

INTERNATIONAL

[Realtà MAPEI]

ISSUE 59

**¡VIVA MI CANAL
VIVA MI PANAMÁ!**



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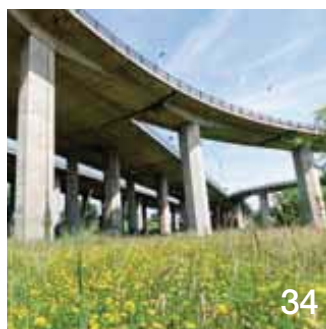
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SUMMARY



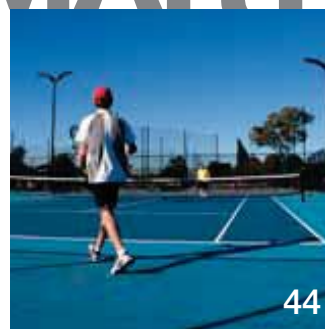
26



34



38



44



48



52



56



62

NEWS

- 2 Keep on innovating to grow even more

PROJECTS

- 4 The new Panama Canal has been inaugurated
21 Mapei in Benelux: a selection of works
26 "Il Centro" Shopping Center in Arese
34 Viadotto dei Parchi
38 Fondazione Poliambulanza in Brescia
44 Carrara Gardens Tennis Academy
45 Woodriff Gardens Tennis Complex
46 Tennis court at Medindie mansion

TEAMWORK

- 12 Mapei in Panama
13 Mapei Panama Corporate Event
16 New facilities for Mapei Benelux

INTERVIEW

- 19 Renovating Mapei Benelux headquarters: interviewing architects from Louis & Royer

RESEARCH

- 48 Mapei for cleanrooms

SPORT DIVISION

- 52 Pallacanestro Reggiana: thanks anyway!
56 Berardi and "Italo-Sassuolo": full steam ahead!

- 58 Sassuolo and its fans receive special awards
59 Sassuolo: 2016 – 2017 season ticket campaign
60 Workshop: the figures of Sassuolo's success story
62 Piazza Garibaldi celebrates Sassuolo

IN THE SPOTLIGHT

Mapegrout Easy Flow p. 36, Ultrabond Eco V4 SP p. 41, Mapecoat TNS systems p. 47; Mapetherm Flex RP p. 64; Mapelastic back cover

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COVER STORY

Mapei was among the key players of the most ambitious feat of engineering ever completed in the world: the extension of the Panama Canal.

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2015 WAS A POSITIVE YEAR
FOR MAPEI, WHICH GREW BY
ALMOST WORLDWIDE **13%**





KEEP ON INNOVATING TO GROW

EVEN MORE, BOTH IN ITALY AND AROUND WORLD

One of the world's leading manufacturers of chemical products for the building industry, Mapei is constantly setting new quality standards, thanks to its innovative products and determination to compete and excel globally.

Well aware that we offer every market we operate on products of the highest quality, 2015 was a positive year for Mapei, which grew by almost 13% worldwide. A result that needs to be interpreted in relation to differing local states of affairs, including countries with a depressed market - such as Italy and France - and other regions around the world, like North America and the Asia-Pacific rim, where growth actually reached 20%. In addition to this, we need to take into account the Group's good performances in countries like Germany, Great Britain, Hungary and Scandinavian nations.

These results were enabled by the Group's high competitiveness on the global market and were achieved by constantly focusing on three strategic lines for Mapei: research, internationalisation and specialisation. Investments in Research and Development of new products and technology also increased and are always aimed at meeting the needs of every market on which we operate, where we constantly strive to be the leading company.

All this while reinforcing our commitment to the sustainable development of industrial processes and products through products designed to reduce energy consumption and VOC emissions (volatile organic compounds) that are safe for the environment, installers and end users.

This commitment to protecting the environment and health is also embodied in our design work, such as the construction of new production facilities using local eco-sustainable materials.

In 2015 the Group continued to grow on five continents on a business, manufacturing and organisational level through the creation of new manufacturing facilities and reinforcing the existing ones, while also increasing the number of its staff and

business partners.

The absolute figures for the Italian market are in line with 2008, although the importance of the Italian market has exactly halved over the same period in time and it is now foreign markets that account for 75% of the Group's income, where the absolute figures have exactly doubled compared to 2008.

Internationalisation has been the strategic lever that has triggered this growth down the years, now allowing the Group to hit a turnover of 2.180 billion Euros for the first time, corresponding to a yearly increase of 240 million. A figure which, in a nutshell, is seven times the turnover of the second biggest competitor in Italy.

Extraordinary growth at a time of global recession, which is something the over 9000 people currently directly or indirectly employed by Mapei Group can rightly be proud of.

Although an improvement in the overall building trade is forecast for 2016 - which is expected to grow by about 3% - the economy as a whole will have its ups and downs for various reasons, including the drop in the price of oil.

Nevertheless, we hope to achieve important results by investing in research, in reinforcing existing manufacturing plants and in building new ones.

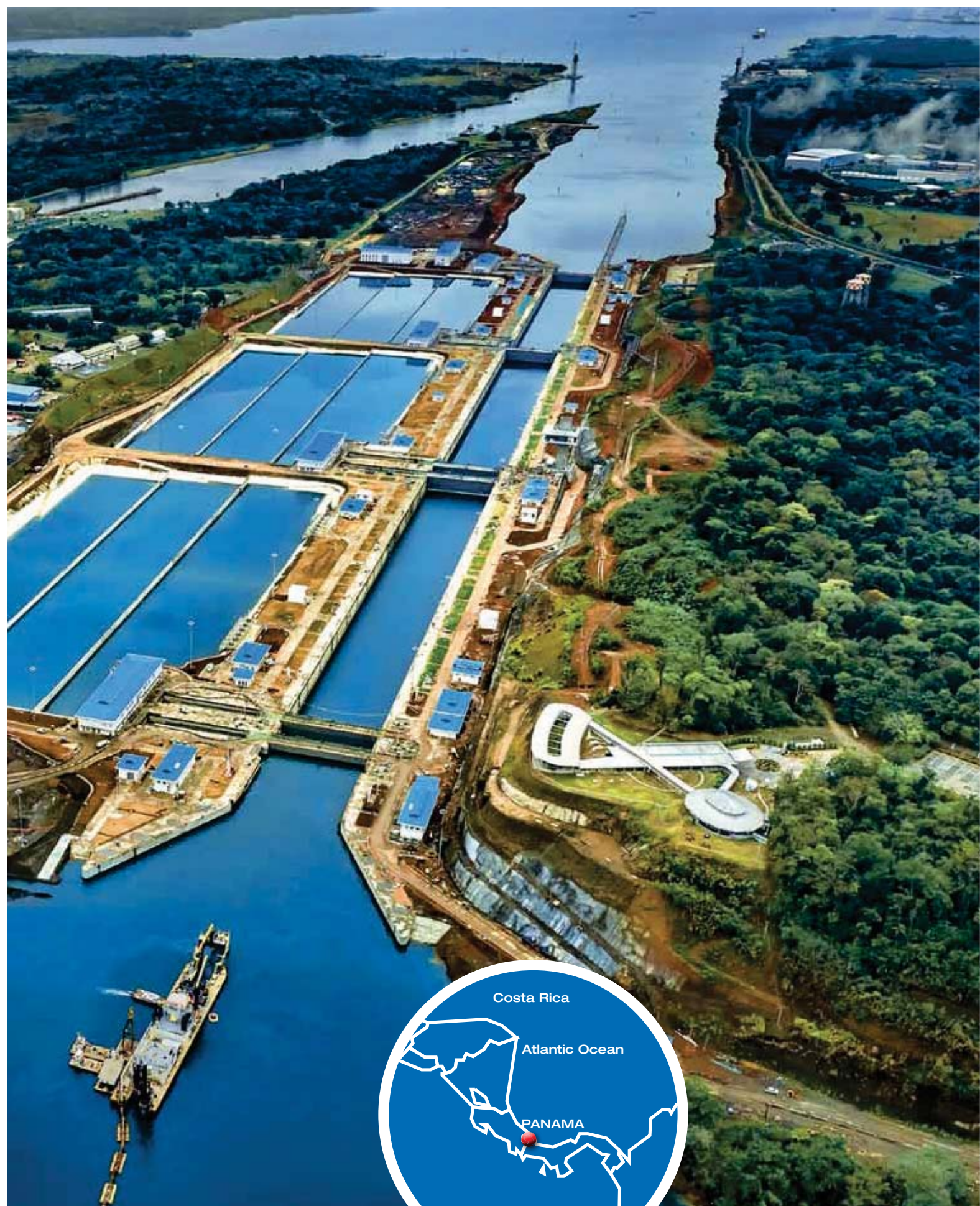
The openly avowed intent is to be even more competitive on a worldwide level, while at the same time creating new employment. This means grasping any opportunities that arise and turning them into chances for growth and improvement. Together with the enthusiasm of its staff and team spirit that has always inspired its enterprises, this is the real strength of a Group that is continuing along its way with great determination and confidence in the future.

Giorgio Squinzi



THE NEW PANAMA CANAL

MAPEI WAS AMONGST THE KEY PLAYERS OF THE MOST AMBITIOUS “MADE IN ITALY” FEAT OF ENGINEERING EVER COMPLETED IN THE WORLD





¡VIVA MI CANAL! VIVA MI PANAMÁ!



26TH JUNE 2016: THE NEW CHANNEL OPENS

The first ship to enter from the Atlantic side of the New Panama Canal was an enormous Chinese container ship (a seafaring giant 300 m long and almost 50 m wide carrying ten thousand containers on board), sailing under a Marshall Islands flag. The Cosco Shipping Panama, which had been renamed specially for the occasion, sounded its siren for more than two minutes when it cut through the entrance ribbon of the new Agua Clara locks at 7:48 on the 26th of June, after which it sailed across the artificial Gatún Lake and arrived in the afternoon, after an eight hour voyage, in front of the VIP stand erected next to the twin locks at Cocoli, on the Pacific side. The President of Panama, Juan Carlos Varela, together with a group of foreign Heads of State and Ministers, was there to welcome this modern merchant vessel, a forerunner of those that will be arriving in the future.

Singing, dancing and spectacular fireworks shows were all part of the inauguration party for the 21st century canal, a project that has cost 5.25 billion dollars. It also represents a victory for this small state of just 4 million inhabitants that are throwing down a challenge to the global trade crisis and are looking to put the recent "Panama Papers" scandal behind them as quickly as possible.

Seven years of work, thirty thousand people working on site and a cost of over 5 billion dollars. These are just a few of the

figures for the extension work on the Panama Canal, that is, the new locks on the Pacific side and on the Atlantic side that will allow ships with three times the previous capacity to sail through. This is the most ambitious project ever carried out in the world, and not just from an engineering point of view. It is also very much "made in Italy". In fact, the bulkheads and rolling gates, the technological heart of the entire project, are Italian made by Cimolai, who beat their American competitors against all the odds to upgrade something the Americans had built at the beginning of the last century. Also Italian made is the operations software and many of the special construction materials, which included bespoke products developed and supplied by Mapei, through consultancy work carried out by the company's highly skilled technicians and the supply of the latest generation of admixtures for concrete, waterproofing mortars and special products for the structures and to waterproof the storage basins.

Italian expertise was also behind the leadership of the international Consortium (GUPE - Grupo Unido Panama Canal) guided by the Italian contractor Salini-Impregilo, which includes the Spanish contractor Sacyr, the Belgians from Jean de Nul and the Panamanian company Constructora Urbana. A little more than two years ago Salini Impregilo, which holds 48% of the construction consortium, just like the Spanish company Sacyr, which also holds 48%, managed to settle a dispute with



IN THESE PHOTOS. On the 26th of June the Chinese container ship Cosco Shipping Panama entered from the Atlantic side of the New Panama Canal. It was welcomed by the President of Panama, Juan Carlos Varela, together with a group of foreign Heads of State and Ministers, and a crowd of people.





16 GATES

THE NEW CANAL IS BASED ON A SYSTEM OF 16 GATES (8 ON THE PACIFIC SIDE AND 8 ON THE ATLANTIC SIDE). EACH GATE IS 57.6 M LONG, 11 M WIDE AND 30 M HIGH AND WEIGHS 3,000 TONNES AND THEY ALLOW SHIPS TO ENTER THE WATERS OF LAKE GATÚN

Panama. “Seven years ago”, commented Pietro Salini, CEO of Salini Impreglio, “We set out on this long journey that represented the synthesis of a dream and a challenge, the sort that every business and every man would like to experience at least once in their lifetime: to build something with the potential to change global commerce.”

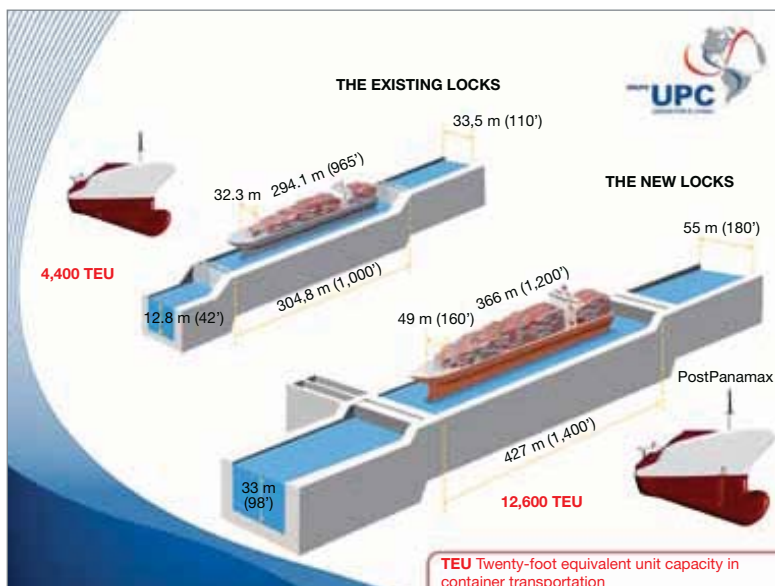
NEW MARITIME TRADE

An 80 km long, inter-ocean canal with the capacity to double the yearly return for Panama to up to 5 billion dollars. A revolution in global maritime commerce really is under way. A new type of ship with loads of up to 14,000 containers will be able to pass through the new canal locks, which up until now could only handle ships carrying 4,400. Half the arsenals from around the world have changed in order to construct them, while the Pacific and Atlantic ports, particularly in the United States, have already carried out large-scale interventions in order to handle these new ships, generating spin-off activities worth twenty times the cost of the work, equating to more than 100 billion dollars.

The first area to benefit from the expansion project has been

the east coast of North America because it will now be reached via a direct route across the Pacific from Asia, rather than the longer route across the Mediterranean and Atlantic, which means two weeks less navigation time.

And Italy could also reap the benefits if one knows how to act and react. In fact, expansion of the Panama Canal coincides with the expansion work on the Suez Canal which could turn the Mediterranean into the centre point for many trade routes. 19% of the volume of global traffic and 25% for global routes currently transit through the Mediterranean Sea. Italy is the third most important nation in Europe for goods traffic with 473 million tonnes and is the leading nation amongst EU countries for short range trade. In twenty years the number of containers handled in the 30 most important ports in the Mediterranean has grown by 425%, at an annual rate of growth of 21%. But something new is needed, both from port authorities and from the ports themselves. The ports of Gioia Tauro (Southern Italy) and Genoa (Northern Italy) handle more than two million containers, but this figure is quite a way behind their direct competitors in Valencia and Algeciras (Spain), and Port Said (Egypt).



THE TECHNICAL ASPECTS AND FUTURE OF THE CANAL

The chambers of the new locks system are 427 m long, 55 m wide and 33 m deep. They act like giant lifts that raise the ships 27 m above the level of the ocean to the level of the artificial Lake Gatún and the navigable route that crosses the Isthmus of Panama, to be then lowered down again on the opposite side, ready to set off on their oceanic voyage. Next to each chamber the Consortium has built enormous storage basins where the water is recycled: they allow more than 60% of this precious resource to be saved, and then feed it back into the locks system.

The “old” Canal, built by the Americans at the beginning of the last century, and which today still gives a return of 2.5 billion dollars, will continue to operate. The Panamanian authorities have already received more than 166 bookings between now and December. Estimates foresee that income from the Canal will double to 5 billion dollars a year once the new Canal has become fully operational.

The main client is still the United States, who on the 31st of

December 1999 handed over administration of this precious waterway to Panama. But the Chinese are fighting back with their increasingly large merchant ships. So much so that the Canal authorities are already working on a future plan and are analysing the costs and benefits of a fourth route, maybe even larger than the current one.

HEAD-SPINNING FIGURES

The construction of the new canal required an enormous building site with head-spinning figures: 70 million cubic metres excavated, 290,000 tonnes of steel, 5.5 million cubic metres of concrete and more than 100 million hours of work. The jewel in the crown of the project are the 16 giant steel gates, built in Italy and transported via sea over the course of seven years.

The average weight of each gate is 3,000 tonnes and they carry out their task in just five minutes: to open and close the water chambers which – operating like enormous lifts – allow the ships to overcome the 27 m difference in level between the two oceans and the artificial Lake Gatún.



IN THESE PICTURES.

For this prestigious building site, Mapei especially developed a new admixture for concrete, DYNAMON XP2 EVOLUTION 1, which proved to be excellent at maintaining the workability and application of the concrete.

30,000

PEOPLE AT WORK
ON THE BUILDING SITES OF THE NEW PANAMA CANAL



MAPEI KNOWHOW

Through their subsidiary company Mapei Construction Chemicals Panama S.A., Mapei supplied various admixtures of the latest generation to manufacture around 5,500,000 m³ of mass concrete and marine concrete, used respectively to build the internal and external sides of the locks. DYNAMON XP2 and DYNAMON XP2 EVOLUTION 1 were developed specifically to build the new Canal (see *Realtà Mapei International* no. 40, 42, and 46).

After numerous checks, carried out in the purpose-built Mapei laboratory in Panama, and cross-referencing the results with the GUPC laboratory, DYNAMON XP2 was chosen for use during the first six months of work on the project on both the Atlantic side, where they were using Panama cement, and on the Pacific side, where they were using Cemex cement.

The objective was to guarantee a service life of the work of 100 years, thanks to the use of a model that calculates the durability of concrete.

After commissioning the plants producing the concrete and aggregates, several serious problems regarding a considerable loss of mechanical strength and durability in the concrete pro-

duced by the plants were solved.

In this phase, Mapei's support focused on various activities: a study and chemical and mineralogical analysis of the raw materials used (basalt aggregates, pozzolan and cement); technical suggestions for the correct choice in flocculants and coagulants employed to treat the waters used to clean the aggregates so that they would be more chemically compatible with the super-plasticisers used in the concrete mix; chemical and petrographic analysis; control of the pozzolanic activity of the basaltic fines from the cleaning operations to assess its use in the concrete mix and optimise its natural pozzolan content. Following a request from the client, Mapei then started to develop a new product which could work well with the new mix designs being verified at the GUPC laboratory.

Mapei technicians designed the formulation for a new admixture called DYNAMON XP2 EVOLUTION 1, with the name chosen to give a sense of continuity to the enormous amount of work previously carried out on the old admixture. This product proved to be even better at maintaining the workability and placing of the concrete at even lower dosage rates compared with the competitors' products.

5,500,000 m³
OF CONCRETE ADMIXED BY MAPEI
 USED FOR BUILDING THE INNER AND
 THE OUTER SIDES OF THE LOCKS

800,000 m²

OF SYNTHETIC MEMBRANES

FOR WATERPROOFING THE AUXILIARY BASINS USED TO RECOVER
AND PARTIALLY RECYCLE WATER FROM LAKE GATÚN

RENOVATING THE EXISTING CANAL

The project also included renovation work on the original Canal. Mapei offered their contribution to help repair and consolidate the foundations for the Gatún Lock, located approximately 30 m below ground and considered to be the most imposing reinforced concrete structure ever built.

This building site used a particular type of mortar and to make it Mapei supplied PLANITOP 15, an one-component shrinkage-compensated cementitious mortar ideal for form-and-pour and form-and-pump applications (which is manufactured in the USA by Mapei Corp.), and MAPECURE SRA, a special curing admixture for cementitious mortars and concrete to reduce hydraulic shrinkage and the formation of micro-cracks.

SYNTHETIC WATERPROOFING MEMBRANES

For the third set of locks – which completed the expansion work on the Canal - an environmentally and socially sustainable project was drawn up, called the Water Saving Basins project, to limit its impact on the surrounding area, the people and the environment. In so doing, 60% less water will be required: whereas normally each passage requires around 500 million litres of water, the new system will only need 200 million litres. Mapei contributed to this work with the synthetic membranes SIBELON PVC-P. SYBELON trademark is owned by CarpiTech Sibelon. Manufactured at the Polyglass (Mapei Group) plants, the membranes were used to waterproof the auxiliary basins that recover and partially recycle the water from Lake Gatún. Developed specifically for hydraulic works, SIBELON PVC-P synthetic membranes, laminated to non-woven polypropylene fabric, were applied over a total surface area of around 800,000 m². Characterised by their high resistance to UV rays and aggressive atmospheric agents, they guarantee a high level of durability over the years.

Mapei supplied numerous other products for completing this grandiose project, such as PLANIGROUT 300, MAPEGROUT 05/06, IDROSTOP PVC BI/BE, IDROSTOP MULTI, MAPEGEL UTT, IDROSILEX PRONTO, MAPEPROOF SWELL, IDROSTOP 10 and IDROSTOP MASTIC.

TECHNICAL DATA

Panama Canal, Panama

Period of Construction for the Original Canal: 1910-1916

Period of Construction for the New Locks: 2010-2016

Period of the Mapei Intervention: 2010-2016

Design: Mike Newberry (CICP, Panama), Bernardo González (Grupo Unido Panama Canal, Panama)

Client: ACP (Autoridad del Canal de Panamá)

Main Contractor: GUPC (Grupo Unido Panama Canal), including Sacyr Vallehermoso (Spain), Salini-Impregilo (Italy), Jan de Nul (Belgium) and Constructora Urbana (Panama);

Sub-contractors: Cimolai (Italy) and Hyundai (South Korea)

Works Direction: Bernardo Gonzales (GUPC)

Mapei Co-ordinators:

Roberto Saccone, Maurizio Leotta, Walter Nussbaumer, and Renato Soffi, Mapei SpA (Italy);

Thomas Lundgren, Mapei Corp, USA (for renovating the existing Canal)

MAPEI PRODUCTS

Renovating the existing Canal: Planitop 15**, Mapecure SRA

Preparing the concrete used to build the new locks: Dynamon XP2, Dynamon XP2 Evolution 1

Waterproofing the basins: Sibelon C 3250*, Sibelon C 3900*, Sibelon CNT 3750*, Sibelon CNT 4400*

Other building works: Planigrout 300, Mapegrout 05/06, Idrostop PVC Waterstop**, Idrostop Multi 11**, Mapegel UTT, Idrosilex Pronto, Mapeproof Swell, Idrostop 10, Idrostop Mastic

*SYBELON trademark is owned by CarpiTech Sibelon. The above-mentioned products were manufactured at Polyglass (Mapei Group) plants.

**These products are manufactured in the USA by Mapei Corp.



ABOVE. On 25th June Mapei Panama celebrated the extension of the Panama Canal and its contribution to the project with a special event.



MAPEI IN PANAMA

Mapei products have been available on the Panamanian market for over 20 years, but the Group only began operating steadily in this country in 2011, when it took over Cimpex International Sa's business operations for supplying admixtures used for constructing the new set of locks at the Panama Canal and also set up Mapei Construction Chemicals Panama S.A.. The subsidiary has a manufacturing plant in the capital city, Panamá, primarily devoted to manufacturing admixtures for concrete, a sector that the Group considers to be crucial for growth in this and neighbouring countries.

"Mapei's involvement in the Panama project", so Veronica Squinzi, Internationalisation and Global Development Director for the Mapei Group, announced "provides us with a way into this region, a presence guaranteed on-site by our subsidiary, complete with offices, a proper organisational setup and a manufacturing plant. But that is not all. Panama also provides a bridge across to our North American team focusing on corporate works for admixtures for concrete."

So it is hardly surprising, then, that Mapei admixtures have been used for the construction of gigantic infrastructural works in Panama, such as the previously mentioned extension to the Canal, the construction of line 1 of the Panamá underground railway line, the Terrazas del Rey housing complex, and the third phase in the extension to the Cinta Costera. The subsidiary now employs 43 staff, who helped generate revenue of almost 13 million US dollars in 2015.

Being able to purchase from the mother company and other subsidiaries belonging to the Group in America means that Mapei Panama can now offer its customers not just the locally produced admixtures for concrete and cement additives, but also company solutions for installing ceramics and stone materials, resilient materials, textiles and wooden floors, products for cementitious and resin floors, solutions for structural strengthening and underground constructions, products for repairing masonry buildings, and wall coatings.





MAPEI PANAMA

Corporate Event

MAPEI PANAMA IS ALSO CELEBRATING THE
EXTENSION OF THE CANAL WITH AN AFTERNOON'S
FESTIVITIES IN A SPECIAL LOCATION

An official opening ceremony preceded the passage of the Cosco Shipping container ship into the new stretch of the Panama Canal called "Agua Clara" and so, not to be outdone, Mapei Construction Chemicals Panama S.A. also decided to celebrate the extension of the Canal and its own contribution to the success of this historic engineering venture. It is no surprise that the Agua Clara Visitor Centre, located close to the city of Colon, was chosen to host this event. The view from here is outstanding: on one side the famous Gatún Lake, where numerous cargo ships and assorted vessels pass by every day; on the other a view right across the area where the expansion works were carried out involving literally thousands of people. The centre is also equipped with facilities for eating and drinking and organising events, like the one that took place on 25th June, the date of the Mapei Panama Corporate Event.

160 people took part in the celebrations, including several representatives of the Mapei Group, many Panamanian customers (distributors, construction companies etc.), customers from Costa Rica, and delegates from associations such as CAPAC (Panamanian Chamber of Construction Companies), SPIA (Panamanian Society of Engineers and Architects) and the Canal de Panama body. There were also many representatives from Mapei Panama, including the subsidiary's Managing Director, Tulio Pascale, and delegates from the Mapei Group, such as Marco Squinzi, Director of Research & Development, Rolf Manser, Regional Director for Latin America, Walter Nussbaumer, Global Liquid Admixture Director,



LEFT. Mapei Panama celebrated the opening of the new locks of the Canal and its own contribution to the project with a special event held on 25th June in the Agua Clara Visitor Centre, close to the city of Colon.

There's a party!

Maurizio Leotta, Director of the Synthetic Waterproofing Division, Roberto Saccone, Senior Project Manager of the Admixture for Concrete line, Francesco Surico from the Admixture for Concrete Division at the Mapei Research & Development Laboratories, and Pierluigi Ciferni, General Manager of Polyglass Italia.

At 1.30 p.m. the guests were welcomed into the Agua Clara Visitor Centre, where they enjoyed a refreshing aperitif. Shortly after that a "dance of the mirror devils" was performed, a piece of Panamanian folklore with actors dressed in brightly coloured costumes, wide dresses, gowns decorated with mirrors and

pom poms and hideous-looking masks.

Rolf Manser, the Group's Regional Director for Latin America, and the General Manager of Mapei Panama, Tulio Pascale, officially opened the evening's celebrations by welcoming everybody in attendance and briefly describing the company's presence and operations in Panama and neighbouring countries. They also thanked Panama, the Panamanian authorities and people, for letting Mapei be in this country and take part in such an important project, as well as everyone in attendance for participating in the celebrations.

These speeches were followed by another short performance



ABOVE. Celebrations took place at the Agua Clara Visitor Center, which offers an exceptional view across the Canal and surrounding landscape.



LEFT. The Agua Clara Visitor Center offers views of famous Gatun Lake. **RIGHT.** Upon arriving guests were treated to refreshments.



RIGHT. Traditional Panamanian dancing entertained the guests with bright colours and sounds.



of Panamanian folklore featuring dancers in brightly coloured traditional dress with flowers in their hair and jewellery around their neck, who sang and danced along with equally exuberantly dressed young people.

To inform everybody in attendance about the Mapei Group's powerful operations and its worldwide fame, a video clip was shown about the company's contribution to numerous building operations in countries all over the world: infrastructures, factories, sports facilities, hotels, public buildings and housing complexes..... Mapei solutions are used everywhere.

Walter Nussbaumer then returned to the subject of Panama and the Canal in particular, providing a detailed overview of Mapei's contribution to the extension works, focusing on the technical characteristics of the concrete used for construction, the development of the ideal Mapei admixtures for these particular characteristics, and the ongoing building site assistance provided by the Group's technicians for concrete manufacturing and casting operations.

It was then Maurizio Leotta's turn to talk about Mapei's contribution to supplying solutions for the waterproofing used during the works on the Canal, a contribution that took concrete form in the supply of 800.000 m² of synthetic membranes transported on site by means of 40 containers. Walter Nussbaumer and Maurizio Leotta emphasised that Mapei was constantly present on the Canal site right until the works were completed.

The official speeches were drawn to a close by Marco Squinzi: he emphasised the Group's long-term strategy for Panama where Mapei plans to keep growing, exploiting its own technological expertise, its worldwide reputation and focusing special attention on the specific requirements of Panamanian customers.

After more Panamanian dances were performed accompanied by traditional local songs, all the Group's representatives who took part in the Panama Canal project received a special diploma in recognition of their contribution handed out by Marco Squinzi.

The rest of the evening was devoted to a hearty meal featuring local dishes followed by more folklore dances and a visit to those sections of the Agua Clara Visitor Centre which offered the best panoramic view of the new locks along the Panama Canal.



ABOVE. Rolf Manser, the Group's Regional Director for Latin America, and the General Manager of Mapei Panama, Tulio Pascale, officially welcomed the guests.

MIDDLE. The Mapei Group's staff that took part in the Panama Canal project.

BOTTOM. Marco Squinzi awarded a diploma to everybody involved in the project for the new Panama Canal.



HEADQUARTERS
OF THE GROUP'S
SUBSIDIARY IN GRÂCE-
HOLLOGNE RENOVATED
WITH SPECIAL
TRAINING FACILITIES

NEW FACILITIES FOR MAPEI BENELUX

Mapei has been operating on the Belgian and Luxembourgian markets since the 1970s and has settled permanently in these two nations ever since the founding of Mapei Benelux s.a. in the 1990s. The decision to set up this company was due to the strategic position Belgium has in Europe and also the excellent results achieved in these countries and in Belgium in particular, where Mapei materials had already been used for such important building projects as new Brussels Airport.

The headquarters of Mapei Benelux officially opened in Grâce-Hollogne in the province of Liège, Belgium, on 18th April 1997. The ceremony was attended by regional, provincial and city authorities, as well as plenty of customers. The facility, which was designed by the architect Walter Pezzetti in partnership with BCT Philippe Colson engineering company, used to encompass approximately 1800 m² of storage facilities and 400 m² of offices. These headquarters were extended, renovated and "celebrated" on 12th May this year.

COMPETENCE AND PASSION TO CONQUER THE MARKET

Ever since it was first established, Mapei Benelux, which has its own expert multilingual technical-business team, has shown it can provide everybody operating on the market with a perfect service and efficient pre- and post-sales technical assistance. These are invaluable assets for what might be

described as a mature and competent market on which consumers pay increasing attention to quality. In order to distribute its own products, the subsidiary has drawn on the service of local retailers of ceramics, resilient and other materials for the building industry and also DIY (Do-it-yourself) chains. At the same time it has always taken advantage of its close vicinity to the Group's other subsidiaries (first and foremost, Mapei France) for the supply of products and exchange of technical-business information.

Another great ally in Mapei Benelux's success has been the Mapei Group's close involvement in cycling. Working in partnership with GB and Bricobi, the Mapei Professional Cycling Team gained great popularity in Belgium and Luxembourg in the 1990s, partly due to a group of Belgian riders captained by Johan Museeuw, who won two consecutive World Cups, a World Championship and a National Championship in the space of just three years, and the Belgian sprinter Tom Steels, twice Belgian National Champion. All this helped boost the Mapei brand's popularity in Belgium, both amongst people working in the building industry and end customers.

Mapei products have been chosen for such important architectural projects as the construction of the Brussels Parliament, the Maison de la Radio, the Berlaymont building in Brussels, home of the European Commission, the Van Breda Bank in Antwerpen, the Audi Test Showroom in Kortenberg,



» THE NEW TRAINING FACILITY CAN CATER FOR UP TO 50 PEOPLE FOR THEORETICAL COURSES AND PRODUCT DEMONSTRATIONS

the Hotel Crowne Plaza in Liège and lots of other business centres in Belgium, Holland and Luxembourg.

Mapei's ties with the Belgian community and its history resulted in the company donating a mosaic to the Italian Consulate in Charleroi created by the Group's subsidiary Mosaico+ and made out of Mapei products. The mosaic, which depicts the Italian and Belgian flags inside a blue frame (the colour symbolising both Mapei the European Union), has symbolic value referring to the history of the Italian community in Belgium, characterised by a combination of sacrifices and integration.

BIGGER AND BETTER "TRAINED"

Mapei's background in Belgium and Luxemburg does not end here. Even though Mapei Benelux can be proud of the results it has achieved over the last 10 years (and, in particular, yearly sales of 25 million Euros and a staff of almost 50), it still intends to carry on growing in these countries. The company has decided to extend its own headquarters, in order to meet market and customer requirements more effectively. After a number of months' work, the new facilities now allow Mapei Benelux staff to meet the needs of people working in the building industry more efficiently. A warehouse with triple the storage capacity, a laboratory for concrete (a particularly useful tool on the Belgian market), a modern training centre and a showroom are innovations that will provide something extra in terms of the quality of the services Mapei can offer professionals in this field. The administration offices have also undergone a restyling project, using Mapei products for building both the walls and floors and for creating a more comfortable everyday working environment for staff.

Nevertheless, the real novelties at Mapei Benelux s.a. in Grâce-Hollogne are the training centre and showroom displaying natural-size slabs of product systems. The new training facility can cater for up to 50 people for theoretical courses and product demonstrations. According to Jean-Michel Grégoire, General Manager of Mapei Benelux s.a., this is "a fantastic opportunity. The new training centre allows us to welcome our customers and people working in the building industry into a comfortable, calm, high-quality environment. Training courses will award Mapei certification for installing and using our products".

IMPORTANT GUESTS

On the 12th of May, the official opening of the renovated headquarters of Mapei Benelux was attended by approximately 500 customers, staff, local political authorities and executives from the Mapei Group. They also included Pascale Delcominette, Manager Director of AWEX (Walloon Export and Foreign Investment Agency), Patrick Simon, spokesman for Jean-Claude Marcourt, Vice-President of the Belgian Government and Minister for Economics and Innovation, and Angela Quaranta, Mayor of Grâce-Hollogne.

Along with Jean-Michel Grégoire, guests were welcomed by Giorgio Squinzi, President of the Mapei Group, Marco Squinzi, the Group's Director of Research and Development, and Veronica Squinzi, the Group's Director of Strategic Growth and Internationalisation. Others in attendance included Roberto Boselli, Director of Production Operations for the Mapei Group, Flavio Terruzzi, Corporate Export Department Director for Mapei SpA, Marco Roma, Mapei Corporate Area Manager

ABOVE. The new training centre of Mapei Benelux can cater for up to 50 people for theoretical courses and product demonstrations.

RIGHT. Refreshments were laid on for clients, authorities and staff attending the opening ceremony for the new headquarters in Grâce-Hollogne.





PHOTO 1. Patrick Simon, spokesman for Jean-Claude Marcourt (Vice-President of the Belgian Government and Minister for Economics and Innovation), holding his speech.

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for Benelux, and Andrea Perini, Corporate Area Manager of Mapei SpA.

Patrick Simon emphasised the importance of this ambitious investment: «Mapei continues to grow by constantly developing and diversifying its infrastructures, services and products. And I am happy to contribute to this positive dynamism that affects the entire territory.»

The General Manager of Mapei Benelux s.a. provided an overview of the new facilities and new means with which the company plans to tackle the not-very-rosy situation on the Belgian building market: in a national economy that is expected to grow by 1% (compared to global growth of 1.5%) in 2016, residential building is still stagnant, as is non-residential building. Although public investment is just 1.7% of the GNP (compared to an European average of 3%), according to Jean-Michel Grégoire, the market for renovations and restructuring provides a glimmer of hope, due to the fact that the rather outmoded state of property urgently calls for redevelopment and renovation operations. At the same time Mapei Benelux's expansion project fits in perfectly with the Mapei Group's development plan, which recorded 13% growth in 2015 and is expected to continue along these lines. Finally, Grégoire thanked everybody (authorities, staff, designers, companies, Mapei SpA representatives), who had helped build these new facilities: "Plenty of hard work went into this project but we are now proud to present it to all our guests."

After the ribbon-cutting ceremony and a tasty buffet, guests were entertained by a concert by the singer Daria Biancardi accompanied by a guitarist.



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TECHNICAL AND MODERN: THE MAPEI BENELUX HEADQUARTERS

AN INTERVIEW WITH THE ARCHITECTS FROM LOUIS & ROYER WHO DESIGNED THE RENOVATION AND EXTENSION TO THE HEADQUARTERS IN GRÃCE-HOLLOGNE AND WITH THE ARCHITECT MARCO MANZONI FROM MAPEI SPA, WHO WAS RESPONSIBLE FOR CHOOSING THE PRODUCTS



ABOVE. The entrance to the Mapei Benelux head office in GrÃce-Hollogne, which was recently extended.

BELOW. Members of the Mapei Group's Board of Directors during a visit around the warehouse.

THE LOUIS&ROYER STUDIO DESIGNED AND SUPERVISED THE EXTENSION WORK AND RENOVATION OF THE MAPEI BENELUX HEADQUARTERS. WHAT WERE THE INITIAL REQUESTS OF THE CLIENT?

The client asked us to undertake quite a large spectrum of work which consisted mainly of a complete facelift to the ex-

ternal part of the building, but without overlooking the current corporate image that characterises the Mapei Group at an international level. The architectural design also included unifying all the different buildings with a common architectural language while respecting the thermal norms and standards that are currently applied in Wallonia. The other request was to increase the size of the storage area from 1,800 a 3,840 m². This part of the work required the construction of four new loading docks, new offices for the logistics activities and a large parking area for the trucks. The express request of the client, when reorganising the new lay-out of the offices, was also that each management division had its own floor: the sales department on the ground floor, administration and finance on the first floor, and so on. This also involved the areas on the outside of the building so that the office space could be maximised while allowing for further expansion in the future.



» THE TECHNICAL SUPPORT GIVEN BY MAPEI REALLY ALLOWED THE PROJECT TO BE COMPLETED SMOOTHLY



FROM A DESIGN POINT OF VIEW HOW DID YOU APPROACH THE ARCHITECTURAL CONCEPT?

The overall philosophy of the intervention was influenced by several factors, starting with the very precise technical requirements a company like Mapei specifies. For instance, the project also integrated a Laboratory where tests and checks can be carried out on the products.

Another important area was the training department. Mapei organises courses on how to use their products for technicians and the actual users of the products which is why, during the design phase, an area dedicated to this activity was also included. A technical showroom was created next to the training area where systems and materials from the Mapei product lines are on display. One particular issue the client insisted on was the “desire” to give the exterior of the building a new look which, apart from its aesthetic value, had to be more energy efficient. The client obviously expected the new buildings to be more comfortable and welcoming while answering the needs of suppliers and clients. The project also has room for further growth,

in line with the company’s development plans.

FOR PRACTICAL AND LOGISTICAL REASONS THE WAREHOUSE HAD TO BE CONNECTED TO THE SALES OFFICES AND THE TRAINING DEPARTMENT. HOW DID YOU MANAGE THAT?

While we were developing the overall design, we made sure two objectives were taken into consideration: to maintain the existing structures by reorganising the traffic areas and the various functions, and to use the same architectural language by enhancing the original volumes available. This approach allowed us to keep within budget, in spite of the small amount of demolition work that had to be carried out. We divided the upgrading work into three phases so that we didn’t interrupt the normal activities of the company. The choice to work without interrupting activities, especially in the sales department, meant we had to introduce changes to the way we organised the construction work and to how we approached the issue of site safety. This meant there had to be a very close relationship with Mapei Technical Ser-

IN THESE PAGES. Some views of the new showroom and the renovated areas.



BELOW. The common spaces are simple and minimalist, while respecting the most stringent quality standards.

THE MAPEI PRODUCTS CHOSEN FOR THE PROJECT

As far as the internal decor was concerned, and for the floors and walls in particular, the design style of the architects from Louis & Royer was the line that was followed when opting for simple and minimalist solutions to maintain a formal style. The building fitted out mainly for training purposes, with a showroom, an area where training courses are held and another area with offices for Technical Services, the Marketing Department and a Laboratory, meant that the materials used had to be suitable for the various activities, while at the same time offering a high level of quality and aesthetic appeal. In the showroom, they opted for a decorative cementitious flooring with coloured aggregates built with ULTRATOP ultra-fast setting, self-levelling mortar with a "Terrazzo alla Veneziana" effect, combined with DURSILITE washable, water-based paint for the walls. The floor

of the training room was made from ULTRATOP LOFT trowellable cementitious paste and the walls were painted with DURSILITE and SILEXCOLOR MARMORINO coatings. Textile floors were chosen for the offices of the Technical Services and Marketing departments while the walls were painted with DURSILITE. By choosing DURSILITE each office could have one wall featuring a different decorative pattern, to create colourful surroundings which are a pleasure to work in. In the Laboratory and testing area the floors were made from MAPEFLOOR I 320 SL CONCEPT, a self-levelling epoxy coating ideal for the requirements of this type of work, while the walls were painted with DURSILITE. The choice for the floor and wall coverings in the bathrooms went to mosaic supplied by the Mapei Group's subsidiary Mosaico+, combined with gypsum effect SILEXCOLOR MARMORINO.

For the entrance and corridors on the ground floor of the Sales Department building, the chosen product was ULTRATOP LOFT.

To make the surroundings more comfortable and to create a more pleasant working environment wooden floor was chosen for the floors in the offices, while the walls were painted with light shades of DURSILITE. In both the building used for training activities and the building used for the sales activities, the stairs were enhanced with SILANCOLOR TONACHINO with Glitter effect.

vices which, together with the use and immediate availability of Mapei products, allowed us to keep to the schedule.

DID HAVING AN EXPERT PARTNER LIKE MAPEI HELP YOU WHEN YOU WERE DEVELOPING THE DESIGN AND CARRYING OUT THE WORK?

Mapei SpA and Mapei Benelux allowed us to express our architectural sensitivity at all times, as long as the design complied with the specifications of the company and we kept to the schedule. The technical support given by Mapei really did allow the project to be completed, thanks also to the specific data sheets we were supplied with. During the construction work, having Mapei Technical Services on site created not only a close collaboration, but their vast experience was a great help to us when we had to solve the kinds of problems which inevitably arise during an intervention.

Archit. Marco Manzoni. Mapei SpA (Italy)





MAPEI IN BENELUX: A SELECTION OF WORKS

HEADQUARTERS OF PRESTIGIOUS INSTITUTIONS, SHOPPING CENTERS, LUXURY HOTELS, INFRASTRUCTURES AND CULTURAL CENTRES: MAPEI BENELUX HAS MADE AN IMPORTANT CONTRIBUTION TO THESE AND MUCH MORE OVER THE COURSE OF ITS HISTORY



WALLONIA ROYAL OPERA HOUSE **LIÈGE - BELGIUM**

Situated in the centre of Liège, this theatre is one of the most important cultural centres in Belgium. The building was renovated between 2009 and 2012 and includes cutting-edge scenery systems and stage technology. On this occasion, various Mapei products were used to treat substrates (ECO PRIM T, ECO PRIM PU 1K, FIBERPLAN and NIVORAPID), installing textile floorings (ULTRABOND ECO 540) and bond ceramic tiles in several areas (ADESILEX P9, KERAFFLEX, ULTRACOLOR PLUS).



GRIBAUMONT METRO RAILWAY STATION, **BRUSSELS - BELGIUM**

Gribaumont station, which is part of the Brussels metro railway system, was opened in 1971. The station was upgraded in 2008, which included replacing the original rubber flooring with new porcelain tiles. The screeds were made from TOPCEM and treated with EPORIP before bonding the porcelain tiles with ADESILEX P4, grouting the joints with KERACOLOR FÜGENSCHLAMMMÖRTEL (distributed in Belgium by Mapei Benelux) and sealing the expansion joints with MAPESIL AC.

RER **LIMELETTE - BELGIUM**

The RER is the Belgian high-speed railway network, and along the stretch that runs between Brussels and the town of Gembloux, MAPEFILL F mortar, mixed with quartz sand where required, was used to anchor concrete elements for the viaducts and parapets and to fasten the metal support guides for the rails in place.



CROWNE PLAZA HOTEL **LIÈGE - BELGIUM**

This luxurious hotel in Liège was lately renovated using Mapei products. Oak floors were installed in the salons using ULTRABOND P902 2K and ULTRABOND P990 1K adhesives. Textile coatings were bonded in the bedrooms using ULTRABOND ECO FIX and ULTRABOND ECO 520 adhesives.



NATO HEADQUARTERS BRUSSELS - BELGIUM

NATO's new headquarters were built between 2010 and 2015. This seven-storey building houses 4,500 employees and has numerous offices and meeting rooms, a convention centre, a restaurant, a bank and a gym, as well as relaxation areas, a warehouse and a workshop. Various Mapei products played their part during its construction: TOPCEM for the screeds in the showers, changing rooms, kitchens and swimming pool; KERALASTIC, ELASTORAPID, KERAPOXY and ULTRACOLOR PLUS to bond ceramic tiles and grout joints in the bathrooms, changing rooms, kitchens and swimming pool. The substrates in the showers were waterproofed with MAPEGUM WPS. MAPEBAND and MAPELASTIC were used to waterproof the surfaces in the swimming pool, while ULTRATOP was used for the floors in the car parks.

SOUMAGNE TUNNEL BELGIUM

This 6,505 m long tunnel is the longest in Belgium and runs along the high-speed railway line that connects the cities of Brussels, Paris, Cologne, Amsterdam and London. Various Mapei admixtures for concrete were used during construction of the tunnel, such as the super-plasticiser DYNAMON SX and MAPEPLAST PMX for enhancing the pumpability of concrete.



BERLAYMONT PALACE BRUSSELS - BELGIUM

Thirty years after its construction, the headquarters of the European Commission had a complete overhaul to bring it in line with the latest quality standards and make it more suitable for use. Numerous Mapei products were used during the course of the work carried out to decontaminate the complex of asbestos (PRIMER G, MAPECOAT I24 SQ and ULTRAPLAN MAXI), install new ceramic floors (ADESILEX P4, GRANIRAPID, ISOLASTIC, KERABOND, KERAFLEX and KERAPOXY), waterproof substrates (MAPEBAND, MAPEGUM WPS), install textile floorings (ULTRABOND ECO FIX) and build cementitious floors (MAPEFLOOR I 500W and ULTRATOP).



LANAYE LOCKS BELGIUM

The locks system in Lanaye is a key passageway along the navigable rivers network in France, Belgium, the Netherlands and Germany. Located between Belgium and the Netherlands, there were only 3 locks up until 2011, when work started to build a fourth one 225 m long and 25 m wide, with a pumping station and a hydro-electric power station. Mapei played their part in the construction work by supplying concrete admixtures such as DYNAMON SX 32, DYNAMON SP1, DYNAMON EASY 21, MAPETARD and DYNAMON EASY 11.



AUDI TEST CENTRE & SHOWROOM KORTENBERG - BELGIUM

In the Audi Centre in Kortenberg, a city in the north of Belgium, various Mapei products were used to install the wooden floors: ECO PRIM PU 1K TURBO to treat substrates, ULTRABOND P913 2K to bond wooden flooring on the ground floor and ULTRABOND ECO S945 1K for wooden flooring on the first floor.



VAN BREDA BANK ANTWERPEN - BELGIUM

The historical headquarters of Belgium's Van Breda banking group in Antwerp was renovated in 2007. This was also the ideal occasion to install new wall and floor coverings in large-size porcelain tiles, which were bonded with ULTRAFLEX S2 MONO cementitious adhesive (which was later superseded by the ULTRALITE adhesives).





“IL CENTRO” SHOPPING CENTRE IN ARESE

FROM CAR FACTORY TO SHOPPING CENTRE: A FORMER
INDUSTRIAL SITE GETS A NEW LEASE OF LIFE



ABOVE. In the external access areas the ceramic tiles were bonded with KERAFLEX.

LEFT. On the floors of the rings that connect the shops EPORIP, PLANITOP FAST 330, KERAFLEX MAXI S1, and ULTRACOLOR PLUS were used to prepare the substrates and bond porcelain tiles.

A BRIEF HISTORY OF THE SITE

The Alfa Romeo car factory in Arese was opened in 1963 because the old works in the Portello area in Milan were no longer fit for purpose.

In 1982, the Arese works employed around 19,000 people and produced historical car models, such as Alfetta and Nuova Giulietta. In 1986 Alfa Romeo was handed over by Fiat to IRI (Institute for Industrial Reconstruction): during this transaction the number of employees fell to 6,000. In 2002 the brand became property of the international real estate development company Aig Lincoln and, in 2005, Alfa Romeo stopped producing cars in Arese. After years of uncertainty and projects that were never completed, in 2013 redevelopment work started on the site with the project for the new shopping centre, a car-park for 10,000 cars for visitors to Expo 2015 (which was then closed at the end of Expo), a hub for small and medium size businesses and the operations centre for the Customer Services Centre of the Fiat Chrysler Automobiles Group, which was then joined by a project to reuse the former test track and the Alfa Romeo Museum.



With just a few hours to go to its official inauguration, what has become the largest shopping centre in Europe looked more like an enormous building site with fork-lifts, cranes, drills and hammers hard at work. In the meantime, right next to the labourers and technicians working on site, shop assistants were busy fitting out the shop windows, dressing display dummies, unwrapping large boxes of merchandise to put out on display and giving the final touches to the restaurant areas.

On the 14th of April in the city of Arese (near Milan, Northern Italy), over a large part of what used to be the Alfa Romeo car factory - where the entire range of models of this prestigious Milanese brand were assembled between 1963 and the first few years of the 2000's - the "Il Centro" shopping centre was inaugurated. An enormous shopping mall which, over 120,000 m² of floor space, offers visitors 200 shops, 25 restaurants, an indoor and outdoor sports hub, a diagnostics centre and an enormous car-park. All this to welcome an expected 13 million people a year.

THE STORY OF AN INDUSTRIAL SITE

The new shopping centre has taken the place of what, just a few years ago, was the historical temple of the Italian blue-collar and industrial workforce and which everybody in Arese still calls Alfa Romeo. When you reach the site from the A8 motorway, the first thing you notice is the red symbol representing the car manufacturer's own museum. The old test track is still there opposite the new shopping centre and, after being abandoned a number of years ago, it has been turned into a track for advanced driving courses. Alongside there are two new buildings with classrooms and a showroom with a display of classic cars.

The Alfa Romeo car factory in Arese, which remained operational from 1963 to 2005, occupied a very large area to the north of Milan and, apart from Arese, stretched as far as the neighbourhoods of Lainate, Garbagnate Milanese and Rho. This area is in a strategic position for the Lombardy transport network and is very close to important roads, such as the "Lakes Motorway" that runs to the Milan-Malpensa airport, the

A4 motorway and the Western ring-road that links the A1 and A7 motorways.

DESIGN OF THE SHOPPING CENTRE

Il Centro was designed by the architects Michele De Lucchi (who also designed the upgrading project for the former Alfa Romeo test track), Davide Padoa and Arnaldo Zappa. Davide Padoa's Design International studio gave form to the design by taking inspiration from the concept of large international malls and came up with a single building along classic architectural lines, to blend in alongside the design proposed by the Michele De Lucchi design studio for the Fashion Court and Ipermercato areas. Fashion Court was inspired by London's covered Covent Garden area and was created along the lines of a square, to create a meeting point overlooked by various shops including Primark, a famous Irish brand which chose Arese as its first sales outlet in Italy, with a store extending over an area of 5,000 m². The architectural concept is based on a series of squares – each with its own identity – and is also characterised by the large ramp inside the centre. As far as the Ipermercato store is concerned, the designers wanted to form a sort of extension to the outlet external to the store, by creating an area dedicated to fresh products to be eaten directly in the store.

According to the architect Davide Padoa, who has been behind the design of various retail projects over the last few years, the Arese Shopping Center was not created to be just a row of stores contained within a shopping gallery, but rather he imagined the centre to be made up of proper buildings and squares opening up along a thoroughfare. The use of wood for the roof and façades proposed by Michele De Lucchi was inspired by rural architecture and, in the shop fronts formed by inlays of wooden elements, he wished to recreate the system of shadows formed by the barns and farmhouses found in the Lombardy region.

The technique used to design and build the wooden roof was also particularly innovative and had never been applied before in a shopping centre. The structure of the roof is made of a special glued laminated timber, Gluelam, and is one of the largest ever installed in Europe.

The entire complex was designed using stringent energy saving and environmental sustainability criteria, in line with the standards required by the U.S. Green Building Council to qualify for the LEED Gold certification.

TECHNICAL DATA "Il Centro" Shopping Centre, Arese (Italy)

Period of Construction: 2013-2016

Period of the Mapei Intervention: 2015-2016

Intervention by Mapei: supplying products to build and treat screeds, waterproof and prepare substrates, bond vinyl floor and wall coverings, bond porcelain tiles on the floors, and build resin floorings

Designers: Michele De Lucchi, Davide Padoa and Arnaldo Zappa

Client: Finiper SpA

Main Contractors: Itinera SpA, Moretti SpA and Spazio Futuro Group

Flooring Contractors: Ripa, 2 ERRE srl

Mapei Co-ordinators:

Davide Ottolini, Matteo Venturini, Andrea Serafin, and Andrea Lodi, Mapei SpA (Italy)

MAPEI PRODUCTS

Preparation of substrates:

Eco Prim PU 1K, Eco Prim T, Eporip, Latex Plus, Nivorapid, Planiprep 4 LVT, Planitop Fast 330, Primer SN, Quartz 1.2, Triblock P, Ultraplan, Ultraplan Maxi

Bonding ceramic tiles:

Kerabond, Keraflex, Keraflex Maxi S1, Ultralite S1
Grouting joints: Keracolor GG, Kerapoxy Design, Ultracolor Plus

Bonding vinyl floor and wall coverings:

Ultrabond Eco 4 LVT, Ultrabond Eco V4 SP, Adesilex MT32

Building resin floors: Mapefloor I 910, Ultratop

For further information on these products see www.mapei.it and www.mapei.com

MAPEI'S CONTRIBUTION

Mapei, through its Technical Services Department, was also involved in the construction of this important shopping complex, assisting both designers and contractors during the building of the internal structures and the installation of the wall and floor coverings chosen for the various shops. By the time work had been completed, Mapei and its products had played an important role in the completion of more than 100 shops to the full satisfaction of the clients, contractors and customers. Numerous products and products lines were used, particularly those for installing ceramics and resilient materials, all of which had been recommended by Mapei Technical Services who were constantly present on site.

LEFT. In various areas of the Mediaworld store, before installing the floor covering, the substrates were levelled off with ULTRAPLAN self-levelling, ultra rapid hardening smoothing and levelling compound.

MIDDLE. ECO PRIM PU 1K acrylic primer was applied on the substrates which were then broadcast with QUARTZ 1.2.

RIGHT. In a number of cases the client opted for LVT coverings for the flooring, which was bonded in place with ULTRABOND ECO 4 LVT.





- 1 Pittarosso
- 2 Nyx
- 3 Oysho
- 4 McDonald's
- 5 Zara
- 6 Calvin Klein
- 7 Pull&Bear
- 8 Ristò
- 9 Toys
- 10 Sisley

CERAMICS LINE

Ceramic tiles and stone materials are very widely used for floors and walls in shopping centres. Mapei offers a complete range of products to help users select the most suitable installation system for any room or area, which includes cementitious and paste adhesives, hydraulic binders for screeds, primers, smoothing compounds, grouts and sealants. These products were used to install thousands of square metres of ceramic tiles in the Arese shopping centre.

> **Bershka:** in this shop, porcelain tiles were bonded with KERAFLEX MAXI S1 high-performance, deformable cementitious adhesive with no vertical slip, extended open time and Low Dust technology for ceramic tiles. This adhesive, which is classified as C2TE S1 according to EN 12004 standard and has very low emission level of volatile organic compounds (VOC), was also used in a number of other shops in the centre.

> **Bluespirit:** ULTRALITE S1 one-component, high-performance, deformable cementitious adhesive was used to bond ceramic tiles. This adhesive also features no vertical slip, a long open time, Low Dust technology and extremely high yield.

> **Calvin Klein:** white KERAFLEX MAXI S1 was used to bond 100 m² of porcelain tiles.

> **Casa Shops:** KERACOLOR FF high performance cementitious mortar was used to grout joints around 500 m² of porcelain tiles.

> **Humanitas Medical Care:** 500 m² of porcelain tiles were bonded with KERAFLEX cementitious adhesive with no vertical slip and extended open time. ULTRACOLOR PLUS high-performance, anti-efflorescence, quick-setting and drying polymer-modified mortar with water-repellent DropEffect® and mould-resistant BioBlock® technology was recommended to grout the tile joints.

> **Fiorella Rubino:** the substrates were levelled off with PLANITOP FAST 330 quick-setting, fibre-reinforced cementitious levelling mortar for internal and external floors and walls.

> **Massimo Dutti:** porcelain tiles were bonded with KERAFLEX MAXI S1 adhesive. The flooring company that carried out the work bonded more than 12.000 m² of ceramic tiles with KERAFLEX MAXI S1 within the Stradivarius, Bershka, Pull&Bear, Zara, Zara Home and Oysho stores.

> **McDonald's:** KERABOND adhesive was used to bond 400 m² of ceramic tiles.

■ CERAMICS LINE



- > **Nyx:** 100 m² of porcelain tiles were bonded with KERAFLEX MAXI S1.
- > **Oysho:** porcelain tiles were bonded with KERAFLEX MAXI S1.
- > **Piadineria:** 50 m² of porcelain tiles were bonded with KERABOND cementitious adhesive.
- > **Pimkie:** joints between the porcelain tiles were grouted with ULTRACOLOR PLUS.
- > **Pittarosso:** in this shop 1,500 m² of wood-effect porcelain tiles were bonded with KERAFLEX adhesive and joints were grouted with ULTRACOLOR PLUS mortar.
- > **Primark:** 50 m² of tiles were grouted with KERAPOXY DESIGN decorative grout. Available in 25 different colours, this product is characterised by its excellent acid resistance and good cleanability.
- > **Pull&Bear:** porcelain tiles were bonded with KERAFLEX MAXI S1.
- > **Ristò:** KERAFLEX adhesive and KERAPOXY mortar were recommended to bond 700 m² of porcelain tiles and grout the joints. KERAPOXY

allows joints in floors, walls and worktops to be grouted in compliance with HACCP standards and EC Regulation 852/2004 regarding the hygiene and handling of foodstuffs.

- > **Roadhouse Grill:** 400 m² of ceramic tiles were bonded with KERABOND.
- > **Sisley:** 50 m² of surface was covered with ceramic tiles bonded with KERABOND.
- > **Stradivarius:** porcelain tiles were bonded with KERAFLEX MAXI S1.
- > **Tommy Hilfinger:** 100 m² of porcelain tiles were bonded with white KERAFLEX MAXI S1.
- > **Toys:** 1,200 m² of porcelain tiles were installed with KERAFLEX and joints were grouted with KERACOLOR FF. DURSILITE was used to paint the walls, a washable water-based paint with low dirt pick-up for internal walls, ideal for areas open to the public. It is available in a wide range of colours, created using the ColorMap® automatic colouring system. In this case the colour chosen was red.
- > **Valerio 1966:** 150 m² of large porcelain tiles

were bonded with ULTRALITE S1.

- > **Yun Quick:** 150 m² of porcelain tiles were bonded with KERAFLEX MAXI S1.
- > **Zara and Zara Home:** porcelain tiles were bonded with KERAFLEX MAXI S1
- > **First and second ring of the two floors that connect the shops:** before bonding the tiles, all the cracks in the substrate were sealed with EPORIP two-component, solvent-free epoxy adhesive. After levelling off the substrates with PLANITOP FAST 330, 23,000 m² of large-size porcelain tiles (120cm x 60cm and 150cm x 20cm) were bonded with KERAFLEX MAXI S1 and joints were grouted with ULTRACOLOR PLUS.
- > **External floors:** 12,000 m² of external access areas were covered with porcelain tiles bonded with KERAFLEX, ideal also for external use.



- ① Aldo Shoes
- ② Disney Store
- ③ Mediaworld
- ④ Mondadori
- ⑤ JD Sport
- ⑥ Tally Weijl
- ⑦ New Balance
- ⑧ Game 7 Athletics

■ RESILIENT MATERIALS LINE

Rubber, linoleum and vinyl have specific performance characteristics in common – elasticity, flexibility, impermeability, cleanability, soundproofing properties and resistance to wear and stains – which make them suitable for areas open to the general public where functionality, hygiene, comfort and aesthetics are all important requirements. Apart from adhesives, Mapei also offers a wide range of admixtures, ready-mixed mortars, primers, insulating materials and consolidating products to help make resilient floor and wall coverings more durable over the years. Since 1980, this particular product line has been enhanced with a series of products that release a very low level of volatile organic compounds (VOC).

> **Aldo Shoes:** to create a perfectly flat surface of 80 m², all the uneven areas in the screed were levelled off with ULTRAPLAN self-levelling, ultra quick-hardening smoothing compound. The LVT (luxury vinyl tiles) floor covering was bonded with an adhesive specific for this type of material: ULTRABOND ECO 4 LVT.

> **Disney Store:** after treating the substrate with TRIBLOCK P and ULTRAPLAN, 400 m² of LVT floors were bonded with ULTRABOND ECO 4 LVT. Certain areas of the walls were covered with vinyl materials bonded in place with ADESILEX MT32 adhesive in water dispersion, ideal for wall coverings.

> **JD Sport:** to bond the vinyl sheets, Mapei Technical Services recommended using ULTRABOND ECO VS90 PLUS universal high temperature adhesive in water dispersion with very low emission level of VOC.

> **Mediaworld:** to prepare 3,000 m² of substrates and bond LVT floorings, which is particularly suitable for industrial areas and areas used by the general public, a coat of ECO PRIM PU 1K one-component, solvent-free, moisture curing polyurethane primer was applied with a roller, followed by a layer of ULTRAPLAN self-levelling and smoothing compound and ULTRABOND ECO 4 LVT adhesive.

> **Mondadori:** to bond 850 m² of vinyl coverings, Mapei Technical Services recommended ULTRABOND ECO V4 SP multi-purpose, acrylic adhesive in water dispersion with a long open time and very low emission level of volatile organic compounds (VOC).

> **Grand Vision by Avanzi:** to bond 150 m² of wood-effect LVT tiles, ULTRABOND ECO 4 LVT fibre-reinforced LVT adhesive, specifically developed for the installation of LVT flooring, was used. Before bonding the flooring, the substrate was treated with ECO PRIM T primer and smoothed over with PLANIPREP 4 LVT.

> **Tally Weijl:** because of problems with damp, an area of 300 m² was waterproofed with TRIBLOCK P three-component epoxy-cementitious primer. The LVT coverings were then bonded with ULTRABOND ECO 4 LVT adhesive.

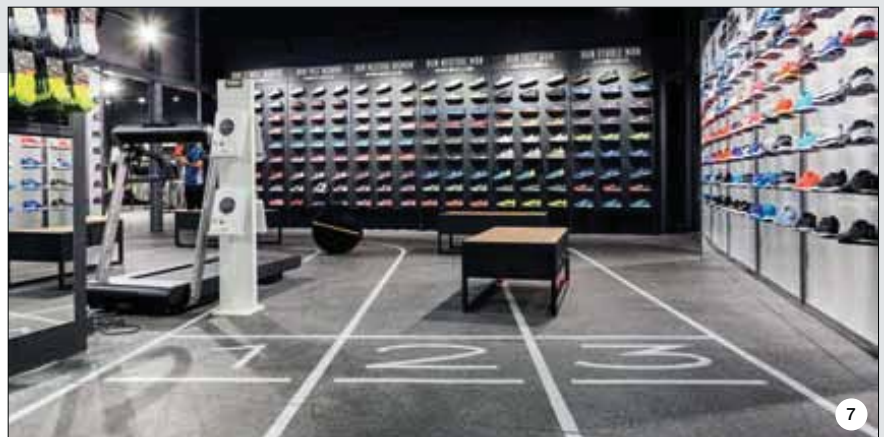


■ RESIN FLOORINGS LINE

For the resin and cementitious flooring sector, Mapei offers its clients a wide range of technologically advanced systems that meet all the requirements by clients and designers for buildings with various final uses – from private and domestic use to commercial and industrial use – while guaranteeing high quality, functionality, durability and an attractive finish.

> **Game 7 Athletics:** a resin coating particularly resistant to abrasion was the choice for 2,000 m² of flooring in this store. The substrate was primed with PRIMER SN and treated with MAPEFLOOR I 910 to protect it, after which a layer of anthracite coloured ULTRATOP self-levelling, ultra-quick hardening mortar was applied. The mortar was then polished to give it a more attractive finish.

> **New Balance:** 150 m² of seamless flooring was created using light grey ULTRATOP.



■ BUILDING PRODUCTS LINE

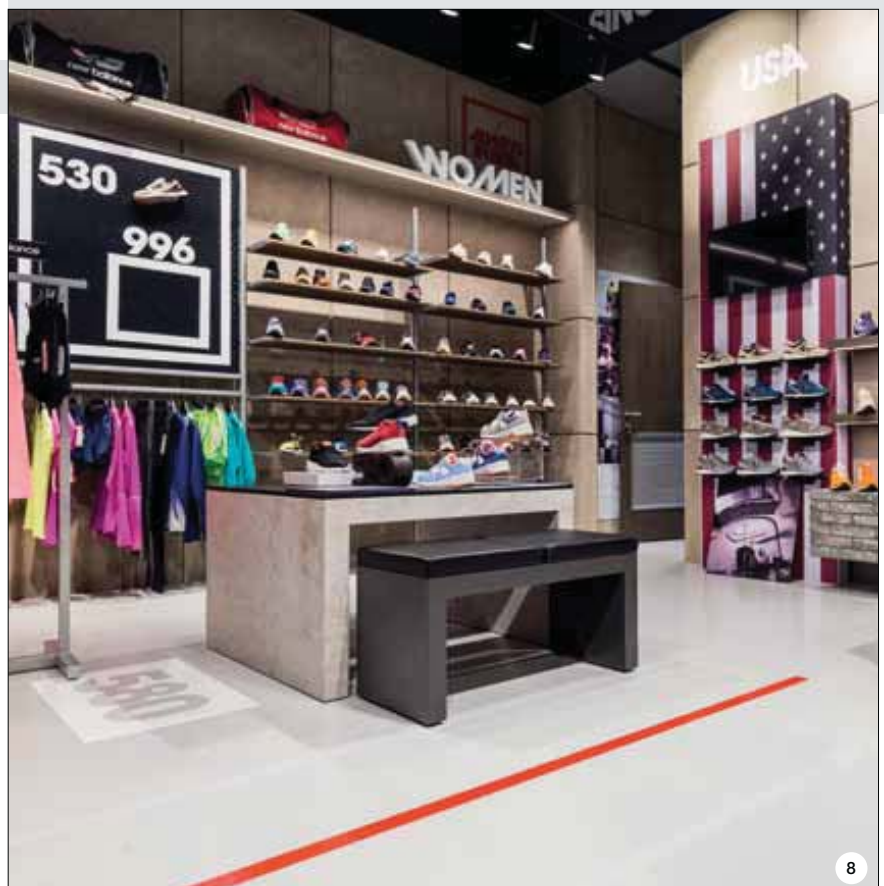
Thanks to its almost 80-year-long experience, Mapei offers a wide range of chemical products for building, including hydraulic binders, ready-mix mortars, waterproofers, protective agents, adhesives and special renders.

> **Concrete structures and floors:** the admixture DYNAMON SR56 was used to formulate the concrete structure; DYNAMON FLOOR 10 was used for the concrete floors.

> **Dividing walls made from perforated concrete blocks:** levelling off the surfaces with NIVOPLAN and smoothing with PLANITOP 530.

> **Mixer:** the screeds were made from TOPCEM PRONTO ready-to-use mortar.

> **Kasanova:** 700 m² of surface was levelled with a layer of PLANITOP FAST 330 quick-setting, fibre-reinforced cementitious levelling mortar.



VIADOTTO DEI PARCHI

REPAIR WORK AND PROTECTION OF THE JOINTS
INTRADOS ON A HISTORIC VIADUCT ON THE MILAN
EAST RING-ROAD



Built between 1969 and 1973, the Milan East ring-road on the A51 Motorway connects the A1 Milan-Naples motorway directly to the A4 Turin-Venice motorway.

Together with the A50 (Milan West ring-road), the A52 (Milan North ring-road) and the A58 (outer Milan East ring-road), it forms the largest system of ring-roads around any city in Italy for a total length of 106 km. On average, more than 70,000 vehicles use this part of the motorway every day.

The Milan East ring-road is currently undergoing important upgrading work to increase the capacity of its links to the highways network in the area to the east of Milan, which is currently also being expanded through a series of important works along the Brescia/Bergamo/Milan (BreBeMi) motorway and the outer Milan East ring-road (TEEM).

The Viadotto dei Parchi (Parks Viaduct), along the Milan East ring-road, is 3 km long and is made up of two three-lane raised carriageways supported by 245 independent spans. The viaduct is fed by the slip-roads for Lambrate, Rubattino and Forlanini.

Apart from updating and perfecting the prototype of the concrete slab viaduct in Viale Monteceneri (1959-1963) in Milan downtown, which after 10 years became the basic design for site-cast, pile-supported viaducts, this viaduct, which was built in 1973, is the first example of the use of mobile, self-regulating formworks.

In 2015 Mapei took part in the work by supplying products to repair and protect the intrados of seven joints on this viaduct near the Rubattino slip-road.

The work had become necessary because, over the years, the concrete had

deteriorated and water was seeping through, and the work was carried out according to schedule using tried and tested product systems that complied with all the requirements for this building site.

PREPARATION OF THE CONCRETE SURFACES

The first step was to remove the 3 to 5 cm thick layer of deteriorated concrete by hydro-blasting the areas about 2 m to the right and left of the joints to form a compact, rough surface.

After the hydro-scarifying operations, the surfaces were cleaned with high pressure water jets to remove all traces of loose material. In so doing, apart from cleaning the concrete substrates, the steel reinforcement was also cleaned and prepared for the application of the repair mortar.

Three electrical connections were also made on the original steel reinforcement on each side of the joint by welding threaded galvanized rods directly to the rebar.



REPAIRING THE CONCRETE SURFACES

After saturating all the surfaces, the joints were rebuilt and re-modelled by spray-applying MAPEGROUT EASY FLOW one-component, sulphate-resistant, fibre-reinforced, shrinkage-compensated thixotropic cementitious mortar, which is particularly suitable for pumping over long distances and under constant high heads, using a rendering machine.

In order to have a correct development of the expansive properties in the open air, MAPEGROUT EASY FLOW was admixed with MAPECURE SRA, a special curing agent used to reduce the hydraulic shrinkage, at a rate of 0.25% by weight of the mix.

MAPECURE SRA allows the repair mortars from the MAPEGROUT Line to expand in the open air during the first few days of curing, which reduces the formation of micro-cracks and guarantees a very low rate of hydraulic shrinkage.

PROTECTING JOINTS AGAINST CORROSION

Once this part of the work was completed, MAPESHIELD E45 self-adhesive pure zinc plates were applied for around 1.5 m along each edge of the joints to ensure galvanic cathodic protection against the corrosion of steel reinforcement rods.

The MAPESHIELD line is an active pro-

ABOVE. A view of the viaduct after completion of the works.

BELOW. The viaduct before the works were carried out.



IN THE SPOTLIGHT

MAPEGROUT EASY FLOW

It is a one-component pre-blended packed thixotropic cement-based mortar composed of sulphate-resistant hydraulic binders, synthetic polyacrylonitrile fibres, organic corrosion inhibitors, special water-retaining, expansive admixtures and selected aggregates. It is used for the repair of deteriorated concrete structures by using a spray rendering machine.

The product is especially suitable when easy pumping is required even over long distances and under constant high heads. It can contribute up to **2 points** to obtain the **LEED** certification for eco-sustainable buildings.



PHOTO 1. Applying MAPEGROUT EASY FLOW by spray to rebuild the joints.

PHOTO 2. Applying MAPESHIELD E45 self-adhesive pure zinc plates.

PHOTO 3. Additional plastic plugs were used to make the connections safer and to make sure each MAPESHIELD E45 plate was fastened securely.



tection system based on the use of pure zinc anodes, which may be used for both renovation work and on new constructions to prevent corrosion.

In order to ensure a higher safety, a perfect fixing and the contact between the adjacent plates, additional plastic plugs were anchored on MAPESHIELD E45 plates.

PROTECTING THE REPAIRED AREAS AND SKIMMING THE PLATES

Once the plates had been fastened in place, the next step was to spray over the surface with MAPELASTIC GUARD protective, cementitious waterproofing mortar using a rendering machine with a skimming lance with a nozzle.

MAPELASTIC GUARD maintains its flexibility under all environmental conditions and is totally impermeable to wa-

ter at pressures up to 1.5 atmospheres, as well as to the penetration of de-icing salts, sulphates, chlorides and carbon dioxide.

Applying MAPELASTIC GUARD, therefore, is recommended when one needs to protect areas of concrete exposed to aggressive substances or even out surfaces protected with MAPESHIELD E45.

To increase its capacity to level off and even out surfaces, MAPENET 150 alkali-resistant glass fibre mesh was embedded between the first and the second layer of MAPELASTIC GUARD.

The surfaces were then treated with ELASTOCOLOR PAINT decorative, elastomeric, crack-bridging, permanently flexible, protective paint with high resistance to aggressive atmospheric agents and chemicals.



TECHNICAL DATA

Viadotto dei Parchi, Milan East ring-road on the A51 motorway, Italy

Year of Construction: 1973

Original Designer: Silvano Zorzi

Period of the Mapei Intervention: 2015-2016

Intervention by Mapei: supplying products for repairing and protecting concrete

Clients: Milano Serravalle - Milano Tangenziali S.p.A.

Works Direction: Guido Ferro, Marco Belli

Contractor: Nuove Iniziative S.r.l.

Mapei Co-ordinators: Giuseppe Dal Mas, Massimo Seregini, Andrea Serafin, Federico Laino, and Gianluca Ferrari, Mapei S.p.A. (Italy)

MAPEI PRODUCTS

Mapegrout Easy Flow, Mapecure SRA, Mapeshield E45, Mapenet 150, Mapelastic Guard, Elastocolor Paint

For further information on products see www.mapei.com



PHOTO 4. Applying MAPELASTIC GUARD.
PHOTO 5. The repaired surfaces were painted with ELASTOCOLOR PAINT protective coating.





FONDAZIONE POLIAMBULANZA HOSPITAL IN BRESCIA



WHAT WAS INITIALLY FOUNDED AS A CENTRE FOR THE LESS FORTUNATE HAS NOW BECOME A CUTTING-EDGE HOSPITAL

The Fondazione Poliambulanza hospital dates back to 1903 when a group of doctors from Brescia (Northern Italy) opened a medical centre for the less fortunate people from the area. The initiative proved to be very successful and, within a few years, so many patients were using the centre that a new location needed to be found. The wards and clinics were transferred to another area of the city but, after a number of years, the structure itself was no longer sufficient for the highly advanced medical services provided and for the growing needs of the city and it was extended to offer a wider range of services with better equipment. In 1997 it then had to be transferred again to its current location in Via Bissolati. Today, the Fondazione Poliambulanza hospital is specialised in providing the most up to date medical services in modern, comfortable surroundings. In fact, the most recent architectural work on the hospital focused on the idea that the areas where the medical care is actually provided, and where patients are cared for, play a key role in the health care process of patients. And it is with this philosophy in mind that the new wing of the hospital was built.



ABOVE. An external view of the Fondazione Poliambulanza hospital.

TOP AND BOTTOM OF THE PAGE. Mapei products were used to install pvc floors in the corridors and operating theatres.



PROJECTS INSTALLING RESILIENT MATERIALS



PHOTO 1. The substrates were first treated with ECO PRIM T primer.

PHOTO 2. The surfaces were then smoothed with PIANODUR R self-levelling smoothing compound.

PHOTO 3. In some areas, the substrates were smoothed over with NIVORAPID mixed with LATEX PLUS to eliminate differences in thickness.

PHOTO 4. The PVC wall covering was bonded with ULTRABOND ECO V4 SP.

PHOTO 5. The PVC floor coverings were bonded with ULTRABOND ECO V4 SP.



INSTALLING FLOOR AND WALL COVERINGS IN THE HOSPITAL

To improve the service provided by the centre even further, a new multi-purpose operating theatre block was recently inaugurated. It has ten operating theatres and relative recovery wards, as well as ten intensive therapy units. The block is therefore able to provide care for the 1,800 patients operated on each year.

Apart from placing particular emphasis on the wellbeing of patients and medical personnel, the client asked that the materials used to install the PVC wall and floor coverings in the operating theatres, corridors and wards were safe and quick to install and that they have a low impact on the environment. This is why the flooring company responsible for installing the floors contacted Mapei Technical Services that proposed a series of products which, apart from guaranteeing excellent performance characteristics that met the client's specifications, also have a low impact on the environment and on the health of the installers and those using the hospital.

Works started by applying ECO PRIM T solvent-free acrylic primer on the substrates. Apart from improving the adhesion of smoothing compounds on absorbent and non-absorbent surfaces, it also contains no solvent and has very low emission level of volatile organic compounds (VOC). The surfaces were then smoothed over with PIANODUR R fine-grained, ultra quick-setting self-levelling smoothing compound. This product is used to prepare substrates so they are suitable for installing all types of resilient and textile flooring in areas such as offices, supermarkets and hospitals, including those subject to intense loads, intense traffic, wheelchairs and equipment mounted on wheels. To eliminate some relevant differences in thickness in some areas, the surface was smoothed with NIVORAPID quick-drying, thixotropic, cementitious smoothing compound mixed with LATEX PLUS elasticising latex instead of water. To bond the PVC floor and wall coverings, the product recommended was ULTRABOND ECO V4 SP multi-purpose, acrylic adhesive in water dispersion with a long open time and very low emission level of VOC.

IN THE SPOTLIGHT

ULTRABOND ECO V4 SP

It is a solvent-free, synthetic polymer-based single-coat adhesive in water dispersion, ideal for internal bonding of all types of vinyl, semi-flexible vinyl, rubber, polyolefines, needlepunch and carpet flooring. ULTRABOND ECO V4 SP has an especially extended open time suitable for the installation of resilient floor coverings, provided they are dimensionally stable. It can therefore be used on non-absorbent surfaces as an alternative to polychloroprene contact or epoxy-polyurethane adhesives. It is easy to spread and has an excellent initial grab. After hardening, the film is flexible and strong and can take heavy foot traffic and wheeled chairs. ULTRABOND ECO V4 SP is not inflammable with very low emission level of volatile organic compounds (EMICODE EC1), it is therefore absolutely harmless to the health of the installer and the end-user. It can contribute up to **4 points** to obtain the **LEED** certification.



TECHNICAL DATA

Fondazione Poliambulanza hospital, Brescia (Italy)

Year of Construction: 1997

Period of the Intervention: 2015-2016

Intervention by Mapei: preparing substrates, installing pvc floor and wall coverings in the operating theatres, corridors and recovery wards

Client: Fondazione Poliambulanza

Floor and Wall Contractor: Centro Distribuzione Pavimenti

Mapei Distributor: Centro Distribuzione Pavimenti

Mapei Co-ordinator: Davide Ottolini, Mapei SpA (Italy)

MAPEI PRODUCTS

Preparing and smoothing substrates:


Eco Prim T, Latex Plus, Nivorapid, Pianodur R

Installing PVC wall and floor coverings:

Ultrabond Eco V4 SP

For further information on products see www.mapei.com





MAPEI SOLUTIONS FOR TENNIS LAND IN AUSTRALIA

NEW COURTS MADE USING MAPECOAT TNS SYSTEM IN ONE OF THE COUNTRIES WHERE TENNIS IS MOST POPULAR

The tennis ball Mapei first struck back in 2009 is certainly travelling a long way. That was the year when MAPECOAT TNS system first came out and was first used for constructing tennis courts at the Vavassori Academy in Palazzolo sull'Oglio, Northern Italy (see *Realità Mapei International* no.56). Now, after being used to make hundreds of courts in Italy and Europe, it can add a number of important tennis centres in Australia to its portfolio. A market that is growing fast in a nation where this is considered to be one of the national sports.

Mapei developed MAPECOAT TNS system with the precise aim of creating a product that could really make the playing surfaces even more high-performing, so that courts could be as close as possible to clay in terms of their softness while, at the same time, maintaining the speed and precision associated with a synthetic or cementitious surface.

ACRYLIC RESIN-BASED SPORT SURFACES

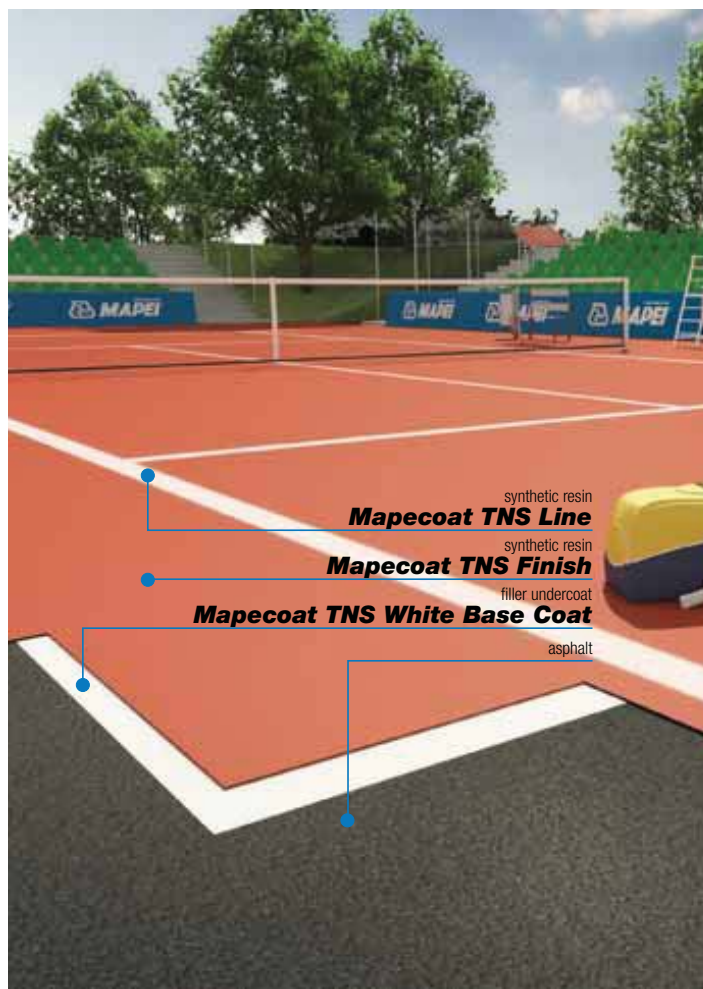
MAPECOAT TNS SYSTEM is a coating and finishing system made from acrylic resin in water dispersion and

selected fillers with high resistance to wear, UV rays and weather conditions. It may be used to form flooring for indoor and outdoor sports and multipurpose areas. Sports surfaces made using MAPECOAT TNS system are relatively elastic, offer excellent playing comfort and have excellent technical performance characteristics, such as the bounce of the ball, sudden changes in direction while running and a high degree of safety, and provide an excellent balance between stability and sliding for those who use such surfaces.

Two more innovative systems for sports surfaces by Mapei are also available: MAPECOAT TNS CUSHION and MAPECOAT TNS COMFORT.

MAPECOAT TNS CUSHION

MAPECOAT TNS CUSHION is a medium elasticity, multi-layered system made from acrylic resin in water dispersion with selected fillers used to make playing surfaces suitable for professional level tennis with high resistance to wear, UV rays and weather conditions. MAPECOAT TNS CUSHION may be applied on existing painted sur-



faces or on new cementitious or asphalt surfaces. When MAPECOAT TNS CUSHION is applied on substrates, it forms a semi elastic playing surface that has excellent playing comfort and excellent performance characteristics, such as perfect bounce of the ball, quick, safe changes in direction and an excellent compromise between balance and slide for players. The elasticity of MAPECOAT TNS CUSHION allows high-performance coatings to be applied which reduce the effect of impact trauma.

MAPECOAT TNS COMFORT

MAPECOAT TNS COMFORT is a highly elastic, multi-layered system made from acrylic resin in water dispersion with selected fillers applied in combination with granular rubbing matting and is used to make playing surfaces suitable for professional-level tennis with high resistance to wear, UV rays and various weather conditions.

MAPECOAT TNS COMFORT may be applied on existing painted surfaces or on new cementitious or asphalt surfaces. When MAPECOAT TNS COMFORT is applied on substrates, it forms an elastic playing surface that has excellent playing comfort and performance characteristics, such as perfect bounce of the ball, quick, safe changes in direction and an excellent compromise between balance and slide for players. The elasticity of MAPECOAT TNS COMFORT allows high-performance coverings to be applied which reduce the effect of impact trauma. Surfaces coated with MAPECOAT TNS COMFORT may be renewed easily and rapidly.



CARRARA GARDENS TENNIS ACADEMY GOLD COAST (AUSTRALIA)

Carrara Gardens Tennis Academy boasts a wide range of sporting and recreational facilities including a new Outdoor Tennis Centre. The Tennis Centre includes twenty clay tennis courts, built by importing the finest quality clay from Italy. In addition there are also eight full size and one half size concrete tennis courts that required surfacing using MAPECOAT TNS CUSHION system. The project commenced with the application of MAPECOAT I 600 W primer over the concrete base to ensure a perfectly sound substrate for the application of the subsequent MAPECOAT TNS CUSHION system. Once the primer had completely dried, a coat of MAPECOAT TNS WHITE BASE COAT was applied to the surface. This process was followed by five coats of MAPECOAT TNS GREY BASE COAT creating the cushion base for the tennis courts. A coat of MAPECOAT TNS FINISH 1 was applied followed by two coats of MAPECOAT TNS FINISH 3 which gave the tennis courts the desired speed as specified by the client. Once completely dry, the white line marking was created using MAPECOAT TNS LINE WHITE. A total of eight full size and one half size courts were



completed using MAPECOAT TNS CUSHION system with outstanding results, which made the Centre ready to host the Special Olympics for tennis, an international sporting competition for athletes with intellectual disabilities.

TECHNICAL DATA

Design: Cactus & Hill and WIM Architects

Client: KDV Sports

Year of Construction: 2016

Year of the Mapei Intervention: 2016

Main Contractor: Alder Constructions

Project Manager: Adam Taylor

Tennis Courts Contractor: KDV Sports

Mapei Distributor: Norm East Sports Surfaces

Mapei Co-ordinator: Neil McIntosh, Mapei Australia

MAPEI PRODUCTS

Mapecoat I 600 W, Mapecoat TNS Grey Base Coat, Mapecoat TNS White Base Coat, Mapecoat TNS Finish 1, Mapecoat TNS Finish 3, Mapecoat TNS Color, Mapecoat TNS Line





WOODRIF GARDENS TENNIS COMPLEX GRIFFITH (AUSTRALIA)

The Woodriff Gardens Tennis Complex in Penrith has secured its future with a large investment for resurfacing their 14 courts. Not only are there more than 8000 users of the facility in Penrith, but the impressive events program, which boasts local, state and national-level tournaments, provides a strong economic impact for the local community.

The installation of the first 4 tennis courts commenced with the application of MAPECOAT TNS WHITE BASE COAT over the entire newly laid asphalt base. This process was followed by five coats of MAPECOAT TNS GREY BASE COAT creating the cushion base for the

tennis court. A coat of MAPECOAT TNS FINISH 1 was applied followed by two coats of MAPECOAT TNS FINISH 3 which gave the tennis courts the desired speed as specified by the client. This completed the tennis court installation and, once completely dry, the white line marking was created using MAPECOAT TNS LINE WHITE. The contractors completed ten full size championship tennis courts using MAPECOAT TNS CUSHION SYSTEM with outstanding results. The Woodriff Gardens Tennis Centre will be enjoyed by social and professional tennis players alike and, accordingly, will become one of the main tennis centres in this Australian State.

TECHNICAL DATA

Design: Tuff Turf and Mapei

Client: Penrith City Council

Period of Construction: 2015-2016

Main Contractor: Tuff Turf

Period of the Mapei Intervention: 2015-2016

Project Manager: Travis Knight

Tennis Courts Contractor: Tuff Turf

Mapei Distributor: Tuff Turf

Mapei Co-ordinators: Neil McIntosh, Mapei Australia; Fabio D'Amato, Mapei SpA (Italy)

MAPEI PRODUCTS

Mapecoat TNS Grey Base Coat, Mapecoat TNS White Base Coat, Mapecoat TNS Finish 1, Mapecoat TNS Finish 3, Mapecoat TNS Line

MEDINDIE MANSION ADELAIDE (AUSTRALIA)

Medindie mansion is situated in the capital city of Adelaide, South Australia and comprises of 14 main rooms and is positioned on 2135 m² of land.

This property was once owned by the Catholic Church. New owners recently purchased this circa 1880s property and commissioned Greenplay, a local sports flooring installation company, to construct a 600 m² cushioned tennis court at the rear of the house.

Greenplay selected the MAPECOAT TNS COMFORT system as this type of system created additional cushioning to the playing surface for the benefit of players, as well as delivering a court surface with outstanding performance characteristics.

MAPECOAT TNS COMFORT rubber matting was bonded to the existing concrete surface using ADESILEX G19 as this adhesive can withstand extreme climatic conditions.

A coat of MAPECOAT I 600W primer was applied over the installed rubber matting and once dry was covered by a coat of MAPECOAT TNS GREY BASE COAT. Once completely dry, two coats of MAPECOAT TNS FINISH 1 were applied to complete the court surface.



MAPECOAT TNS LINE in its white shade was then applied on to create the court lines and complete the in-work.

This was the first tennis court in Australia to use the MAPECOAT TNS COMFORT SYSTEM. The end result was truly outstanding with the owners of the property extremely satisfied. The tennis court has become a showpiece in Adelaide where other installations have now been carried out using MAPECOAT TNS COMFORT.

TECHNICAL DATA

Client: Medindie Mansion's owners

Year of Construction: 2015

Year of the Mapei Intervention: 2015

Project Manager: Anthony Saba

Tennis Courts Contractor: Greenplay

Mapei Distributor: Greenplay

Mapei Co-ordinator: Neil McIntosh, Mapei Australia

MAPEI PRODUCTS

Adesilex G19, Mapecoat I 600W, Mapecoat TNS Grey Base Coat, Mapecoat TNS Finish 1, Mapecoat TNS Line



Mapecoat TNS

Elastic, rapid, winning system.



24 colours

and further sample-based colours upon request

Multi-layered system made from acrylic resin in water dispersion for sports surfaces.

- **Durable** because it is characterized by high resistance to wear and abrasion
- Highly flexible material
- **Solvent-free and eco-sustainable**
- Excellent look

- **Wide colour choice**
- It guarantees an excellent price/performance relation
- Creation of surfaces with **high adhesion rate** complying with ITF standards



Mapei is with you:
take a closer look at www.mapei.com





MAPEI FOR CLEANROOMS

SIX MAPEI PRODUCTS HAVE BEEN
AWARDED THE “CLEANROOM
SUITABLE MATERIAL” CERTIFICATION

Cleanrooms are special environments with very low levels of contamination mainly used in the aerospace industry, micro-electronics, pharmaceutical industry, manufacturing of medical appliances, food industry and manufacturing of sanitary articles. All these industries need a controlled environment. Cleanrooms and their controlled environment can limit contamination from airborne particles to allow operations sensitive to particle contamination.

Pollution levels in cleanrooms are constantly monitored and checked in parameters, like, for example, the number and size of airborne particles, the presence of volatile organic compounds and the level of bacteriological contaminants.

Staff are only allowed into a cleanroom under specific conditions, such as wearing sterile uniforms, shoe covers, protective caps, gloves, goggles and, in the most stringent cases, after first passing through a decontamination chamber before entering cleanrooms, so as not to compromise the environment.

Several factors determine the purity of the environment in a cleanroom: ranging from the human factor and ventilation by



purified air to sterile components and, of course, building materials, which must be “clean”.

But what does “clean” really mean? How is a building product certified as suitable for use in cleanrooms?

The certification required is CSM (Cleanroom Suitable Material): tests carried out in external laboratories determine whether a given material is suitable for use in cleanrooms.

Thanks to special formulas developed in the Mapei R&D laboratories in Milan, 6 products from Mapei product line for resin floors have been awarded this important and hard-to-obtain certification: MAPEFLOOR I 302 SL, MAPEFLOOR I 306 CR, MAPEFLOOR I 309 CR, MAPEFLOOR I 360 AS,

MAPEFLOOR I 390 EDF and MAPECOAT I 62W.

These products were tested by the Fraunhofer Institute in Stuttgart, Germany (an internationally acknowledged Research Institute) and certified based on the results obtained.

The tests required for a product to be compatible with cleanrooms are numerous: the ISO 14644 standards set the classification levels (depending on the application, a cleanroom requires a certain degree of air/environmental cleanliness) and reference tests.

PARTICLES TEST

There is a critical and fundamental test for assessing particles



POLLUTION LEVELS IN CLEANROOMS ARE CONSTANTLY MONITORED AND CHECKED

emitted by a given material subject to abrasion, simulating, in the case of a floor, wear-and-tear on the material due to foot traffic.

The ISO 14644 standard sets various different classes: classes 1, 2 and 3 are, for example, suitable for the semi-conductors industry (a sector requiring the cleanest cleanrooms of all), while higher classes refer to materials that may be used in other types of cleanrooms requiring a lower level of environmental cleanliness.

The ISO classes are related to the kind of cleanroom in question (see table 1): only products which are classified with the same or even better class of the room can be applied in it.

MAPEFLOOR I 302 SL (epoxy formulate for self-levelling resin floors) is certified class ISO 3 for particle emissions, while MAPECOAT I 62W (water-based epoxy coating for floors and walls) is class ISO 5: both classes guarantee an extremely high level of environmental cleanliness.

Particle emissions are evaluated by the Fraunhofer Institute,

in accordance with ISO 14644-8 standard, using instruments specially designed by the Institute itself on a total of 13 samples for each test.

What is to be evaluated is not only the number of particles emitted inside the cleanrooms but also their diameter. More specifically, in the case of resin floors, a disc of hardened product is stressed with abrasion for a given period of time. The particles emitted are measured in terms of their number and size using a laser instrument.

VOC EMISSIONS

The volatile organic compounds (VOCs) emitted by products to be used in cleanrooms are carefully monitored. Volatile organic compounds are all those compounds emitted into the air, which contribute to indoor pollution. Sometimes these compounds can actually be perceived, but sometimes they can only be identified if the indoor air is monitored using special instruments and methods. The certifications generally used by Mapei in the field of indoor pollution (GEV, Blue Angel, AgBB,...) are not sufficient for cleanrooms: testing must be carried out on emissions onto products at room temperature and high temperatures to stress the product even further. Samples are placed in special micro-chambers and, by means of passive sampling, the air inside these micro-chambers is collected on special cartridges capable of retaining all the volatile organic compounds given off. These cartridges are then assessed using the gas chromatography mass-spectrometry method. The Mapei R&D laboratories in Milan are equipped with all the instruments required for this type of testing: products have been tested in Mapei laboratories before being sent to the Fraunhofer Institute for final evaluation and certification.

Here again products are certified into "classes" ranging from 0 (high VOC concentration, equivalent to 1 g/m³) to -12 (best class corresponding to VOC emissions of 10⁻¹² g/m³, i.e.

TABLE 1. The classes set by the ISO 14644 standard for materials used in the cleanrooms.

Classification numbers (N)	Maximum concentration limits (particles/m ³ air) for particles equal to and larger than the considered size shown below					
	0.1 µm	0.2 µm	0.3 µm	0.5 µm	1 µm	5 µm
ISO 1	10	2				
ISO 2	100	24	10	4		
ISO 3	1,000	237	102	35	8	
ISO 4	10,000	2,370	1,020	352	83	
ISO 5	100,000	23,700	10,200	3,520	832	29
ISO 6	1,000,000	237,000	102,000	35,200	8,320	293
ISO 7				352,000	83,200	2,930
ISO 8				3,520,000	832,000	29,300
ISO 9				35,200,000	8,320,000	293,000



0.001 ng/m³).
 MAPEFLOOR I 309 CR (an ultra-low VOC two-component epoxy product for floor coatings) has been classified as < -9.6 using this method, which means that the product emits 0.1 nanograms of volatile organic compounds into a cubic metre of air!

The resin-based products have also been tested from the viewpoint of their chemical and bacteriological resistance. Test tubes of samples were subjected to both chemical and bacteriological aggression and the final impact was assessed. Another interesting test is aimed at demonstrating the cleanliness of resins used for making floors. This is the Riboflavin test.

RIBOFLAVIN TEST

The Riboflavin test is a control process that uses the substance “Riboflavin”, which turns fluorescent when ultraviolet light is shined on it, to evaluate a resin surface’s effectiveness at reducing contamination through cleaning methods. The fluorescent contaminant is placed on the specimen surface and left there for two hours. At the end of this period of time, the contaminant is cleaned using a linear wiping simulator, a sort of micro-fibre cloth that cleans the surface at a constant rate over a set period of time.

After cleaning is completed, all residual contamination is identified under UV light and the result is documented in photographic form.

The picture on top of this page shows the results of the test carried out on MAPEFLOOR I 302 SL.

As usual, Mapei is not satisfied to claim its products are “eco-

PHOTO 2. The micro-chambers used to evaluate the emission levels of volatile organic compounds.

PHOTO 3. Cleaning the material during the Riboflavin test.

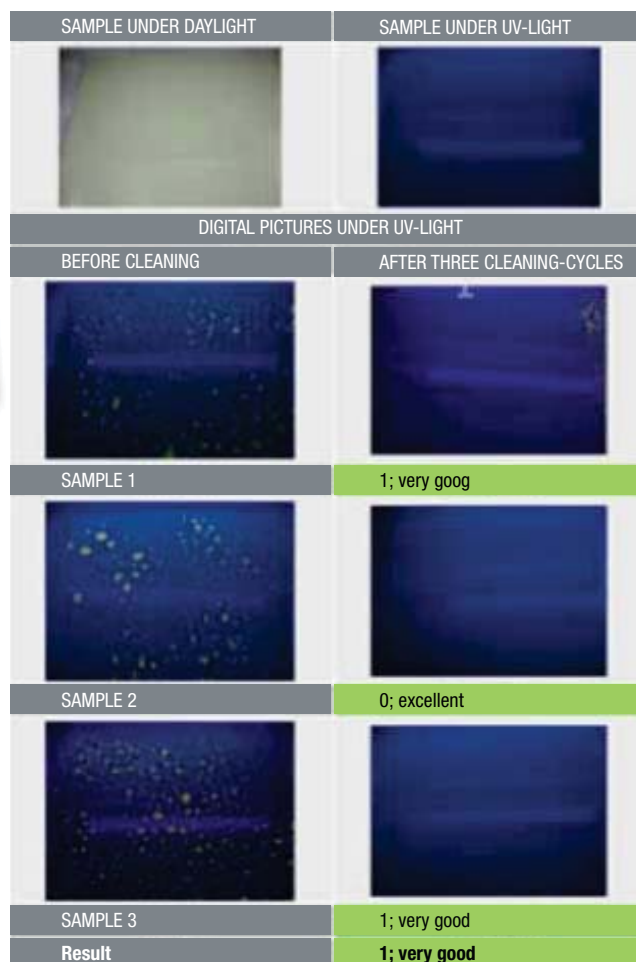
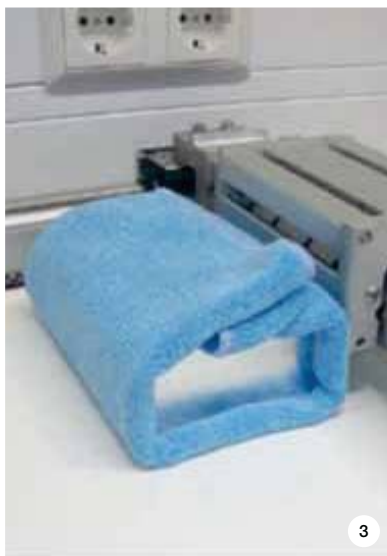


PHOTO 4. The results of the Riboflavin test on MAPEFLOOR I 302 SL.

friendly”, “green” or “eco-sustainable” without first measuring whether they actually are. Mapei’s resin-based formulas have been studied at its R&D laboratories and then tested in accordance with ISO standards, evaluated and certified as being suitable for applications and usage in cleanrooms by a third party body.

After a long study lasting two years, MAPEFLOOR I 302 SL, MAPEFLOOR I 306 CR, MAPEFLOOR I 309 CR, MAPEFLOOR I 360 AS, MAPEFLOOR I 390 EDF and MAPECOAT I 62W were certified by the authoritative Fraunhofer Institute

as suitable for the application in cleanrooms, even in those sectors in which environmental contamination must be reduced to a minimum.

This prestigious certification guarantees that the above-mentioned Mapei products can be applied without any problems or concerns in sectors ranging from the micro-electronics industry to the building of operating room floors in hospitals.

Mikaela Decio. Mapei Environmental Sustainability
Ileana Plati. Mapei R&D Lab Resin flooring



THANKS ANYWAY!

BASKETBALL: PALLACANESTRO REGGIANA FINISHES SECOND IN THE ITALIAN CHAMPIONSHIP

Basketball is growing in popularity with the Mapei Group's customers and supporters thanks to Pallacanestro Reggiana basketball team, which enjoyed another spectacular season in 2015-16. At the beginning of the season the club from Reggio Emilia (Central Italy) with the Mapei brand on the team shirt won the Italian Super Cup beating Olimpia Milano in the final, a team with a much more prestigious background. For the second year running Reggiana reached the final of the League Championship. In the 2014-15 season it lost the final of the Italian Championships in the seventh and final match against Dinamo Sassari. In the 2016 play-off finals the boys from Pallacanestro Reggiana were beaten by Olimpia Milano in game 6.

SLOW START

The play-offs began badly for Pallacanestro Reggiana with two defeats at the Forum in Milan, where Olimpia Milano plays its home games. Pietro Aradori injured his left adductor in the very first match and this certainly had a really negative effect on the team's performance. "All things considered – so Amedeo Della Valle, a member of the Italian national team who plays for Pallacanestro Reggiana, pointed out - we started the play-offs the same as we did against Sassari, losing twice". Fortunately for Della Valle and company, the "PalaBigi effect" then came into play, a basketball arena where - before the start of the play-off finals against Milan – Pallacanestro Reggiana had won 20 of the 21 matches it had played in the regular season and play-offs.

"Our supporters – so Amedeo added – help us give that something extra. In actual fact we did not play that badly in games 1 and 2, we could have got better results. We lost too many balls in the first match: a total of 20, and everybody knows that you can only afford to lose about a dozen if you're going to play well in a top-flight match". Pallacanestro Reggiana was given a real boost by its two "giants", Darjuš Lavrinovič and Vladimir Veremeenko.

LIONS AT THE PALABIGI

Game 3 at the PalaBigi was the turning point. It is worth pointing out that Pallacanestro Reggiana played without both Stefano Gentile and Aradori. Reggiana's tough defence and great





ABOVE. Left, Pietro Aradori in action and, right, Ojar Silins scores in one of the play-off final games against Olimpia Milano.



ABOVE. From left, Simon Krunoslav (Olimpia Milano) tries to get away from Achille Polonara. Right, celebration time for Reggiana.

team play were the real keys to this match. The only time the enthusiastic home fans looked worried was at the beginning, when Milan took a 17-9 lead. Then Lavrinovič and Rimantas Kaukėnas helped Reggiana win the match by nine points. Two days later, again at the PalaBigi, Reggiana won again and levelled the series at 2-2. 6 players scored more than 10 points each. Aradori was outstanding for Pallacanestro Reggiana in the first quarter, scoring 15 points. Reggiana then turned up the heat with Kaukėnas and Lavrinovič both scoring points as the match drew to a close in a highly boisterous PalaBigi. Reggio were never really in game 5 at the Forum from an emotional viewpoint. The “Red boots” of Olimpia stormed to a 29-8 lead over Reggiana in the first quarter. Della Valle gave it everything in an attempt to get Reggiana back in the game as his individual play brought Reggiana back to within nine points of Olimpia Milan, but then the lights went out for Menetti’s boys: it was now 3-2 for Olimpia Milano.

THE PALABIGI COULD NOT DO IT

Despite all the boisterous support from the fans, game 6 was Pallacanestro Reggiana’s second home defeat during a long and glorious season. Olimpia won the series 4-2 in game 6

and with it the 27th league championship in their history. Reggiana controlled the match until five minutes from the end. But just when it looked as if it the championship would go to a decider in game 7, Olimpia Milano played its very best basketball, mainly thanks to Sanders, who was awarded the “Most Valuable Player” at the PalaBigi, just as he was 12 months earlier when playing for Sassari. The last man to give in for Pallacanestro was never-say-die Kaukėnas (18 points), who played a textbook fourth quarter.

THE SIX MATCHES OF THE FINAL

GAME 1	Olimpia – Reggiana	87–80
GAME 2	Olimpia – Reggiana	94–73
GAME 3	Reggiana – Olimpia	81–72
GAME 4	Reggiana – Olimpia	81–76
GAME 5	Olimpia – Reggiana	97–73
GAME 6	Reggiana – Olimpia	70–74

AN INTERVIEW
WITH
ALESSANDRO
FROSINI,
PALLACANESTRO
REGGIANA'S TEAM
MANAGER

FROSINI: "BETTER THIS YEAR"

Many people believe that Olimpia Milano was a much stronger team than the Dinamo Sassari team Pallacanestro Reggiana played against in the 2014-2015 play-offs final. Alessandro Frosini, Reggiana's team manager, does not agree: "If we just look at the final results, i.e. the defeat this season in game 6 and the Championship lost after game 7 in June 2015, then we might conclude that Olimpia was a better team. In actual fact, I can assure you that in my opinion the Dinamo Sassari team we played against in last year's final was a better organised squad than the Olimpia team we played against this season".

Do you have any regrets about the results of games 5 and 6 in this year's final against Olimpia?

"I think what happened out on the court showed which was the stronger team at that particular moment. The only regret I have is that we did not have our full squad available".

Is there any player who performed really well during the regular season but not so well in the play-offs?

"Generally speaking, I do not think any player was disappointing at any time during the season, unfortunately a series of injuries during the play-offs robbed us of such key players as Gentile, Aradori and Veremeenko. The list of injuries weighed heavily on the negative results in games 1, 2, 5 and 6".

As regards national tournaments, Pallacanestro Reggiana was the top seed in the 2015-2016 Italian Cup but was knocked out by Avellino in the quarter-finals. How did that happen?

"The Italian Cup is a special event: you play for a trophy over just a couple of days, so your physical and mental state during that period make all the difference. At that time we were not at best either physically or mentally".

Was Polonara better in the 2014-15 season or the season that ended with the Reggiana-Olimpia

Milano final?

"Statistically speaking, I think his 2014-15 season was better. Personally, I think Achille improved a lot last season in specific ways that are not reflected in the statistics, but are just as important for his team's successes".

Which players showed last season that they have the most room for improvement?

"Definitely Andrea De Nicolao, who used to play in the second division. He has already improved significantly and made such an impact on our League that he very quickly became our first-team playmaker".

Nobody is ever happy losing play-off finals. Nevertheless, if we look at the glass as being half full, were you less disappointed after the final against Dinamo Sassari in June 2015 or at the end of game 6 against Olimpia Milano in June 2016?

"I do not think you can really talk about being happy after losing a final; after losing the second final we realised just how close we had come in June 2015, and that made us all feel rather proud and aware of the excellent work carried out by the whole club".

Tell us what you think about the schedule of international challenges facing Reggiana in the 2016-17 season.

"The club really wants to take part in such an important international cup as the Eurocup, an extremely prestigious competition that would rank us among the top 40 clubs in Europe; we will just have to wait and see the outcome of the dispute between FIBA (International Basketball Federation) and Euroleague Basketball".

What kind of a relationship does Reggiana have with young players?

"I firmly believe that Reggiana could not compete at this level without a strong youth sector, producing talented young players for the first team".

The Lithuanian player, Kaukėnas, who is now 39 years old and was decisive in a number of play-off matches according to the critics, has decided to retire.

"We and the whole of basketball will miss him. Rimantas is the prototype of a player, who, due to his extraordinary physical traits combined with natural leadership qualities, rightly deserves to be considered among the pantheon of basketball greats".

How will your fifth consecutive season in the top league begin?

"We have a new plan. We hope it will get us to another final for the Italian Championship within three years".

TOGETHER, FLYING HIGH.

The **champion** scores the points, the **team** helps him and wins.
Mapei is proud to support **Pallacanestro Reggiana** basketball team.
Hard work produces results.

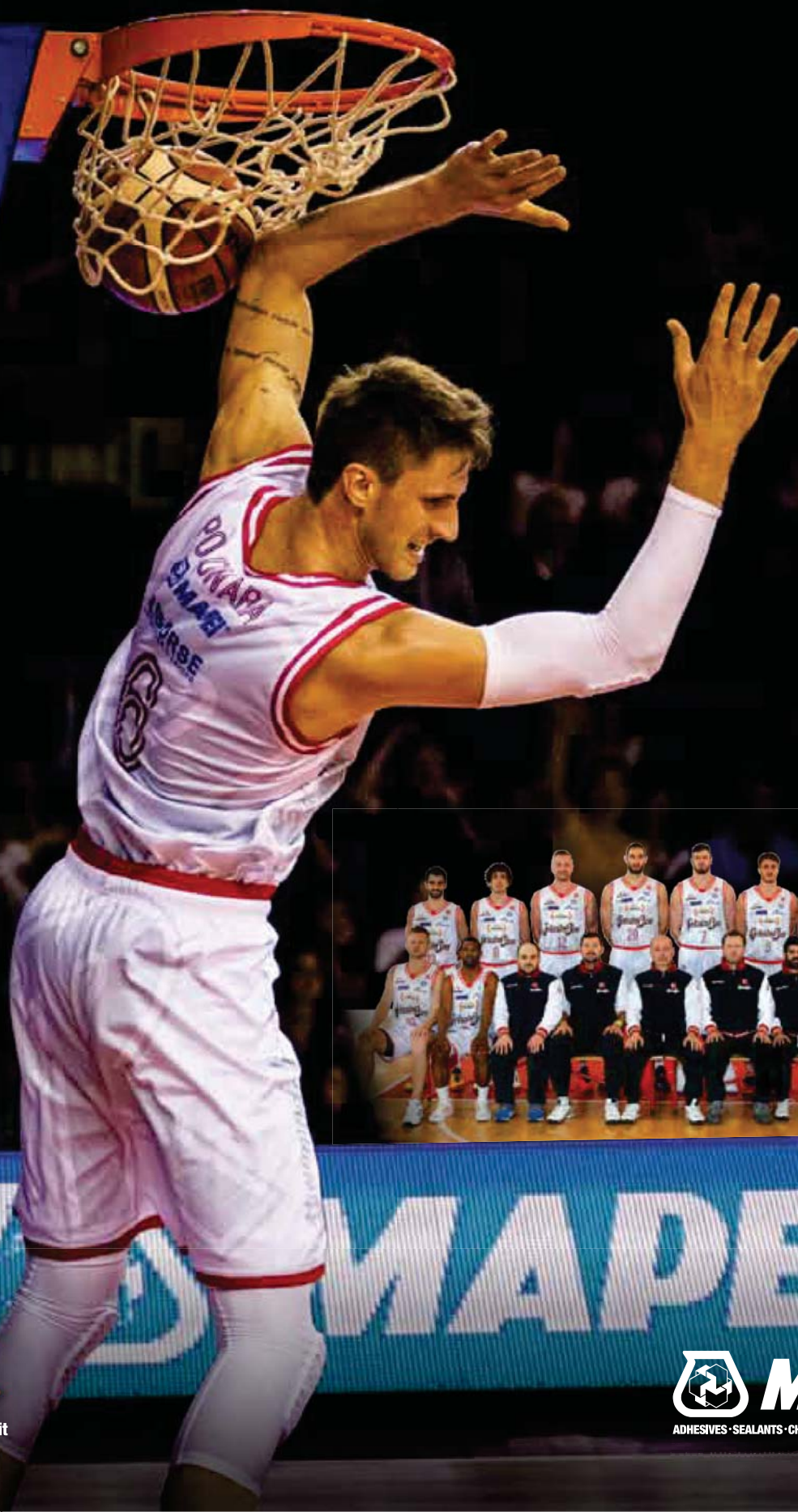


Photo by Manuela Pellegrini and Enrico Rossi



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BERARDI AND “ITALO-SASSUOLO”: FULL STEAM AHEAD!

“The Italian team that intrigues me most? Sassuolo. I hope it does really well in the Europa League. Sassuolo could become the Italian Leicester City. It reminds me of the Udinese team a few years ago, only with a different underlying philosophy. In Udine they focused on foreign players, while at Sassuolo they are opting for home-grown talent and that could really shake up the whole of Italian football.” That is what Claudio Ranieri, head coach of Leicester City, the English Premier League champions, had to say just a few days before Sassuolo made its first appearance in the Europa league against the Swiss team Lucerne. At the start of its fourth season in the top division, Sassuolo really is Italy and not just because it has qualified for the Europa League. It is, first and foremost, Italian in terms of its mentality and its squad of players, who have mainly been Italian ever since the team first began playing in Serie A. At the beginning of the new season the other top teams have a very different approach: the most Italian is Juventus with 7 foreign players in its starting line-up. Sassuolo is determined to remain loyal to the slogan “Full speed ahead!” during the new season, when it will be playing in 3 different competitions: let’s not forget the Italian Cup, in which the team is seeded and will only enter the competition in the round of the last sixteen (skipping the early rounds).

SUMMER TRANSFER SAGA

The transfer saga surrounding the forward Domenico Berardi (born in 1994) was headline news for long periods this summer: “He is leaving Sassuolo and joining Inter Milan”, “That is

NEW SEASON: SASSUOLO INVOLVED ON 3 DIFFERENT FRONTS

not true, he will respect prior agreements and join Juventus”, “Domenico is staying at Sassuolo”, so the rumours went around. In the end Berardi was glad to stay at Sassuolo. “Berardi - so the managing director and CEO of Sassuolo, Giovanni Carnevali,

pointed out - is an extremely talented player and it is hardly surprisingly that a number of important offers were made by both Italian and foreign clubs”.

Mr Carnevali, is it true that Inter Milan made an official request to try and buy Berardi or were they just rumours coming from all the usual gossip-mongering between media people and football agents?

“We never received an official transfer request or offer from Inter Milan and Berardi never turned down a transfer to Juventus. Domenico simply decided to stay with us for another year to continue his development as a player: he is just 22 years old and we are in 100% agreement with his decision”.

During the first couple of seasons in the Italian Serie A, Sassuolo focused on young players. It is now a Europa League team: does that mean that, from now on, the club will be concentrating more on more experienced players during the various windows in the transfer market?

“Sassuolo F.C. will always focus on young players and will always have strong Italian representation in its squad. We are looking for talented, quality players and age certainly is not a factor. The main thing is that all the new players have the right mentality and motivation to fit in at Sassuolo and, above all, they must share our vision and way of thinking”.



LEFT. Luca Mazzitelli, recently signed from Brescia. **BELOW.** Eusebio di Francesco with some of the players at the team's summer training camp. **FACING PAGE.** Stefano Sensi, another new face at Sassuolo for the 2016/17 season.





FIRST SUMMER TRANSFER NEWS

The Sassuolo F.C. squad has been reinforced with some new players ready for the start of the 2016-17 season. The club has completed the signing of the forward Matteo Politano after reaching a settlement with Roma and the midfielder player Luca Mazzitelli (who loaned to Brescia last season) has also joined the team from Roma. Stefano Sensi, a commanding midfielder player, has been signed from Cesena. Some young players, who had left the club on loan, are now returning to Sassuolo: the defender Cristian Dell'Orco from Novara, Giovanni Sbrissa, midfielder, from Vicenza and Leonardo Fontanesi, defender, from Cesena. A new goalkeeper should also be joining the Sassuolo squad: Bryan Costa, who used to play for Vicenza. So does this mean that "Italo-Sassuolo" only buys Italian players? Absolutely not: it has bought the central defender Timo Letschert (Holland) from Utrecht and the Spanish defender Pol Lirola (defender) will also be joining the club on loan from Juventus. Sassuolo has sold its Croatian player Sime Vrsaljko to Atletico Madrid and Alessandro Longhi to Pisa.

forward much more, since he is a good athlete and can cross the ball well".

Sassuolo F.C. is the most Italian of all the Italian teams that qualified for international competitions at the end of the 2015-16 season, but the Italian team manager, Conte, did not take any Sassuolo players to Euro 2016 in France. What do you think about that? Bearing in mind that a player like Missiroli, who had a great season, would certainly have been useful to the Italian cause from the round of the last 16 onwards.

"I think we have some extremely good players in our squad that deserved to be taken into consideration. I hope that the new Italian manager, Giampiero Ventura, will give them a chance in the future".

Which players from the 2016-17 Sassuolo team have a chance of playing for the Italian national team under the new manager, Mr Ventura?

"We have some interesting players and not just for Ventura's new Italian national team; since we have really focused on young players, I can safely say that there are lots of promising youngsters in our squad, who could certainly play for the Italian Under 21 team".

UP-AND-COMING PLAYERS

At the end of January 2016, the Emilia-based club bought the centre forward Marcello Trotta from Avellino and he scored a goal at the end of last season. From now on Trotta will have a lot more opportunity to show off his goal-scoring skills. Stefano Sensi, aged 21, and Luca Mazzitelli, aged 20, also joined Sassuolo "full-time" in early July 2016. In actual fact these two midfielder players have belonged to the club since the end of January 2016, but Sassuolo allowed them to finish the season with the clubs they have been playing for, i.e. Cesena in Sensi's case and Brescia in Mazzitelli's. The latter was on loan to Brescia but was actually on Roma's books. Mazzitelli, 1 m 84 cm tall, won the Italian Championship with the Roma youth team. On the other hand Sensi, 1 m 68 cm tall and born in Urbino, learned his trade playing for San Marino in the first division and "Pro League". Stefano is the typical highly skilful midfielder general and Sassuolo had to beat off competition from important clubs (and not just in Italy).

Allegedly, both tactically and physically, Sensi calls to mind Pirlo when he was a young player. Do you agree with that Mr Carnevali?

"I firmly believe Sensi will make great progress here at Sassuolo, where he will get the chance to develop in a healthy and relaxed environment. It would be wrong to make comparisons, but I have no doubt he has the potential to become a great player".

Sassuolo's new players for the 2016-17 season include the Spaniard, Pol Lirola, aged 19. He is joining the club on loan from Juventus and has even played in the final of the Youth Championship at the Mapei Stadium. What kind of player is he?

"He is a right-sided defensive player that really caught the eye playing for Juventus's youth team. He will have to learn to fit in with Di Francesco's style of play and will get the chance push





SASSUOLO AND ITS FANTASTIC FANS RECEIVE SPECIAL AWARDS

SASSUOLO WINS THE DISCIPLINARY RANKINGS AND "GAETANO SCIREA" FAIR PLAY TROPHY FOR THE SECOND YEAR RUNNING

Alongside all last season's notable results, such as battling it out with the top teams and finishing sixth in the Italian league to qualify for the UEFA Europa League, two other major achievements pay testimony to and confirm all the great work that has been done over the last few years by Sassuolo team, its club staff and its well-behaved but extremely enthusiastic fans.

For the second year running Sassuolo and its supporters won "Coppa Disciplina", the cup awarded to the team with the best disciplinary record for the 2015-2016 Italian Championship and also the "Gaetano Scirea" Fair Play Trophy (jointly with Chievo and Empoli) set up by the Italian Football League Committee to reward the best behaved supporters of teams playing in the Italian Serie A.

The team won the 2015-16 cup for good discipline, which takes into account disqualifications for misconduct, bookings and any fines imposed on players, staff and Serie A teams, with a final coefficient of 03.22.

Chievo Verona (03.26) and Torino (03.27) came second and third respectively with coefficients just a few hundredths higher than Sassuolo's, but still lower than many bigger teams that are supposed to commit far fewer fouls than their opponents.

Bottom of this very special table were Frosinone, Hellas Verona and - surprisingly - Inter Milan, which finished bottom with

an incredible coefficient of 07.21, much higher than second-to-bottom placed Verona (06.76).

Sassuolo also finished joint top of the "Gaetano Scirea" Fair Play Trophy, which is awarded to the best behaved fans in Italy's top division. Three teams finished joint top: Chievo Verona, Empoli and, once again, Sassuolo. Verona finished bottom just below Inter Milan and Lazio. Roma, Napoli and Juventus all finished just above them.

Di Francesco's team has good reason to be extremely pleased with its position in this table after also qualifying for Europa League. Sassuolo is continuing to improve in terms of its players, the club in general and its fans, who, together, are ready to embark on the new adventures lying ahead next season.

2016 - 2017 SEASON TICKET CAMPAIGN

The season ticket campaign for 2016/2017 began on Monday, 4th July, so that the fans can feel even closer to the team and get ready to support them in Italy and Europe. The campaign features plenty of new offers and some fabulous surprises.

The Family deal has been confirmed with three areas reserved for families and children in selected sectors of the Main Stand, Front Stand and South Terrace for a total of 2200 seats.

Among the new ideas intended to get people more closely involved with the team, there are special reductions for women, a special offer for under 30s - replacing and extending the old under 25s category - and, as usual, special prices for under 16s and season-ticket holders at Modena Volleyball Club.

All season-ticket holders received a free commemorative shirt to celebrate the team qualifying for the preliminary rounds of the UEFA Europa League.

Let's paint Mapei Stadium black and green! Let's get behind the lads during the exciting season ahead, ready to dream even bigger and win even more.

WITH ALL THE FAMILY AT MAPEI STADIUM TO WIN TOGETHER

YOU GIVE US STRENGTH!



**2016/2017
SEASON
TICKET
CAMPAIGN**

sassuolocalcio.it

**Season Ticket for 21
games instead of 19:**
including the third preliminary
round of the Europa League
and the last 16 of the Tim Cup

**Discount on later games
in the Europa League
and Tim Cup**

Free commemorative shirt:
"Europe, something to dream
about together"

Discount for Under 30s
Special deals for Under 16s and ladies

What's New



Kappa

MAPEI



WORKSHOP:

THE FIGURES OF SASSUOLO'S SUCCESS STORY

GREAT RESULTS AND
AMBITIOUS PROJECTS FOR
A TEAM THAT WANTS TO
KEEP ON IMPROVING

The Confindustria Ceramica (Association of Italian Ceramic Tiles and Refractory Materials Manufacturers) Auditorium in Sassuolo (Central Italy) hosted the "Europa, un sogno da vivere insieme (Europe, dreaming together)" event, which was attended by top Mapei executives and the Sassuolo players. It was put on to provide Sassuolo's sponsors with an overview of all the communication, promotions and other activities they can organise for their benefit. Of course all

the Sassuolo players attended, together with the team manager, Eusebio Di Francesco.

The pre-Europa League workshop began with the actor Gianfelice Facchetti (son of the legendary old captain of the Italian national football team, Giacinto Facchetti), telling a story. The journalist Federica Lodi from the Italian TV channel Sky Sport then handed over the microphone to all the various guest speakers. They included Carlo Rossi, President of Sassuolo football club, who thanked everybody in attendance. It was then the CEO of Mapei and owner of Sassuolo, Giorgio Squinzi's turn to speak. "We need to convince ourselves that our achievements are the result of hard work. We will try and make even more progress, our strength lies in our unity. At Mapei we have achieved great things in cycling, so I keep on repeating the same old slogan to the players, management and sponsors of our football team: never stop pedalling. Important results will come along if you just keep going". Here are some of the remarks made by Adriana Spazzoli, the Mapei Group's Operational Marketing and Communication Director: "The Mapei Group has 9000 staff. These 9000 workers include you, the Sassuolo football players, you are an

important linchpin in our marketing and communication strategies. You are part of our companies: 9000 players take the pitch at the Mapei Group! We all feel part of our company and we are in your hearts. Sassuolo football team is a provincial story in the noblest meaning of the word, based around great team work". Adriana Spazzoli also added a few comments about the communication campaign: "A chance to bring together different fields of endeavour. Every Sunday our boys proudly wear the Mapei brand on their shirts, a company that owes its success to the day-to-day hard work of all its staff. Dear sponsors, we need to make the most of the opportunities offered by 'walkabout' and 'match sponsor' initiatives, using the Mapei Stadium to host conventions and seminars and focusing on public relations, including visits to see the team on non-match days. Our partners are able to take their guests to Sassuolo matches and Sassuolo's sponsors also have the chance to watch training sessions at Ricci Stadium in Sassuolo."

And the players themselves are available as guests at trade fairs and conventions: "For example, a number of our players were on hand at the stands of companies that sponsor Sassuolo during the



Cersaie trade fair”.

Interest in the team is increasing, particularly from foreign television networks. Various broadcasters in Asia showed 560 Sassuolo matches during the 2015-2016 season. 246 were shown in the USA and 394 in Europe: record-breaking figures for a team from a town that played in the amateur league in the 1990s. More attention is also being shown by the press, with Italian and international papers giving the team ever more space.

Giovanni Carnevali, the Managing Director of Sassuolo, took the floor next: “Mapei Stadium is the only Italian stadium that is not policed inside on match days. The club’s projects also include reorganising the young players’ sector”. Social networks are the latest frontier of communication. “Our company - so Massimo Pecchini from the Press Office pointed out - has developed an impressive experience in producing its own special video clips and writings specially for the Internet and social networks”.

BELOW. Giovanni Carnevali, Managing Director of Sassuolo, speaking at the Workshop “Europe, dreaming together”, which was held in Sassuolo on 30th June.
IN THE MIDDLE. Giorgio Squinzi shakes Domenico Berardi’s hand.



A STORY ABOUT A DREAM

HERE IS AN EXCERPT FROM THE SPEECH GIANFELICE FACCHETTI HELD DURING THE WORKSHOP



How often have we been told that we can learn from the past, which is true.... but the most exciting story of all, the best story of all is the one that surprises us (...)

As we look back into the past, I do not think we will find it hard to come up with the right words to describe all the most important experiences of Sassuolo (...)

Firstly. This is a story about tradition. Very few cities can boast a manufacturing and business heritage like Sassuolo’s, whose quality standards are quite extraordinary (...)

Secondly. Bertolt Brecht said that the smallest human unit is not composed of one person alone, but two. This is a story about encounters and at the very top of the pile is the coming together of Giorgio Squinzi’s Mapei and this city with its football club and people (...)

Thirdly. This is a success story. It is no miracle! There is a real difference. Success comes from training and discipline, it is the result of hard work and sweat, it is daily endeavour, it is down-to-earth talent. I believe it is only thanks to all this that the club has been able to reach the very top of Italian football (...)

Fourthly. This is a story of an opportunity for all those who chose to get involved. You have also grown and changed as Sassuolo has gradually won applause and league points at stadiums all over Italy, mainly thanks to a playing style that is easily recognisable both on the pitch and from the stands (...)

Fifthly. This is a story about a dream..... that just came about like that. after making a casual remark that might have seemed rather unlikely to some, “we will get into the Italian Serie A and beat Inter Milan 1-0 at San Siro”. For anybody who is a dreamer, but is also used to getting up early in the morning and rolling up their sleeves, there are no bounds to what you can wish for, you just need to use your head, heart and lungs. Now it is your turn again, Europe is calling and we need to reply “here!” (...) But be warned: be careful what you wish for, it might just come true one day.





TEAM PRESENTATION IN THE HEART OF SASSUOLO

PIAZZA GARIBALDI: A “MAPEI STADIUM”

Who says only Formula 1 racing drivers and Moto GP bikers have their own “umbrella-holder girls”? Sassuolo football players also have theirs. They are the so-called “droplets” or, in other words, live testimonials of the Mapelastic advertising campaign, who welcomed friendly sponsors, fans and guests into Piazza Garibaldi in the heart of Sassuolo on so-called “black-and-green Thursday”: the official presentation of the Sassuolo team for the 2016-2017 season. The girls also had their own umbrellas perfectly in accordance with the lively and extremely popular Mapelastic campaign devised by Jack Blutharski advertising agency from Bologna.

The Hollywood-style presentation of Di Francesco's players coincided with the major advertising campaign for Mapelastic, the top product from the Mapei Group's waterproofing line. The friendly and attractive “droplets”, dressed in jeans, a Mapei Mapelastic branded T-

shirt and dazzling smiles, captured plenty of attention and many Sassuolo fans wanted to take a selfie with them.

More than a city square, Piazza Garibaldi looked like something between the Sud Stand of Mapei Stadium and an authentic arena. Crowds of people welcomed the coach carrying the players and staff. Green and black flags waved all around the square together with the Italian national flag: Sassuolo is actually the most Italian of all the Italian teams that have qualified for international competitions this season.

The official presentation of the Sassuolo team for the 2016-2017 season began with the presenter Federica Lodi from Sky Sport TV channel on stage and lots of famous faces in the front rows: alongside Carlo Rossi, President of Sassuolo football club, there was Giorgio Squinzi, CEO of the Mapei Group, Adriana Spazoli, the Mapei Group's Operational Marketing and Communication Director, Gio-



ABOVE. The fans were welcome in Piazza Garibaldi by “droplets”, live testimonials of the Mapelastic advertising campaign.

RIGHT. During the event devoted to the presentation of the Sassuolo team for the 2016-2017 championship, Giovanni Carnevali, Managing and General Director of Sassuolo football club, and Claudio Pistoni, the Mayor of Sassuolo, both took the stage.



vanni Carnevali, Managing and General Director of Sassuolo football club, and Claudio Pistoni, the Mayor of Sassuolo accompanied by other local officials.

"Stay with us, Berardi stay with us!", the fans all chanted as if to dispel rumours he might be transferred to another club. Carlo Rossi then greeted his fans and local townspeople.

The Mayor then took the stage: "I am proud to be the Mayor of a city whose football team has qualified for the Europa League - so Claudio Pistoni announced - Sassuolo is giving the city's image a huge boost: even people who are not interested in football cannot help but admire the great work done by Mapei and all the club staff. When you have a winning project, good results inevitably follow".

Giorgio Squinzi took the stage to a rapturous welcome from the fans. "I think we will see some great things this coming season. We now have to prove we are as good as the results we have achieved, most significantly qualifying for Europe". Squinzi then addressed team manager Eusebio Di Francesco and the players. At the beginning of each new season I always ask for the team to get ten point more than the previous year. In the 2015-2016 season the team got 12 points more than the previous season, so I will settle for just 8 points more at the end of May 2017." Adriana Spazzoli also greeted and thanked all the fans and players.

The club's Managing and General Director, Giovanni Carnevali, took the stage next and spoke about the transfer market: "We are on good terms with Inter

Milan and all the other top clubs, but we have no real need to sell players". The players then took the stage one by one. The Sassuolo fans voted goalkeeper Andrea Consigli, aged 29, as their favourite player. "Qualifying for the Europa League - so the goalie who came from Atalanta noted - has meant we have had to cut short our holidays. But that does not matter: I would have gladly started training a month earlier to play in Europe. Qualifying for the Europa League was a dream for us Sassuolo players, one that came true". The Sassuolo fans really got Consigli going: "when I left Atalanta in summer 2014 to become a Sassuolo player, a lot of people criticised me. Now I am delighted to be at Sassuolo, a very well-organised and ambitious club that

has allowed me to prove a lot of people wrong. And the fact that a coach like Di Francesco has decided to stay with us fills me with confidence".

"Peluso-Peluso-Peluso!", so the fans chanted when Federico Peluso, aged 32, joined the presenter on stage. This is the start of his third season with Sassuolo. "Finishing sixth in last year's Championship was an important result: equalling or even bettering that will be extremely difficult. We will try and give it everything we have got: we really want to improve! A fan gave Di Francesco a black "good luck" shirt for the Europa League. "It will be a tricky season", so Di Francesco announced on stage. "I want the players to improve in terms of their intensity. They must give their best for 95 minutes in every match. The young players must up their game. Everybody, including Berardi". There was also talk of the season-ticket campaign throughout the evening. And then, as the fans sang the names of the team captain Magnanelli, Missiroli ("He deserved to play for Italy in this summer's European Championship"), Sansone, Acerbi, Defrel, Duncan and all the rest, the evening came to a close with an auspicious group photo.

WHAT FABULOUS NEW SHIRTS!

Sassuolo has new Kappa-branded football kits for the 2016-2017 season. The five designs were displayed at the beginning of the team presentation in the heart of Sassuolo. The first "home shirt" is traditional with black-green vertical stripes. The second ("away") shirt is the main novelty: a white shirt with a black-green diagonal sash, like River Plate's (the legendary Argentinian team).

Sky-blue is Mapei's corporate colour. It is also the main colour of the third shirt, which now has black inserts on the shoulder and sleeve. The shorts and socks are colour-coordinated with all three new shirts. The goalkeepers will have two options: either a red or orange kit. Both have a stripe along the sleeves and black-coloured hoop across the top of the socks. "Sassuolo" is written vertically on the socks of all the new-look kits.



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