the age of 24 he still needs to develop: sometimes it looks like he is playing with the handbrake on. So far we have only seen flashes of the real Duncan: he needs to make that final decisive step forward to really break through”.

Is the midfielder Stefano Sensi a “little Pirlo”?

“It is not up to me to say whether he is the new Pirlo or a little Pirlo. I can only assure you that Sensi has the quality and dynamism to be one of the best attacking midfield players. Talking about young players, I would like to mention our winger, Claud Adjapong, for his speed. And we have other important up-and-coming players in our squad”.

OPPOSITE PAGE. The manager Cristian Bucchi.

THIS PAGE, ABOVE. From left on: the President of Sassuolo - Carlo Rossi - with Bucchi, the owner Giorgio Squinzi and the CEO Giovanni Carnevali.

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