

INTERNATIONAL

# REALTÁ MAPEI

# 70°



 **MAPEI**  
1937 - 2007



## Ambassador of the Image of Italy in the World

**GIORGIO SQUINZI, CEO OF THE MAPEI GROUP, WAS OFFICIALLY AWARDED THE LEONARDO QUALITY PRIZE FOR ITALY BY GIORGIO NAPOLITANO, PRESIDENT OF ITALIAN REPUBLIC.**

*Photo:  
on December 4<sup>th</sup>,  
Giorgio Squinzi,  
CEO of Mapei  
Group, was  
officially awarded  
the Leonardo  
Quality Prize for  
Italy by Giorgio  
Napolitano,  
President of Italian  
Republic, in the  
presence of Laura  
Biagiotti, President  
of the Comitato  
Leonardo, Luca  
Cordero di  
Montezemolo,  
President of  
Confindustria, and  
Francesco Rutelli,  
Italy's Vice Prime  
Minister.*

The Comitato Leonardo was established in 1993 by a group of business people, artists, scientists and representatives of the cultural world, with the support of ICE (Italian Institute for Foreign Trade) and Confindustria (Confederation of Italian Industry), to promote and enhance the Italian Quality throughout the world. The name "Leonardo" immediately evokes a magic combination of art, science and technology: three expressions of the human intellectual abilities which are linked to Italy's reputation throughout the world.

The Comitato Leonardo is supported in its efforts by other Institutions who are involved in promoting and fostering Italian interests abroad. Among the participants there are high officials of state such as the President of the Council of Ministers, the Italian Minister of Foreign Affairs and the Italian Minister of Production Activities.

The Comitato Leonardo instituted the Leonardo Italian Quality Awards for Italian entrepreneurs that have been very successful in international markets. The company leaders awarded are called "Ambassadors of the Image of Italy in the World", due to their valued international role and to their successful results, which are evidence of the excellent quality of Italian work.

This year, on December 4<sup>th</sup>, Giorgio Squinzi, CEO of Mapei Group, was officially awarded the Leonardo Quality Prize for Italy by Giorgio Napolitano, President of Italian Republic. Many are the reasons for the choice of awarding Squinzi: during the last five years the Mapei Group doubled its turnover (the turnover for 2006 was 1.45 billion Euros); at the end of 2006 Mapei's employees were 4,800 (12% of which work on research) and the Company's investments in Research and Development were over 70 million Euros per year.

Laura Biagiotti, President of the Comitato Leonardo, claimed that the prize intends to enhance the Italian Quality in both the entrepreneurial field and the research and intellectual activity. It aims to highlight Italian prominent personalities embodying entrepreneurship, artistic creativity, elegance and cultural talents. These, together with the Italian products and lifestyle, are incomparable expression of the Italian genius, which is appreciated and sought-after all over the world. This was, for Mapei, an excellent way to close 2006: a prestigious award to the man who most embodies the Company's spirit and manages the Group's growth worldwide. Congratulations, Mr Squinzi!

**LEO  
NAR  
DO**

COMITATO LEONARDO  
ITALIAN QUALITY COMMITTEE

[www.comitatoleonardo.it](http://www.comitatoleonardo.it)



«On 15<sup>th</sup> February 2007 Mapei celebrated the 70<sup>th</sup> anniversary of its founding. This is an important date, which, in light of the goals we have already achieved, I was particularly proud to celebrate with all those who, over the years, have got to know Mapei.

Down the years lots of customers, staff, suppliers, business partners and friends have been involved with Mapei and chosen to grow along with us. First established in 1937 just outside Milan by my father Rodolfo Squinzi, Mapei has now developed from a small family business into a multinational operating all over the world, in which the third generation of our family has been employed for some time now.

The first 70 years of our history have resulted in Mapei today being a world leader in the fields of adhesives and chemical products for the building industry, firmly established on all five continents.

A number of key elements in our corporate philosophy have allowed the Mapei Group to grow so successfully: specialisation in the building industry; internationalization, with a special eye for local market requirements; research and development of products constantly at the technological cutting-edge; personalised customer service; team work; the sustainable development of our operations; careful attention to the installers' and final users' health; careful management of Human Resources.

## GIORGIO SQUINZI: MAPEI'S 70<sup>TH</sup> ANNIVERSARY

This growth has not, however, detracted from our original Company spirit based on creativity, competence, passion and flexibility.

The secret of Mapei's success is just that: thinking big and expanding across the world without losing those distinctive traits of a craft enterprise, namely an everyday commitment to working shoulder-to-shoulder with our customers to find increasingly innovative solutions for dealing with issues related to the building world.

As with all important commemorations, Mapei is now naturally reflecting on the key moments in its history, remembering and thanking all those people who helped the Company to grow (and still keep on growing) in the knowledge that the driving force behind the Company has not petered out but, on the contrary, seems to be growing stronger day by day.

On such occasions, reminding ourselves about the past does not mean that we are forgetting about the present or not planning for the future.

For Mapei commemorating this date means remaining faithful to its own nature and looking ahead, sure that it will hit plenty more milestones in the future.

Although plenty of targets have been reached over the last 70 years, others are steering Mapei and its customers all over the world on towards further goals.

The future is already here and, as they say in the world of sport, "you always win together".

So I can only hope that you will all continue to be key players in the success of the Mapei Group and part of its winning story ».

*Giorgio Squinzi*  
Chief Executive Officer

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First established in 1937 in Milan, this year Mapei celebrates the 70<sup>th</sup> anniversary. This is an opportunity to look back at the Company's history, recalling the achieved goals and looking ahead at the future targets.

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[www.mapei.com](http://www.mapei.com)

The Mapei web site contains all the information about the Group's products, its organisation in Italy and overseas, its involvement in the sector's main trade fairs and lots more.

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# THE 10 PILLARS OF OUR SUCCESS

1

## **We are our customers' best supplier**

We offer our services as a business partner and do our best to provide customers with very excellent solutions.

2

## **We build a partnership with our strategic suppliers**

We work to ensure that our strategic suppliers turn meeting our needs into the opportunity to jointly design new products and solutions which can even cater for the latest market requirements.

3

## **We always keep one step ahead**

We try to anticipate designers' requirements and interpret business and building-site needs.

4

## **We keep solid financial foundations**

so that we can invest in the technology and products of the future.

5

## **We innovate constantly**

Every year we strategically invest over 5% of our overall turnover in Research & Development.

6

## **We improve all our procedures by means of quality control**

Our products and services all conform to the highest ISO 9001 certified standards.

7

## **We build a winning and committed team**

Our most precious resource is the value of our team: we work together passionately and grow professionally thanks to constant training.

8

## **We are at the cutting-edge in terms of environmental safety and health**

We attach great importance to the environmental sustainability of our products, the eco-friendly nature of our procedures and the safety of our customers, workmates and entire community.

9

## **We are determined to achieve excellence**

We strive to achieve ambitious goals so that we are market leaders in our chosen sectors.

10

## **We always tell the truth**

A high-profile and transparent communication strategy allows us to convey and share our values with as many people as possible.

# A LONG STORY, An Unbreakable Bond Holds Between a Business Idea that Gave



Rodolfo Squinzi, the Company founder.



The name stands for "Auxiliary materials for building and industry": Mapei was founded in February 1937 in the suburbs of Milan.

It is the story of a very small firm and of a family of businessmen - the Squinzis - who have developed the Company into a leading multinational in the world of adhesives for building. A success story which can boast something really special: Mapei has never closed a financial year in the red and has never resorted to redundancy payments.

In 1937 the firm had only three members of staff and began dealing in paints, coatings and materials for laying insides and outside coverings of buildings, hospitals and airports. The idea was Rodolfo Squinzi's, the Company founder, who led Mapei towards its initial success: focusing on a niche in the market for adhesives for installing wall and floor coverings. Mapei's mission was quite clear in Rodolfo Squinzi's mind: "being able to read the trend in the sector of adhesives and chemical products for building and always keeping one

step ahead, so as to supply the market with innovative products serving its emerging needs". Initially the firm manufactured adhesives for linoleum and then for ceramics, stone materials, carpet, PVC and wood. When the Italian ceramics market exploded in the 1970s, Mapei was ready to take advantage of this great opportunity and managed to offer a wide range of special products designed to make laying tiles faster and safer by replacing conventional cementitious mortar.

Specialising in the products it manufactures was one of Mapei's strengths and the firm soon began marketing other types of adhesives, sealants, special mortars, waterproofers and admixtures for concrete. At the same time Rodolfo Squinzi, with the help of his son Giorgio, who graduated in Industrial Chemistry, confirmed another of the Company's strong points: the constant upgrading of products thanks to the work of a cutting-edge research centre. This decision enabled the Company to break onto foreign markets, gradually exporting an increasing amount of its own products. In 1978 Mapei's process of internationalization really began when it opened a factory in Canada.

Giorgio Squinzi pushed this process with strong determination, even after his father passed away in 1984. This made the firm expand across five continents with a number of manufacturing

**1937-2007:  
THE STORY OF A SMALL  
BUSINESS WHICH OVER  
SEVENTY YEARS HAS  
DEVELOPED INTO A LEADING  
MULTINATIONAL IN THE  
FIELD OF ADHESIVES AND  
CHEMICAL PRODUCTS FOR  
BUILDING.**



# A GREAT FAMILY

## the Squinzi Family and Mapei: Rise to a Major Group.

plants opening in strategic places for the world building market. This expansion process was geared to a clear strategy: each factory had to reflect the industrial culture of the place where it was located, and so had to be Canadian in Canada, French in France, American in the United States, etc. Among the latest and most prestigious acquisitions it is worth mentioning Sopro, a well-known German leading building chemicals manufacturer, which in 2002 joined the Mapei Group.

The idea behind this winning internationalising strategy is that only people who deeply know the local culture can really understand the needs of the people operating in that given area. In addition, each plant needs its own research laboratory to ensure quality control of its products, as quality is closely tied to the type of raw materials used in any given location. The internationalization of the Company resulted in an almost vertical rise in turnover and made Mapei a world famous brand everywhere, from the Americas to the Far East, from Europe to Oceania and from the Middle East to Africa.

In 1994 the Company acquired the "white glue" Italian firm Vinavil. For Mapei, one of Vinavil's main customers, this was an important way of taking upstream control of strategic raw materials (vinyl acetate polymers), which allowed the firm to extend its range of products. This was the start of a new phase in development, which has also continued into the third millennium with further acquisitions on the front of manufacturing finished products and in the integration of strategic raw materials into the manufacturing process. So down the years the Mapei Group has incorporated a cement factory in Poland, Gorka Cement, a quality sand extraction industry in Italy, VA.GA, and, in 2006, the German manufacturer of bituminous materials Rasco Bitumentchnik.

The third generation of the Squinzi family also joined the Company.

Mapei now owns 47 subsidiaries and 46 plants (7 in Italy) in 23 different countries.



*The second and the third generation of the Squinzi family.*



*In the previous page: Mapei's first logo, enclosed in the 1937 official business licence application form.*

*Left: the currently used official Company logo.*

*Left: in 1937 Mapei began its manufacturing activity with 7 employees and the Company founder, Rodolfo Squinzi (the second one on the right).*



*Right: during the last 14 years Mapei Group's human resources have been growing fast: from 620 employees in 1992 to 4,800 in the end of 2006.*

## 70<sup>th</sup> THE WORLD OF MAPEI

Mapei's internationalization strategy is based on two main principles: maximum proximity to the needs of local markets and reduction of logistic costs to a minimum.

The Group now counts 47 subsidiaries, 7 main Research & Development Laboratories and 46 manufacturing plants, each with its own quality control laboratory.

Among these plants, some manufacture Mapei products, other provide the Group with strategic raw materials: Va.Ga. produces selected silica sands, Gorka Cement manufactures aluminous cements, Vinavil vinyl acetate and acrylic polymers and Rasco Bitumentehnick bituminous products. The constant internationalization process is directly connected to the sales growth recorded over the years: in 1994 aggregate sales were 160 million Euro; in 2001 they reached 725 million Euro (57% of which achieved abroad) and in 2006 they are 1.45 billion Euro. The number of employees is also rising fast: in 1990 there were 512, whereas in 2006 there are more than 4,800, with 12% of the total working in research.

AMERICA - THE AMERICAS  
 ARGENTINA - MAPEI ARGENTINA S.A. - Buenos Aires  
 CANADA - MAPEI Inc. - Lima - Quebec  
 PUERTO RICO - MAPEI CERISE S.p.A. - Dorado  
 USA - MAPEI Corp. - Deerfield Beach - Florida  
 VENEZUELA - MAPEI DE VENEZUELA C.A. - Caracas





# Laboratories • 46 Plants in 23 Countries

**AFRICA - AFRIKA**  
 EGYPT - VIRAD EGYPT  
 PCN CHEMICALS S.A.S. - Suez

**EUROPA - EUROPE**  
 ITALIA - MAPET S.p.A. - Milano  
 ITALIA - AEDITAL S.p.A. - Ferrara (Modena)  
 ITALIA - ALBA S.r.l. - Costa di Mezzogiorno  
 ITALIA - VIRAD S.p.A. - Milano  
 ITALIA - CERCOL S.p.A. - Sesto San Giovanni (Milano)  
 BENELUX - MAPET BENELUX S.A./N.V. - Grube-Holding  
 CZECH REPUBLIC - MAPET spol. s r.o. - Diamond  
 DEUTSCHLAND - MAPET GmbH - Ebersbach  
 DEUTSCHLAND - RABCO DRYMEXTERSTEINER GmbH - Augsburg  
 DEUTSCHLAND - SOPRO BAUCHNERDE GmbH - Weiskirchen  
 ELADA - MAPET HELLAS SA - Athina  
 ESPAÑA - REDWAPET S.A. - Barcelona  
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 ÖSTERREICH - SOPRO BAUCHNERDE GmbH - Axams  
 POLSKA - MAPET POLSKA Sp. z o.o. - Żelazna  
 POLSKA - SOPRO CERENT Sp. z o.o. - Tostkowo  
 POLSKA - SOPRO POLSKA Sp. z o.o. - Wągrowo  
 PORTUGAL - LONCOMAPEI, Produtos Químicos para a Construção, SA - Ribamar (MA/PA)  
 ROMANIA - MAPET ROMANIA SRL - Bucuresti  
 RUSSIA - ZAO MAPET "TRADING AND MANUFACTURING" - Saint Peter - Moscow  
 SLOVENIJA - MAPET d.o.o. - Nova Mesto  
 SLOVENSKA REPUBLIKA - MAPET SR d.o.o. - Vrhnika  
 SLOVE - MAPET SLOVE S.L. - Sesto San Giovanni  
 SUOMI-FINLAND - RESCON MAPET OY - Rauma  
 SVERIGE - RESCON MAPET AB - Göteborg  
 UKRAINA - MAPET UKRAINA LLC - Kiev

**ASIA - OCEANIA - ASIA/OCEANIA**  
 AUSTRALIA - MAPET AUSTRALIA Pty Ltd. - Brisbane  
 CHINA - MAPET CONSTRUCTION MATERIALS (GUANGZHOU) CO., LTD. - Guangzhou  
 CHINA - MAPET CHINA LTD. - Hong Kong  
 MALAYSIA - MAPET (MALAYSIA) SDN. BHD. - Rawang  
 NEW ZEALAND - MAPET NEW ZEALAND - Auckland  
 SINGAPORE - MAPET FAY KAY PTE. LTD. - Singapore  
 VIETNAM - MAPET VIETNAM LTD. - Quang Nam



## A SYMBOLIC PLACE, THE MAPEI: THE RESEARCH &

### The Research & Development Centre in Via Cafiero, Milan

Right from the outset in 1937, Mapei was quick to realise that investing in Research and Development was an important requisite, not only to present the best possible products to the market, but also to be able to grow at an international level. So, if today Mapei is a leading company with a name which is known all around the world, it is certainly not by accident. It is the fruit of a vision which, right from the early origins, foresaw a level of commitment in this direction.

Research and Development are in Mapei's DNA and it is through these instruments that the company continues to grow at an international level.

And it is in this sector that Mapei has always dedicated the best resources, with 5% of total turnover designated for investment programmes in Research & Development. Mapei has seven main research centres and 46 quality control laboratories attached to the plants. The seven research centres are located as follows: two of them are in Italy (Milan and Villadossola), one in France (Toulouse), one in Germany (Wiesbaden), one in Canada (Laval), one in the USA (Deerfield Beach) and one in Norway (Sagstua).

Around 12% of the total workforce is involved in research activities.

The largest group of researchers works in the main Research Centre, in Via Cafiero, Milan. Its job is also that of coordinating the work of the other six laboratories and acts as the central analytical laboratory for the whole Group. And it was just here, in this Milan street, in the Bovisa district of the city, that in the 1930s Mapei was founded.

This was the first site of the Company's headquarters and first production facility, and also of the first research centre. It is a symbolic place for Mapei which, after recent modernisation and extension, is still a source of knowledge and a magnet for new energy. In fact, research is the sector which, even today, takes on the lion's share of Mapei's new employees, with the choice falling especially on young, fresh high school and university graduates

specialized in a wide range of scientific disciplines.

From the words of Aristotle, we can proudly state that the Research & Development Centre in Via Cafiero is the "unmovable motor" which, since 1937, has never ceased to feed the entire Company with positive energy, coordinating the scientific activities of the entire Mapei Group. It is also well worth remembering that all the laboratories use the most advanced instruments and chemical and physical-chemical techniques, such as all types of X-ray diffractometers, spectrophotometers and chromatographs, an ESEM-FEG electronic microscope, as well as numerous other analytical techniques which are able to assess every characteristic of the various products.

Coordinated and supervised by the Centre in Via Cafiero, the other Mapei laboratories work in close contact with each other, as well as with universities and scientific and industrial research institutes, and also provide valid support for the Technical Service Department to help in finding solutions for the most difficult problems of their clients.

Detail of the Milan R & D Laboratory in the 1960s.



# DRIVING FORCE BEHIND DEVELOPMENT LABORATORY

## The Most Stringent International Standards

The only way to expose the limits and characteristics of materials is to torture them! This is what goes on every day in Mapei's laboratories, using the most stringent international standards, such as ISO, CEN, ASTM and DIN, as well as more specific national standards.

To torture the materials, the most sophisticated equipment available is used, such as electronic dynamometers, presses and tools, and they are tested even in conditions of extreme temperature and humidity, using special climate chambers. The experience accumulated in this field has led to Mapei's technicians covering positions of considerable prestige, such as the presidency of two CEN (the European Committee for Standardization) commissions, and to represent Italy in more than 100 international commissions and working groups.

## Research for Man and the Environment

You will never go a long way if you have to apply and respect standards against your will, which you may consider abstract and irrelevant, because, from an egoistic point of view, they are considered non-productive. And you will never go a long way either if you try to do "just enough", to respect only the minimum requirements which products must possess to safeguard man and the environment. Nowadays, it is no longer possible to expand industrially if you don't have ethical principles which inspire all the Company's activities, or by boasting about quality standards which are not really achieved. Right from the very start, Mapei's philosophy when operating on the market has been to anticipate the requests of the client base and to be a step ahead of even the most innovative trends regarding ecology and safeguarding the health of application technicians. One of the main driving forces behind Mapei research is, in fact, the aim to develop products which are less and less harmful for those people who use the products, and which have a lower and lower impact on the environment.

And it is in this direction, apart from the development of formulas in which all the hazardous components are gradually eliminated, that particular attention has been paid to the production of adhesives with low emission of volatile organic compounds, yet which maintain excellent workability and high bonding strength.

To achieve this, environment chambers have been developed, firstly in the Laval research centre in Canada, followed by the new one in Milan.

This is very special equipment which has the technology to measure even the smallest quantities of volatile organic compounds (VOC) emissions. 70 years from its foundation, it doesn't look like Mapei has the minimum intention of slowing down its growth. A growth which owes a large part to Research & Development, and above all to his laboratories in Via Cafiero, Milan.

This is a symbolic place for the entire Group which today, just like yesterday, is a crossroads where old-time experiences and new knowledge both meet and compare.

*to like this...*



*The most advanced technology and the excellence of Human Resources are the basis for the strategy of all Mapei's 7 R & D laboratories.*



# 70<sup>th</sup> MODERN PRODUCTION SYSTEM

**From Via Cafiero to China,  
via ... Mediglia**

Mapei is now a global player constantly growing on the international market along a few definite guidelines: growth must be "healthy and balanced" and for Mapei the terms "investments and finance" mean developing and financing the Company's business growth properly to increase its market shares.

As Mapei's CEO Giorgio Squinzi recently stated: "We tackle our goals as companies composed of a combination of products/people/production capacity, which is why we are striving to maximise growth and efficiency and not just our products."

In addition to being an international global player, Mapei has two other distinctive traits: it is run like a family business and always approaches issues from a medium-/long-term viewpoint. The Company's business growth is firmly established and the figures speak for themselves: over the last 28 years Mapei has either bought or built from scratch 39 manufacturing plants.

Everything began seventy years ago in a tiny factory in what used to be the suburbs of Milan. It was from the first headquarters in Via Cafiero, in the Bovisa district of Milan, - now the home of the most important Research & Development Laboratory of the entire Group - that the first products emerged with everything being carried out by hand.

All the Mapei plants are now at the very cutting-edge in terms of automation and conforming to the most stringent safety and environmental standards.

### **The Robbiano di Mediglia Plant**

The boast of Mapei is now the Robbiano di Mediglia plant at the gateway to Milan, where everything is organised around fully automated production lines (one of the production lines for powdered products reaches the staggering rate of 3,600 25-kg bags-an-hour). Originally built in 1975 and subsequently extended several times, it is now the Mapei Group's most important manufacturing centre: it had an output of over 635,000 tons of product in 2006. Approximately 23% of the output from Robbiano di Mediglia is exported. This year a new factory is planned to be built and will include production facilities and warehouses on a total area of 11,000 m<sup>2</sup>.

Logistics is certainly one of the most important aspects of Mapei's industrial development strategy, so that its customers receive the goods they order very quickly.

Mapei is at the very cutting-edge in this respect: 80% of the orders it receives are shipped out within 48 hours, whether they are packaged or loose products. There are further 45 Mapei factories operating worldwide and the Group manufactures in 23 countries over 5 continents working along these lines, respecting the environment at all times. Mapei has always been to the very fore in its commitment to an eco-compatible chemicals industry that respects nature. The Company only uses systems which are safe for the people operating them and for the surrounding environment as well.

*Left:  
The inside of the original small factory in Via Cafiero in Milan and, below, the Mapei production lines in Robbiano di Mediglia in the 1970s.*

*Right:  
Aerial view of the modern Robbiano di Mediglia plant and details of the manufacturing cycles.*



*from like this...*

*to like this...*

Since 1992 the Group has adhered to the international Responsible Care project, the chemicals industry's global commitment to pursue environmental protection and the health and safety of its staff.

Mapei's Robbiano di Mediglia plant received ISO 14001 certification in April 1998, and in July 1999 its site was given registration number I-S-000019 based on CE 761/01 (EMAS) regulations for environmental management.

In October 2000 its management system received OHSAS 18001 certification for its worksite health and safety management system. It also obtained Integrated Environmental Authorisation (Order in Council 372/99) on 27 December, 2004.

A total of over 16,000 tons of finished products leave Mapei plants every day and the same amount of raw materials arrive to prepare over 1,000 products (adhesives, sealants, grouts, admixtures, latexes etc.) making the entire Mapei range.

All these products, distributed worldwide by Mapei's subsidiaries and used on the world's leading building sites, are currently manufactured at the Group's 46 factories.

Returning to the Mediglia plant, which now sets the standard for all the rest, it is worth mentioning that this is where the Engineering Team now works on recently extended premises. The team focuses on studying and designing projects to optimise the smooth-running of all the Group's factories.

Mapei has come a long way since its first site in Via Cafiero, and its most recent plants opened in China and Vietnam, a sign of growth that makes the Company one of the world's leading market players. And the growth is still going on.



*All the Mapei production facilities are built and extended following a precise layout, devised by the Engineering Team of the Robbiano di Mediglia plant, which sets the standard for the other 45.*



# 70<sup>+</sup> A COMPLETE PRODUCT RANGE

## A Product for Every Solution

Mapei's name stands for "Auxiliary materials for building and industry". The Company first entered the market manufacturing paints, renders and materials for insides and outside coverings of buildings, hospitals and airports. Then it made a big step forward by focusing on a niche in the market, namely on adhesives for installing wall and floor coverings. Today Mapei products contribute to quality of life, by changing and improving the aesthetics, comfort and safety of our living spaces. They are everywhere in our homes, under the floors, in the concrete of the pillars or on the surfaces of historic buildings. Mapei's production includes 9 ranges which are able to meet all the needs arising in the building field.

Mapei products are made available in all the worksites of the world by official distributors, except for the items of the product line devoted to Underground Constructions (due to these jobsites' specific problems and their need of special technical support) and those of the Grinding Aids line (which are dedicated to cement production plants).

## The Line Teams

A distinctive thing about Mapei is that it still feels like an old-fashioned craft business even though it is now a world-famous multinational. The experience and professional know-how of every single person working at Mapei is an important resource constantly enhancing the entire firm's range of expertise. Pooling all these different skills has, of course, almost naturally given rise to various business teams, each with its own distinctive identity. All this is in line with the Company's corporate policy, which calls for maximum flexibility and ability in sharing individual skills with other people. To make an even greater impact on the market and provide customers with the best possible service, Mapei now has not only the best products, but also staff organised and trained to tackle every imaginable on-site building requirement.

Mapei now flanks each line of products with a business team dedicated to developing and marketing them. Headed by a Product Manager, each Line Team interacts on a constant basis with promoters, technical-commercial managers, laboratory technicians and the Technical Service Department.

The aim is to carry out daily field checks to assess the effectiveness of existing products, devise new products and provide information and advice about the best possible solutions available through constant customer relations.

The opposite page gives a brief presentation of the Major Projects Division, designed to handle all the most tricky problems emerging in this field, and two of the aforementioned Teams (U.T.T. and D.A.M.), chosen for both the representative value of their structure and the distinctive traits of their activity.



# MAPEI'S TASK FORCES

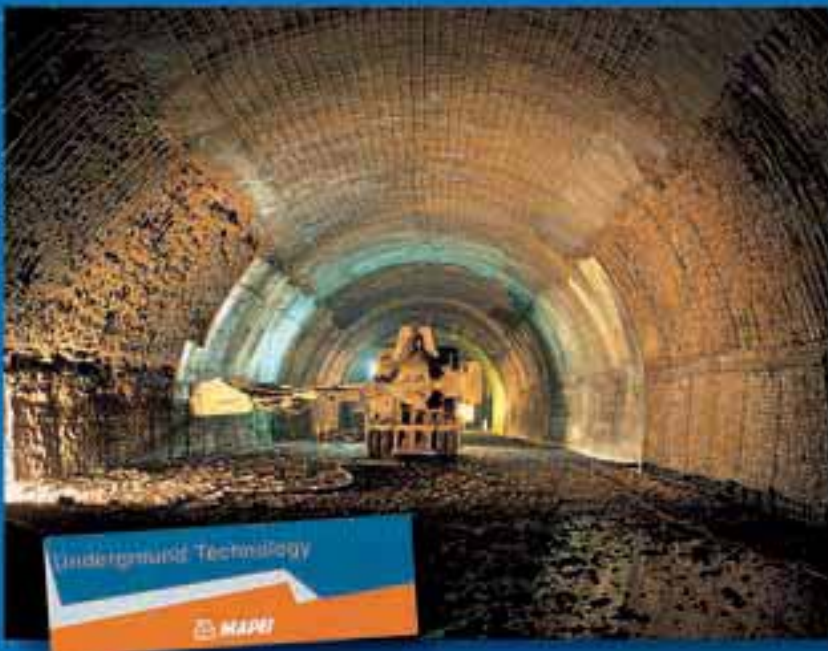
## Major Projects Division

This Mapei Division is a team of highly qualified technicians, a structure devoted to design products for helping engineering institutes and companies to set their business goals, to carefully prepare specifications and draw up the relative technical documents. One of the Division's distinctive features is that it provides advice about operating procedures, manufacturing cycles, the best available materials and estimated operating times. Diagnostics, top-level scientific expertise, real-time solutions to various building problems, a willingness and ability to follow and advise clients throughout all the operating phases: these are the distinctive traits of the Major Projects Division. The Division also stands out for the way it draws on all of Mapei's resources, right across the board. In addition to Research and Development, it also takes advantage of dedicated technical consultancy, on-site building assistance and careful analyses of all the various problems involved, consequently coming up with quick solutions using the best products available from the nine Mapei lines.



## Underground Technology Team (U.T.T)

The launch of the Underground Technology Team was Mapei's response to the construction market's growing demand for a customer service dedicated to underground spaces. Thanks to the investments made in the efficient R&D Labs and to the technical knowledge acquired in many different countries, Mapei was able to develop a product line of "Underground Technology Construction Products". Underground works have a unique nature due to the complexity linked to their design phase, but above all to the severity of the work environment. They require particular technologies, dedicated product systems and specialized, reliable technical personnel able to confront the most unexpected situations and assure a proper and immediate progress of the work. Mapei is now able to offer customers all of it.



## Grinding Aids Division (D.A.M.)

In 2001 Mapei introduced the new "Grinding Aids" line, dedicated to cement production plants. These aids are meant for solving agglomeration problems within tubular mills and improving cement quality. The Grinding Aids Division is indeed devoted to the development of specific products and strategies for cement. These aids are added to the mix while grinding, which requires a strong interaction between the technicians in charge of cement casting and the Laboratory chemists. That is why the D.A.M. staff encloses both chemists and experts of cement production working together within the same structure.



# 70<sup>+</sup> COMMUNICATION TRAINING AND CUSTOMER SERVICE

Although Mapei is now a successful international Company, it is still a family-run business based on the same old principles that its founder Rodolfo Squinzi passed on to his son Giorgio, the Company's current CEO. Mapei continues to act according to three guidelines: specialisation, internationalization and Research & Development. Following and implementing these principles has enabled Mapei to grow at an astounding rate over the years. And it takes real passion and enthusiasm to convey concepts of this scope and importance to the entire Company and its suppliers. In this sense communication plays a key role for two reasons: because it channels this passion into a strategy aimed at attaining outstanding results in terms of marketing and, at the same time, creatively nourishes team spirit ("team work"), which generates an endless loop of knowledge allowing everybody to share in the Company's corporate mission.

## World Champions

One of the most striking examples of how Mapei operates to publicise its products and values on a global scale is the recent sponsoring of the Italian National Football Team. A project which involved the entire "World of Mapei": from staff to business partners, retailers and customers. The bare figures given here speak for themselves and illustrate the outstanding results obtained. During the World Cup, the company logo appeared over 1,500 times in the Italian press and was mentioned 21,000 times on Italian television (equal to almost 145,000 seconds): in money terms this is equivalent to Mapei spending about 25 million euros in advertising.

It is estimated that there were over 30 billion people-contacts worldwide, over 76 million contacts in Italy through the press and over 343 through television. Mapei took over 1,000 guests to Germany to watch the matches and 7 of the Group's subsidiaries were directly involved. Mapei took this chance to organise a competition, giving out prizes and backing the project with investments in communication. And once again the results were startling: the turnover of the promoted products increased by about 40%.





to like this...



Above:  
The Mapei stand at the Cersaie and Saie exhibitions held in Bologna in 2006.



Left:  
pictures of the Mapelastic television campaign which, in just a few months in 2006, increased product sales by 42% for a total of 41 million Euros just in Italy.

Below:  
Mapei offers continuous training thanks to two extremely well-furnished auditoriums (in Milan and Latina) and 2 travelling schools (Motor-homes) for technicians.



### Marketing, Fairs and Documentation

Mapei follows a tightly focused marketing policy, combined with a continuous training activity and a high level technical service. Specific strategies for product lines, for different markets and for types of clients complement dedicated marketing operations and tools.

This means tightly focused advertising campaigns with print ads and television commercials, some sponsorships linked to great events and numerous other initiatives to have an ongoing, direct contact with the customer. Beside, Mapei is constantly moving: it participates in specialised tradeshows held every month of the year throughout the world and produces a broad range of documentation, based mainly on multimedia supports (DVD, CD, video), as well as range and product brochures for customers worldwide.

### Continuous Training

Training plays a major role for Mapei, which continuously organizes courses to help retailers and installers refresh and improve the techniques they use to install wall and floor coverings. The courses are held by the Technical Service Department staff who make the most of practical demonstrations, informative materials and audiovisual aids. Mapei also organizes conferences for designers and site managers with the collaboration of professional associations. Presentations at these events are given by experts of the field and focus on foremost issues of the building industry.

### Technical Service

Customer service, both before and after selling a product, is one of the keys to Mapei's success. Never abandoning the client and suggesting him the best way to use Mapei products in all the jobsite's situations: this has always been an important guideline of the Company's philosophy. The service calls for telephone assistance in the simplest cases as well as direct visits to the site in the most complex ones. Support is assured in every corner of the world by highly specialised technical personnel, skilled in every sector. They can guide the customer and the installer to the proper use of the products and solve every kind of technical problem.



**Mapei's 70<sup>th</sup> anniversary was celebrated at the Teatro alla Scala and with an extensive special tour of the Company**

# Art and WORK

Mapei was first established in February 1937 in the Bovisio district of Milan. This year, to mark the 70<sup>th</sup> anniversary of its founding, Mapei decided to return to Milan and the place where it all began. The most important of Mapei's 7 Research & Development Centres all around the world is now in fact located on the Company's original site in Via Cafiero, and the Group's Headquarters are just a couple of yards away in Viale Jenner. The tours around these two business locations, as well as around the Group's most important Italian manufacturing plant in Robbiano di Mediglia (on the outskirts of Milan), were specially laid on for lots of Italian and foreign guests and the families of Mapei staff. The tours let visi-

tors see the real heart and soul of Mapei and show them that these sites, so full of history and memories, are at the technological cutting-edge and ready to take on new challenges in the future. Going back into the past really only makes sense if it involves more than just commemorating a date or period in time. It must be projected into the future, drawing on and even enhancing that driving force from the very early days which underpins the development of anything big being newly created. An eye cast back into the past and its heart and soul set on achieving new goals: this is Mapei's business and "sporting" spirit and this is the direction in which the celebrations were organised to commemorate the Company's seventieth anniversary.

## Great Celebrations at the Teatro alla Scala

This really was a big celebration which will, however, be continued at various times throughout the whole of this year. Mapei owes much of its growth to Milan, which, in turn, has also developed and modernised thanks to Mapei's work down the years, using its products to renovate and repair some of the city's most emblematic places: such as Maggiore Hospital, the Basilica of Sant'Ambrogio, the Pirelli skyscraper, the Navigli waterways' banks and the Teatro alla Scala Opera House. Mapei has just chosen the "shrine" of opera music to host its 70<sup>th</sup> anniversary's celebrations with two prestigious events attended by 2,800 people,

including staff, business partners and customers from all over the world: two major theatrical performances were the culmination of the festivities, with everybody who has contributed down the years to Mapei's success at home and abroad being invited to join the Squinzi family. On Saturday 10<sup>th</sup> February, 600 Mapei staff attended the *Mid-summer's Night Dream* ballet and, five days later – Thursday 15<sup>th</sup> February – the whole of the Opera House was booked for 2,200 guests





## FROM THE OPERA HOUSE TO THE PALACE: THE CELEBRATIONS CONTINUE

who attended (and applauded) a special performance of Giacomo Puccini's *Madama Butterfly*.

Two memorable evenings in one of the most internationally renowned locations right in the heart of Milan, designed to further strengthen that very special bond between Mapei and this famous theatre, where the Company drew on all its expertise, technology and research to carry out restoration and repair works which were officially completed on 7<sup>th</sup> December 2004.

This was an important way of highlighting Mapei's know-how and 70 years of technological leadership, as has also been emphasised in the new Company's institutional brochure, published in conjunction with these celebrations in February.

This publication's front cover features the new commemorative logo which was specially devised to highlight the anniversary and will be on all the advertising material and product packaging through-out this year: a big number "70" on it and "1937-2007" written beneath it.

After a special performance of the *Madame Butterfly* at the Teatro alla Scala on 15<sup>th</sup> January, Mapei invited its guests to attend further celebrations in three separate and striking settings: two inside the Opera house itself (in the Toscanini and Gallerie foyers) and the third in the Sala delle Cariatidi in Palazzo Reale. The latter is the only room inside this prestigious building in Piazza Duomo which still looks the same as it originally did in the late 18<sup>th</sup> century, since it is the only part of the building to survive 2<sup>nd</sup> World War air raids (although it was half demolished). Due to its peculiar appearance which, thanks to partly damaged eye-catching statues, really strikes visitors, Mapei chose this space to host its customers, work partners and other business guests at such an important event.

This location was also chosen due to the existing bonds between Mapei and Palazzo Reale, where the Company's products have already been used to carry out renovation and adaptation work on several inner premises (see the article on pag. 20). As in the case with the Teatro alla Scala, Mapei's work on this prestigious home of culture further underlines Giorgio Squinzi's (CEO of Mapei Group) idea that art and work are so closely tied that the former cannot exist without the latter.



## HEADQUARTERS

V.le Jenner, 4 - Milan



## TOUR OF MAPEI

After the Teatro alla Scala event, Mapei's hospitality also extended to the following days and aimed at having guests better understand and personally experience the Company's world.

On Friday 16<sup>th</sup> February, there were extensive guided tours of the three Company's sites in Milan for all the numerous guests (98% from abroad). The tour was also repeated on Saturday 17<sup>th</sup> February with, in this case, the visitors being over 600 members of the Mapei staff accompanied by their families. There were three main stops: the Group's Headquarters in Viale Jenner, the central Research & Development Laboratory in the Company's original site in Via Cafiero (where Mapei was first established 70 years ago) and, lastly, the ultra-modern factory in Robbiano di Mediglia to the east of Milan. The tour around the Group's Headquarters in Viale Jenner – a 7-storey building covering a total area of 6,400 m<sup>2</sup>, which holds the administration, business and marketing offices – included visits to the show-room, the test lab for



Technical Assistance and also the auditorium, where all the numerous training courses are held.

The visit to the Research and Development Laboratories in Via Cafiero, 22 – the centre co-ordinating the work of the Group's 7 laboratories – also provided a chance to see the result of the latest extension work recently completed, which has increased this area to a total of 7,800 m<sup>2</sup>, 4,800 of which built on.

This is the very heart of Mapei, and it is here where 170 research workers go about their activities, designing the Company's most innovative products. It was interesting to note how amazed the visitors were when they saw all the latest cutting-edge technology the Centre is equipped with, making it one of the world's leading laboratories specialising in chemicals for the building industry.

The "Mapei Tour" ended with a visit to the Robbiano di Mediglia plant, built in 1975 and later extended several times. This is now the Mapei Group's most important manufacturing facility. This provided the guests with the chance to see the production lines close up, where over 635,000 tons of building products were manufactured in 2006, with approximately 23% of the output being exported abroad).

All this is accomplished with systems which are safe for the

**We have come a long way in 70 years!**

*Giorgio Squinzi received lots of good luck and congratulations messages for the 70<sup>th</sup> anniversary of the founding of Mapei. The Puttini family (owners of Sacces, Mapei's agent for the Campania region) even*



*sent a special gift: a carefully repaired old-fashioned FIAT 1100 E van in perfect working order. This is the same model as the first vehicle used by Rodolfo Squinzi, the Company's founder, at the beginning of his career and which also appears in the first old photo of Mapei.*

*Sent straight to the original home of the Company in Via Cafiero in Milan, it really re-evoked the pioneering spirit that ran through Mapei back in the late-1930s.*

*A wonderful present and really touching gift, underlining a lengthy business partnership and sincere friendship.*

*Now on display in the headquarters' showroom in Viale Jenner, this historical car will remind everybody of just how far Mapei has come during its first 70 years in business.*





## R&D LABORATORIES

Via Cafiero, 22 - Milan



workers and the surrounding environment, which was evident to all the visitors. Indeed, Mapei is at the forefront in developing an eco-friendly chemicals industry and we must not forget that the Mediglia plant was awarded ISO 14001 Certification of its Environment Management System in 1998, the EMAS registration in 1999, the Certificate according OHSAS 18001 standard in 2000 and the Integrated Environmental Authorization in 2004.

Milan, the Teatro alla Scala, the Bovisa district and Robbiano di Mediglia: a journey through art and work, cutting-edge technological research and environmental protection, creativity and hard work with due respect for people and the best of their endeavours. It would not be over-rhetorical to quote what Francesca, a young graduate who has just joined Mapei, had to say at the end of the tour: "I was proud to accompany my parents to see in person just what a great Company I work for." This is the impression the latest generation got. A simple thought which, on such an historically significant anniversary for the Company, also sounds like encouragement, especially meant for the young generation, to keep on doing better and never give up.

RM



## PLANT - ROBBIANO DI MEDIGLIA

Strada Provinciale 159 - Robbiano di Mediglia - Milan





## New terracotta tile and parquet floors were installed in one of the most emblematic buildings in Milan

Located in the south side of Piazza Duomo, the Palazzo Reale was the centre of Milan's political power since the late Middle Age, the seat of the Old Town Hall and the residence of Torriani, Visconti and Sforza noble families. It also hosted members of royal houses such as Maria Theresa of Austria, Napoleon and the Savoia family. The building was extended and transformed several times during its 9-hundred-year history, but its today's outside appearance is mostly due to Giuseppe Piermarini's architectural work at the end of the 18<sup>th</sup> century. As mentioned previously, the Palace was chosen by Mapei to welcome many guests on the night of 15<sup>th</sup> February, after the show at the Teatro alla Scala. This is not the first time Mapei has been involved with Palazzo Reale. The Company can already boast having contributed to preserving and

repairing this important building's artistic and architectural heritage. Once again, art and labour are tied together inseparably.

### Installation of the Highest Standard

Back in 2005 Mapei took part in the building work to adapt some of the premises on the second floor of the building to a new purpose, as various Company products were used to install a parquet floor in the rooms designed to hold a museum.

A light-weight substrate was first cast over the old steel sheeting slab. Polythene sheets, carefully overlapped and bonded with one another, were then spread over the surfaces creating a floating screed made of TOPCEM PRONTO\* ready-to-use, pre-blended, normal-setting mortar incorporating an electro-welded mesh. Before laying the wooden floor, PRIMER MF\* two-

component epoxy primer was applied to the substrate to waterproof it.

The parquet flooring was then bonded down using light-coloured ULTRABOND P902 2K\* two-component epoxy-polyurethane adhesive.

More building work was carried out between the end of 2006 and the start of 2007, divided into several different jobs. The work involved the building's various interiors and also included the installation of new wood and brick floors. Before laying new floors in the various premises, structural strengthening had to first be carried out, placing an electro-welded mesh over the old steel sheeting substrate. The concrete was made of STABILCEM\* very fluid expanding cementitious binder mixed with sand.

The installation of the new wooden flooring (hard oak boards) in the other interiors, such as the conference halls



1



2



3



4

Photos 1, 2 and 3.  
The Tuscan terracotta tile floors were bonded with Keraflex Maxi.



5

Photos 4, 5 and 6.  
The wooden floors were installed using Ultrabond P902 2K.



6


Photo 7.  
Detail of the floors after the works were completed.



7

and some second-floor rooms with frescoed walls over in the west wing, was preceded by work to repair and restore the old sand and cement substrates. Tests carried out using a carbide hygrometer revealed plenty of residual damp in the screed, so PRIMER MF\* two-component epoxy primer was used, because it is ideal for waterproofing and consolidating substrates. The first layer of the product was diluted with PRIMER KL\* diluent for PRIMER MF\*, in order to reduce its viscosity and hence its ability to penetrate into the porous screed. After preparing the substrates in this way, installation work was ready to be carried out 48 hours later. The parquet flooring was bonded using ULTRABOND P902 2K\* two-component epoxy-polyurethane adhesive.

A floor made of Tuscan terracotta tiles was installed in the offices of the Fine Arts Commission on the first floor, after first carrying out strengthening work using STABILCEM\*. Before carrying out this work, ULTRAPLAN MAXI\* smoothing compound was first applied to level out and smooth over any unevenness in the substrate. The terracotta tiles, measuring 20x40 cm, were bonded in place using KERAFLEX MAXI\* high performance deformable (class S1 according to the European standard EN 12002) cementitious adhesive with no vertical slip and extended open time. Thanks to the high thickness allowed by this product, it was possible to compensate between the difference in thickness of the various brick tiles. The joints were grouted using a mixture of lime (3.25), white cement and terracotta tile dust obtained by crushing some of the tiles into tiny fragments. This procedure made it possible to create a grout featuring the same colour as the tiles, ensuring that the final surface sported uniformity of colour.

The porcelain tiles in the bathrooms, measuring 30x30 cm, were also laid using KERAFLEX MAXI\* adhesive. 

**\*Mapei Products:** the products referred to in this article belong to the "Products for Ceramic Tiles and Stone Materials", "Products for the Installation of Resilient, Textile and Wood Floor and Wall Coverings" and "Building Speciality Line" ranges. The technical data sheets are available on the "Mapei Global Infonet" CD/DVD or at the web site: [www.mapei.com](http://www.mapei.com).

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

**Keraflex Maxi (C2TE):** high performance, deformable, cementitious adhesive, with no vertical slip and extended open time and deformable for ceramic tiles and stone material; particularly suitable for the installation of large sized porcelain tiles and stone material (thickness of adhesive from 3 to 15 mm).

**Mapecem:** special fast setting hydraulic binder for the preparation of fast-drying screeds (24 hours) with controlled shrinkage.

**Primer KL:** adhesion promoter on non porous-surfaces for epoxy surfaces and diluent for Primer MF.

**Primer MF:** solvent-free two-component epoxy primer to be used as an adhesion promoter for products of the Mapefloor range and to consolidate and waterproof cementitious substrates.

**Stabilcem:** very fluid expanding cementitious binder for the preparation of injection slurries, mortars and concrete.

**Topcem Pronto:** ready-to-use, pre-packed, normal-setting mortar with controlled shrinkage for fast-drying screeds (4 days).

**Ultrabond P902 2K:** two-component epoxy-polyurethane adhesive for wooden flooring.

**Ultraplan Maxi:** ultra-fast hardening self-levelling smoothing compound for thicknesses from 3 to 30 mm.

## TECHNICAL DATA

### Palazzo Reale, Milan (Italy)

*1st work stage:*

**Work:** laying parquet floorings

**Year:** 2005

**Customer:** Milan City Council, Milan

**Contractor:** Cotea, Rome

**Parquet Installation Company:** Woodline (Concorezzo, Italy)

**Mapei Distributor:** Bema (Milan)

**Mapei Co-ordinator:** Massimiliano Nicastro

*2nd work stage:*

**Work:** structural strengthening, laying wooden and terracotta tile floorings

**Years:** 2006-2007

**Customer:** Milan City Council

**Contractor:** Cotea

**Parquet Installation Company:** Woodline

**Mapei Distributor:** Bema

**Mapei Co-ordinators:** Angelo Giangiulio, Massimiliano Nicastro, Andrea Peli

TRADE FAIRS

Sistemi per Impermeabilizzare



Sistemi per Riparare

Sistemi per Rinforzare



Sistemi per



# SAIE 2006

## BUILDING THE NEW,

### MAPEI AND MAJOR WORKS







# RESTORING THE OLD

**S**AIE 2006, the 24<sup>th</sup> edition of the International Building Exhibition held in Bologna, drew to a close recording over 176,000 professional visitors, a 7% increase compared to the 2005 show.

Once again this important exhibition, which took place from 25<sup>th</sup>-29<sup>th</sup> October at the Bologna trade fair, proved to be one of the leading European events devoted to architecture and building, a real must for companies and anybody else in the construction industry interested in finding out more about the latest ideas and innovations offered by the exhibitors attending the event.

This year featured a considerable number of foreign visitors, notably from those Eastern European nations which joined the European Union at the beginning of the year and from the former Soviet Union and former Yugoslavia, currently amongst the most interesting markets for Italian and European companies.

A trend which also emerged in the foreign delegations present, with plenty of visitors from these countries and new oil-producing powers from Central Asia, like for instance Kazakhstan.

## Topics in the Spotlight

Saie is now one of the most important European events for discovering the most innovative production and technological solutions available on the market; a unique opportunity for people working in the architecture and construction business and manufacturers to compare what is on offer, which highlighted – once again this year – an undeniable thrust towards innovation. An ideal stage which, as we will see, Mapei has taken full advantage of to present plenty of new products and innovative solutions for Major Works in

particular.

Energy efficiency and safety are very important for Mapei and currently very much to the fore in architectural design, due both to all the attention currently being paid to environmental issues and the quality of life and also because of their importance in economic terms.

Saie 2006 staged two special events devoted to energy efficiency and safety, providing business people in attendance with a real overview of the most interesting international products and technology aimed at making proper use of energy resources and attaining high safety standards.

On the subject of energy efficiency in particular, debate ranged from demiotics serving energy-saving purposes to aspects linked with certification and the use of solar energy and renewable sources for solving energy emergencies; as regards safety, alongside reflections on the current state of affairs 10 years after law 494/96 came into force in Italy, debate focused on major tunnelling operations and work on existing structures and high-level constructions.

As usual, Saie also cast an eye towards the market's future prospects and developments, providing the chance to focus attention on the entire building process, from urban planning to the use of the most convenient components and methods.

## Mapei's Solutions for Major Works

A giant sphere made from MAPELASTIC revolving to the motion of water: this was the stylistic design of the terrestrial globe inset with tiny Swarovski jewels at those points across the globe where Mapei has subsidiaries. This was the spectacular sight greeting visitors to the big stand (outside area 45/A64) Mapei installed at Saie.

The presentation of Mapei products at Saie was accompanied by plenty of up-to-date documentation. New technical charts and lots of brochures devoted to the individual products or different lines were prepared for the event, while much of the existing documentation was updated and extended. The new catalogues and brochures shown in this article can be obtained by applying to the Mapei Marketing Department (e-mail: [marketing@mapei.it](mailto:marketing@mapei.it) – fax: +39 02-37673.214). We would also like to remind you that the products' technical data sheets are directly available from the website: [www.mapei.com](http://www.mapei.com).



The official image being conveyed – deliberately similar to that at the Cersaie event – was of an international company which owes its success to technologically cutting-edge products. But there was also a specific reference and tribute to the Italian National Football Team's victory – sponsored by Mapei in 2006 – at the last World Cup Championship. A "National Team-Sky Blue" and "Blue-Mapei" stand in a blaze of Italian national flag colours evoked the Italian character of a firm which is growing worldwide. Beside, the sphere covered with MAPELASTIC highlighted the cementitious waterproofer which is also a world champion for its rapidly growing popularity and extraordinary technical performance.

Once again this year Mapei presented its best solutions for various building purposes at Saie, including some interesting novelties for major building work.

The guiding thread behind Mapei's presence was its solutions for Major Works ranging from products for the installation of floor and wall coverings to coatings, without forgetting items for masonry and concrete repairs, road maintenance, admixtures for concrete

and products for underground constructions. A strategic decision for Mapei, which, again on this occasion, wanted to emphasise the importance of this sector for the Company and, at the same time, to follow a trend which sees major infrastructures as the fastest growing industry for both the Italian nation and the entire building sector.

The central part of the stand was devoted to Mapei's old favourite: MAPELASTIC, the waterproofing mortar which, for over 15 years now, has been the biggest seller in its own field of application, widely used for repairing and protecting major works, like, for instance, bridges and dams. This is the leading product in a range of waterproofer, which also includes other successful products such as MAPELASTIC SMART and MAPEGUM WPS. It is worth remembering that these products can be reinforced, for special purposes, using a FIBREGLASS MESH.

Big panels for each product and constant photographic references to the most important works completed using them guided visitors



Sistemi per Proteggere



Sistemi per Deumidificare



around and provided them with plenty of information about the Mapei products on display in the large exposition space.

People flocking to the stand were introduced to numerous ranges of Mapei products and new ideas.

An extensive selection of products covering, as we will see, the entire building industry.

### New Products for the Building Industry of the Future

Technologically advanced systems to ensure both better durability and superior aesthetic effects: these were the main features of the Mapei **products for floor installation** on display at Saie. The Mapei Research & Development

laboratories have developed two important ranges of products which were the focus of attention at the exhibition: MAPEFLOOR SYSTEM, a full range of epoxy and polyurethane products, and ULTRATOP SYSTEM for creating self-levelling cementitious floors. There are lots of novelties in the new "Cementitious and Resin Floor Coverings" catalogue, such as MAPEFLOOR CPU MF, a new system for resin floors from the MAPEFLOOR SYSTEM range. This is a covering made of polyurethane resins and cement, featuring high chemical resistances for thicknesses of 3-4 mm, ideal for floors in the chemical, pharmaceutical and food industries (such as sugar processing and bottling mineral waters), textiles companies and firms in the water purifying sector.

The range was completed by presenting MAPEFLEX PU45, the new one-component, thixotropic, fast-hardening polyurethane sealant and adhesive with a high modulus of elasticity. MAPEGROUT EASY-FLOW GF, the new one-component thixotropic mortar with a high content of inorganic fibres, attracted plenty of interest in the sector for **repairing major concrete works**. This product can repair large concrete structures with great ease and speed and at low costs and is especially recommended for viaducts, canals, tunnels, dams and spillways. It has a very distinctive trait: thanks to its fibres contents, when using MAPEGROUT EASY-FLOW GF



Sistemi pe



mortar, no electrically welded mesh is needed any longer. Another eye-catching product in this sector was the new STABILEM SCC cementitious binder for preparing shrinkage-compensated concrete mixes: recommended for viaduct beams and frames, bridge superstructures and concrete foundations of hydraulic works. It guarantees total compaction, high resistance when in place, and greater durability.

Finally, there was also PLANITOP 430, a fibre-reinforced shrinkage-compensated mortar consisting of fine graded aggregates with an average mechanical resistance, for repairing concrete. It is ideal, amongst other things, for cortical repairs of slabs of balconies, damaged corners, columns and beams. A new catalogue and interesting new products were also presented for the Mapei range of **admixtures for concrete**. These included MAPEPLAST FV, a new liquid admixture, ideal for upgrading the concrete's cohesion and "unsurfaced exposition", which is also capable of eliminating air bubbles in the mixes and the unevenness of cast surfaces.





There was also an updated brochure for the DYNAMON SYSTEM, the range of admixtures drawing on Mapei nano-technology for concrete.

In conclusion, it is also worth mentioning the latest product developed by Mapei's R&D Laboratories in Milan: MAPEPLAST UW, an anti-washout admixture used for manufacturing superfluid, cohesive concretes that are easily pumpable for underwater casting.

There were also lots of **products for repairing masonry buildings, for strengthening and carrying out anti-seismic treatments.**

A major work completed in Spain using tried-and-tested Mapei systems was chosen at Saie 2006 to symbolise the Company's potential in the repair and restoration sectors. Plenty of photographs illustrated the renovation of two brid-

ges (one made of concrete and the other of stone) for crossing Rio Duero (See the article on pag. 38 of this issue of Realtà Mapei International). Plenty of Mapei products were used to achieve the truly astounding completion of this important work, notably including two products from the MAPE-ANTIQUE range: MAPE-ANTIQUE LC, a cement-free binder for the restoration of damp stone, brick or tuff masonry, and MAPE-ANTIQUE I, a cement-free fillerized hydraulic binder for consolidating, by injection, stone, brick and tuff structures.

There was also a new product on show: PLANITOP HDM MAXI, the new two-component fibre-reinforced mortar with high flexibility with a poz-





Sistemi di rinforzare



zolanitic-reactive binder base for adjusting and reinforcing stone, brick and tuff structures. PLANITOP HDM MAXI, PLANITOP HDM and MAPEGRID G 220 (special alkali-resistant fibreglass mesh for reinforcing masonries) compose the Mapei system for structural reinforcement. The area devoted to **road maintenance** featured two versions of the STABILSOIL 200 SYSTEM: single-component (STABILSOIL 200 POWDER) and two-component (STABILSOIL 200 POWDER combined with the new STABILSOIL 200 LATEX). This is an innovative system for the cold recycling of spent asphalt. Another product on display was MAPEPLAST

LA, a foaming liquid pumping aid

for concretes with a low dosage of cement rate (100-200 kg/m<sup>3</sup>). It can be used to manufacture cellular concretes, which are particularly useful for collapse-proof excavations fills.

Another product to the fore was MAPEGROUT SV, a quick setting and hardening controlled-shrinkage easy-pour mortar for repairing concrete and fixing wells, street manhole covers and urban furbishing, and the new MAPEGROUT SV-T, a fast setting and hardening controlled-shrinkage thixotropic mortar for repairing concrete elements and floors (even if they are sloping) and ramps for road traffic and for fixing concrete drainage channels.

In the area devoted to underground works, which is served by Mapei UTT (**Underground**

## Manutenzione stradale

### Stabilsoil 200 System

Stabilsoil 200 Powder • Stabilsoil 200 Latex

Sistema innovativo per il riciclaggio a freddo del conglomerato bituminoso esistente per la stabilizzazione di terreni



SENZA RASCHIARE IL VEICOLO

### Mapegrouit SY

Molto stabile e durevole nel trattamento di tutti i tipi di terreni



### Mapeplast



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Risanamento degli edifici in muratura  
DA MAPEI DUE LINEE DI PRODOTTI  
PER ESIGENZE DIVERSE

Linea  
**Mape-Anti**

Technology Team), there was an entire range of products from the MAPEQUICK line, a full selection of alkali-free set accelerating admixtures for concrete. The international calibre of this dedicated Mapei Team can be seen by flicking through the pages of its new presentation brochure or by checking out its special website [www.utt-mapei.it](http://www.utt-mapei.it).

Finally, the range of products for **indoor and outdoor wall coatings** featured lots of products and system products increasingly popular on the market and specially developed to be perfectly compatible with systems for repairing surfaces and fully compliant with the technological specifications required for each separate job. COLORITE BETON (pure acrylic semi-trans-

parent resin based paint in water dispersion for protecting concrete, reinforced concrete and cement surfaces) comes with lots of other specific systems: ELASTOCOLOR SYSTEM, SILANCOLOR SYSTEM, SILANCOLOR PLUS SYSTEM, SILEXCOLOR SYSTEM, QUARZOLITE SYSTEM and COLORITE SYSTEM. They are all available in a wide range of colours obtained using the ColorMap automatic colour system.

The top part of the stand hosted a special corner devoted to a photographic account of a sponsorship deal and special initiative, which took place in Perugia (Italy) as part of the 2006 edition of Eurochocolate international chocolate fair.

On this occasion, Mapei and the pre-cast concrete firm Manini Prefabbricati helped build a large wall shaped like a bar of chocolate made of pre-cast concrete blocks.

This was another example of how Mapei is varying its communication programme and also, in this instance, publicising not only its own trademark but also the multiple solutions it offers the wide world of building.

The next edition of Saie will again be held in Bologna from 24<sup>th</sup>-28<sup>th</sup> October 2007.



**utt**  
UNDERGROUND TECHNOLOGY TEAM  
MAPEI



TUNNEL DE CEUTA



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Range

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# Different kinds of bridges, DIFFERENT KINDS OF REPAIRS



Different technology and different products employed to restore two bridges over the River Duero: one in concrete and one in stone.

In March, 2005 the Junta de Castilla y León Regional Council decided that work needed to be carried out on the two bridges, one in concrete and the other in stone, which are used to cross the River Duero along the stretch between Peñafiel and Pesquera de Duero, in the Spanish province of Valladolid.

The first phase of the operation involved repairing the concrete bridge. This structure was in more urgent need of repair, so that cars and lorries could cross the River Duero. Repairs to the ancient stone bridge, which is only a few metres from the concrete bridge, were planned for the second phase,

and it had already been closed to traffic. Each structure had problems of a different nature, which were solved by applying different, specific solutions, yet with both projects bearing the Mapei "hallmark".

#### Operations on the Stone Bridge

The stone bridge over the River Duero, which dates back to the VI century AD, is formed by seven arches and is reserved for pedestrians and light traffic only. Of the seven arches, the two central ones were completely ruined. A field analysis carried out by technicians from the Ibermapei Technical Service Department highlighted a series of

problems, which made the bridge dangerous for pedestrians. The main cause was that the structure had been left to its own devices over the years, and its conditions had gradually become worse and worse as time went by. Waste material had also collected over the years at the foot of the pillars which support the bridge, and weeds had grown in the joints causing the old mortar to crumble.

Further damage was also found by the technicians, with cracks in the columns which support the arches, no sealant between the stones in various portions of the masonry work and cracks in the vault of some of the arches, which had

provoked detachment of a number of blocks of stone.

The repair work on the stone bridge was divided into two separate steps.

The first step was to thoroughly clean the surface of the bridge using a high-pressure water washer.

The missing and damaged stones were then put back into place, and the joints between each row of stones were pointed using MAPE-ANTIQUE LC\* cement-free hydraulic binder mixed with fine local sand. MAPE-ANTIQUE LC\* is based on synthetic fibres and fine additives and features pozzolanic-activity. It is resistant to sulphates and is particularly suitable for renovation work on masonry subject to rising damp or else damaged by soluble



*On this page:  
view of the serious damage of the ancient stone bridge which, before the repair work, had been closed to traffic.*

*The operation required the rebuilding of the missing and damaged parts, repair of the cracks, consolidation of the arches and, lastly, pointing between the rows of stone blocks.*

salts. The cracks in the vaults of the arches were repaired using MAPE-GROUT T40\* thixotropic mortar and pointing was again carried out using MAPE-ANTIQUE LC\* binder.

MAPE-ANTIQUE I\* hydraulic binder was then injected to consolidate all of the arches, except the two central ones. MAPE-ANTIQUE I\* is used to consolidate by injection and fill cavities, cracks and internal porosity in ancient stone and brick structures. The day before the binder was injected, the internal structure to be consolidated had to be thoroughly soaked with water, using the same holes which had been drilled ready for injecting the

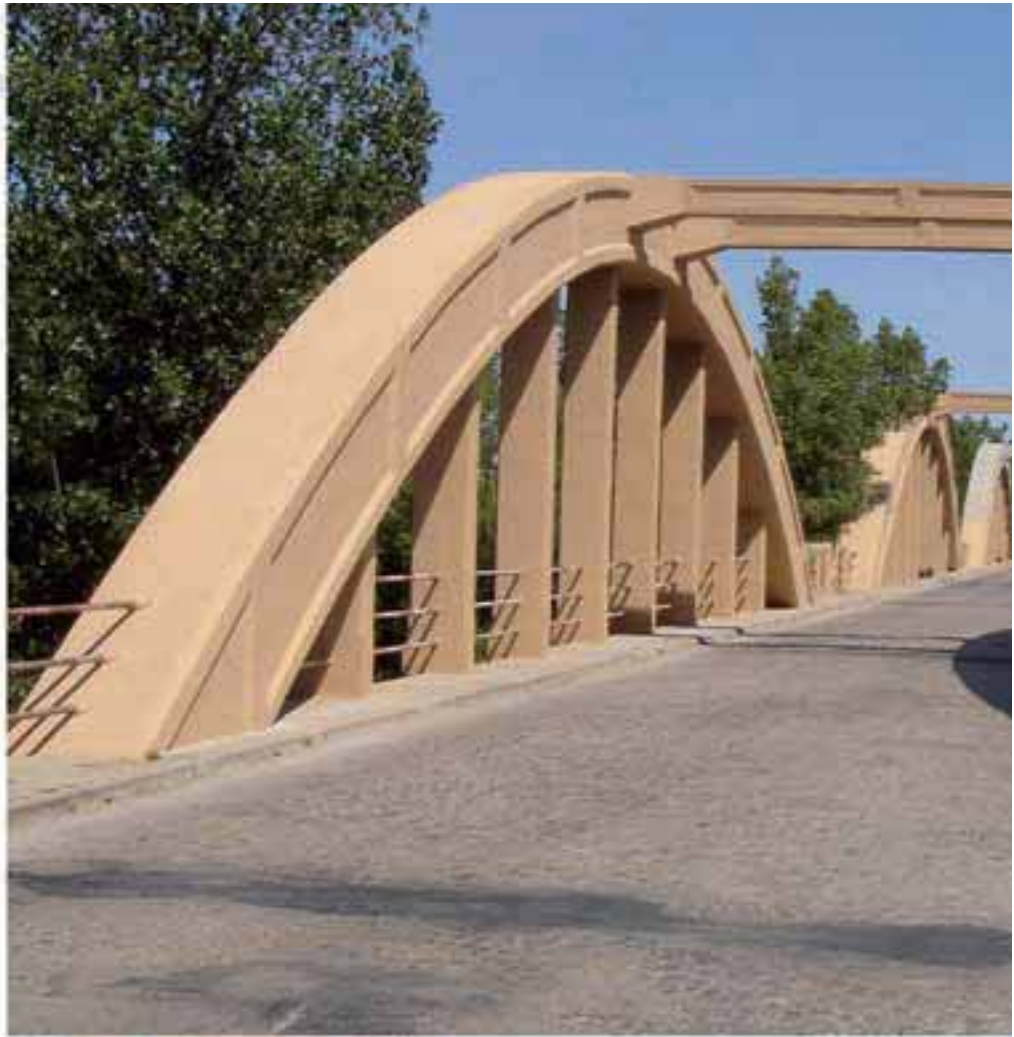


MAPE-ANTIQUÉ I\*, which is a pre-blended binder resistant to sulphate, used to form slurry for injecting purposes. The product has a base of hydraulic-reaction inorganic materials, special additives and ultra-fine charges.

During the second phase, the bases of the two ruined, central pillars had to be reinforced where they come into contact with the water that flows in the River Duero, by forming a reinforced cement plinth followed by rebuilding the stone pillars and vaults.

### Operations on the Concrete Bridge

The concrete bridge is used by vehicles to cross the River Duero. It features large arches reinforced by a series of lateral pillars, while the roadway is supported by beams and there are iron parapets, for safety purpose, running along the sides. A careful technical analysis brought to light a series of problems which "plagued" the bridge. In some areas, the reinforcement rods were clearly visible and oxidised, due to detachment of portions of the con-



crete. The condition of the bridge was rather serious, especially in the lower pillars of the arches and in the beams beneath the roadway. Also, because gravel with an inadequate grain size had been used during the original construction work, there was poor cohesion of the concrete to the substrate. During the survey, the technicians also found that the surface of the roadway had insufficient drainage.

The increase in stresses due to an increase in road traffic, which had not been calculated during the design phase of the structure, and a lack of sufficient maintenance over the years had done the rest.

The bridge no longer met the required safety conditions and, therefore, need-





On the facing page, at the bottom: details of damage of the concrete bridge. Notice the exposed, rusty reinforcement rods which were treated with Mapefer.

Below: after rebuilding the missing and removed portions, Elastocolor protective and decorative paint was applied on the entire surface of the bridge.

To the side: the bridge was reopened to traffic once the work was over.



ed drastic repair work.

Once the problem areas had been identified, the Ibermapei Technical Service Department defined a series of interventions using products developed for similar structures and materials, which were then presented to the client.

The first step was to clean all the surfaces to be treated using a high-pressure water washer. The deteriorated portions of concrete, or those in danger of detachment, were removed mechanically and the reinforcement rods which were in a poor condition were exposed.

The reinforcement rods were brushed to remove all traces of rust and loose parts, and were then treated with MAPEFER\* two-component anti-corrosion mortar based on polymers in water dispersion. Once the MAPEFER\* had dried, the areas of the structure where the damaged concrete had been removed were repaired using MAPEGROUT T40\* thixotropic mortar.

The final step was to finish off the surfaces by smoothing them over with MONOFINISH\* one-component, normal-setting cementitious mortar.

The repair and sealing of the expansion joints on the roadway were carried out using MAPEGROUT HI-FLOW\* fibre-reinforced, controlled-shrinkage fluid mortar and by applying a 1.2 mm-thick PVC membrane reinforced with polyester mesh.

Once the repair work had been completed, the entire surface of the bridge was treated with ELASTOCOLOR PAINT\* elastic paint. Apart from leaving the structure with an attractive, even coating, this paint waterproofs concrete surfaces and protects them against aggressive agents present in the atmosphere.



This article was taken from "Realidad Mapei", n° 6, the in-house magazine edited by Ibermapei, the Spanish subsidiary of Mapei Group, which we would like to thank.

**\*Mapei Products:** the products referred to in this article belong to the "Building Speciality Line" range. The technical data sheets are available on the "Mapei Global Infonet" DVD/CD or at the web site: [www.mapei.com](http://www.mapei.com).



**Elastocolor Paint:**

protective and decorative elastic paint based on acrylic resins in water dispersion.

**Mape-Antique LC:** cement-free binder for light coloured dehumidifying mortar for the restoration of damp stone, brick and tuff masonry.

**Mape-Antique I:** cement-free fillerized hydraulic binder, for consolidating, by injection, stone, brick work and tuff structures.

**Mapefer:** two-component corrosion-inhibiting cementitious mortar for the protection of reinforcing rods.

**Mapegrout T40:** medium strength (40 N/mm<sup>2</sup>) thixotropic mortar for the repair of concrete.

**Mapegrout Hi-flow:** controlled-shrinkage fibre-reinforced fluid mortar for concrete repair.

**Monofinish:** one-component normal setting cementitious mortar for smoothing concrete.

**TECHNICAL DATA**

**Bridges on the River Duero**, located along the stretch between Peñafiel and Pesquera de Duero (Valladolid – Spain).

**Work:**

on the concrete bridge: treatment of the reinforcement rods, rebuilding of the damaged sections, smoothing and coloured coating;

on the stone bridge: structural strengthening, replacement of the missing stone blocks and pointing of the joints.

**Year:** 2005

**Client:** Junta de Castilla y León

**Main Contractor:** Constructora Hispànica S.A.

**Building Contractor:** Evotec

**Mapei Co-ordinator:** Manuel Angel López, Ibermapei SA



# MAPEI-ANTIQUE

## RESTORATION OF OLD MASONRY BUILDINGS: FROM DEHUMIDIFICATION TO PROTECTION AND DECORATION

*Thanks to the use of lime and **Eco-Pozzolan**,  
the Mape-Antique line of products features*

- *Mechanical strength comparable with that of normal, hydraulic lime-based systems*
- *Workability comparable with the best aerated lime-based systems*
- *High vapour permeability*
- *High sulphate resistance, due to the chemical reaction between lime and **Eco-Pozzolan** that rapidly eliminates all free lime*
- *Efflorescence eliminated due to the absence of free lime*
- *No alkali-silica reaction*
- *Ability to colour the products on site by the addition of suitable pigments.*



*The high water vapour transmission of the  
Mape-Antique range of dehumidifying  
mortars requires the combined use of the  
**SILEXCOLOR** range of silicate-based  
coating systems as the final protective  
and decorative treatment.*



One-component thixotropic mortar with a high content of inorganic fibres, for repairing concrete structures

# Mapegrout Easy-Flow GF

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**THE RENOVATION OF AN ANCIENT CHURCH IN CUBA WITH A DISTINCTIVE RED ROOF.**

# Red roofs across the Cuban skyline

The history of San Pedro Apóstol Church in Versalles began in March 1860 when La Habana's Board of Statistics informed the church authorities that Versalles had 380 houses and 2750 inhabitants and was now in need of its own church.

Versalles is a neighbourhood of Matanzas, one of the twenty boroughs forming the Cuban province of the same name. On 22<sup>nd</sup> of August that year the bishop issued a decree to build a parish church to be named after (and dedicated to) San Pedro Apóstolo in Versalles. He also commissioned the Italian architect Daniele Dall'Aglio to design it and follow all the construction work.

In 1867 the architect showed the bishop the building plans and an estimate of the costs involved in constructing the church. On 14<sup>th</sup> May 1870, Don Antonio María Pereira, archdeacon of La Habana Cathedral, consecrated the church and placed the Holy Sacrament in it. Mr. Dall' Aglio designed the church like a temple with three wide aisles, embellishing the central

aisle with a "canon-barrel" vault; there is a small dome over the transept. Although the two side towers framing the main façade are not particularly streamlined, they are perfectly proportioned and designed in a gradually ascending sculptural manner, whose totally smooth lower section is followed by a central section decorated with squares and ovals before culminating in small columns and addorsed pediments, which, in turn, act as a base for the pyramid-shaped roof.

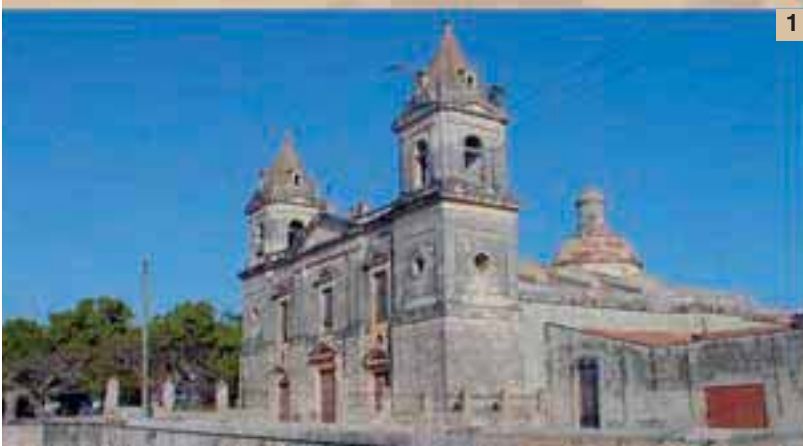
Many scholars of Cuban architecture agree that San Pedro Apóstol in Versalles Church is, from a construction viewpoint, one of the nation's most important religious monuments and a fine example of Hispanic colonial architecture.

### Mapei's Work

A few years ago the Franciscan monks from the Friar Minor Conventual Order (who are currently looking after the church) decided, bearing in mind its poor state of repair, to undertake renovation and restoration work, both inside and

*Photos 1, 2 and 3. Pictures of the church before the renovation; from left: the outside of the building, a detail of the dome and of one of the two towers.*

*Photos 4, 5 and 6. The dome was initially treated using the Mape-Antique dehumidifying system, then it was waterproofed with red Mapelastic. In the case of the roof, it was decided to reinforce the Mapelastic with Fibreglass Mesh inserted between the two layers of the elastic membrane.*



1



2



3



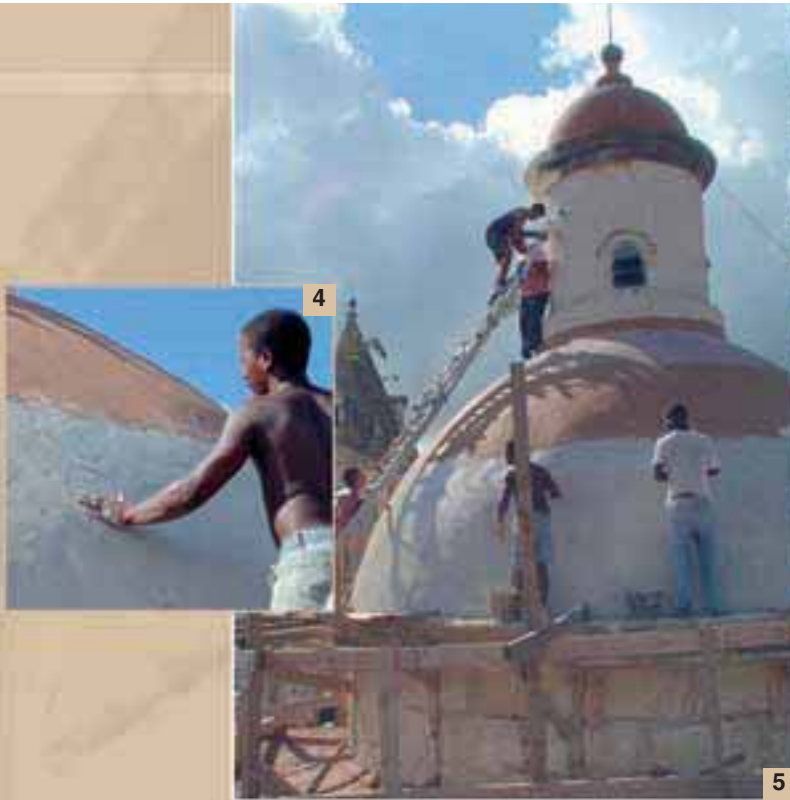


Photo 7.  
The Mape-Antique system was used to restore the main façade to its former glory and protect it against damp.

Photo 8.  
The two towers were structurally reinforced using injections of Eporip, Epojet and Mape-Antique I. The damaged parts were then rebuilt and then, lastly, the roofs were waterproofed using red Mapelastik, reinforced between the two layers by means of a Fibreglass Mesh.

outside the building.

Due to technical and financial problems, this turned out to be a rather tricky enterprise, so the monks decided to turn to Mapei Technical Service for help. After a careful examination, which revealed the overall state of disrepair of the entire construction, the technicians and monks decided to carry out the repairs in stages, starting with the dome and roof before working on the main façade and towers, interiors and side facades and completing the operation with modernisation and restructuring work on the communal quarters used by the monks.

#### Dome and Roof

The dome was in a terrible state with coating material flaking off everywhere, caused by water seeping into the church down the years. First of all the damaged or flaking material was removed; then the surface of the dome was cleaned so that the substrate could be treated with products from the Mape-Antique System. To begin with, an approximately 5 mm coat of

MAPE-ANTIQUE RINZAFFO\* "salt-resistant" mortar was applied, ideal for restoring old buildings made of old stone, tuff and brick. Next a 1-3 cm coat of light-coloured MAPE-ANTIQUE MC\* dehumidifying mortar was spread all over the dome to give it a more even surface.

The work was completed by using light-coloured MAPE-ANTIQUE FC\* fine mortar based on special hydraulic binders, special additives and fine grains of natural sands. The protecting and waterproofing of the dome was completed by applying two coats of red MAPELASTIC\* (in a shade specially designed in the same colour as the roofs on Cuban buildings and manufactured by the Mapei plant in Latina, Italy).

MAPELASTIC\* is a cementitious mortar producing highly flexible protective-waterproofed membranes. The dome was given the finishing touch of a coat of SILEXCOLOR PAINT\*, chosen in the closest shade of red to the original colour. As well as decorating and protecting the surfaces against atmospheric agents, the paint work also keeps the surfaces completely vapour-permeable.



## PROJECTS

Like the dome, the main roof was also in a terrible state of repair; the damage to certain parts of the protective surface had actually caused cracks and spits to open up, allowing damp to seep into the perimeter walls and aisle below. After thoroughly cleaning the roof surface, a layer of red MAPELASTIC\* was applied.

To enhance MAPELASTIC\*'s already high-performance properties, FIBREGLASS MESH\* was applied over the first coat while it was still wet. This is a common procedure for surfaces with notable cracks coming under considerable strain as in this case. The mesh was then covered with another coat of red MAPELASTIC\*.

### Towers and Main Façade

The lack of upkeep, together with maintenance problems, down the years had allowed shrubs to grow all over the side towers and the plants' roots had made them unstable.

This meant that work had to be carried out on the structure of these two constructions before working on their surfaces. This was achieved by making several injections of MAPE-ANTIQUE I\* hydraulic binder, EPOJET\* epoxy resin and EPO-RIP\* epoxy adhesive, according to the thickness of the supporting walls and the damage found. ADESILEX PG1\* was also used to add structural support.

Bits of damaged or flaking concrete were removed to reveal the reinforcing rods beneath.

The rods were cleaned and then treated with MAPEFER\*, two-component corrosion-inhibiting cementitious mortar based on polymers in water dispersion.

The parts removed were then reconstructed using MAPEGROUT T60\* thixotropic mortar, which is easy to apply to vertical surfaces



9



without formwork. PLANICRETE\* latex was added to the concrete used for smoothing purposes in order to improve its adhesion to the substrate and mechanical resistance.

Red MAPELASTIC\*, reinforced with FIBREGLASS MESH\* placed between the two layers, was again used to protect and waterproof the covering on the towers. The technicians again suggested using the Mape-Antique System to restore the main façade to its original glory and protect it against damp: after cleaning the work surface, a 5 mm coat of MAPE-ANTIQUE RINZAFFO\* was applied to the façade, followed by MAPE-ANTIQUE CC\* mortar designed for renovating and restoring buildings badly damaged by sulphate salts. To complete the work, light pink (the final colour chosen for the façade) MAPE-ANTIQUE FC/R\* fine mortar for dehumidifying plasters was then applied.



11

Photos 9 and 10. Mape-Antique dehumidifying system was used on the walls, vaults and interior arches.

Sillexcolor Primer and Sillexcolor Paint, chosen in shades similar to the original colours, were used for protection and final decoration purposes.

Photo 11. The picture shows a detail of the state of decay inside the church before the repair work.

Photo 12. The church's main façade after the work was completed. The building, an excellent example of Hispanic colonial architecture, was restored to its original glory.



12



10

### Interiors

The inside of the church had various kinds of coverings and coatings – concrete, plaster and stone – partly due to work carried out after it was originally built. Basically, all of the walls had been damaged up to a height of 150 cm by the constant presence of an abundance of salts, which had ruined the original paint work down the ages causing it to crumble and flake off.

Work began by scraping off the crumbling plaster; the surfaces were then washed down with water before applying the same products from the Mape-Antique range already used on the façade (MAPE-ANTIQUE RINZAFFO\*, MAPE-ANTIQUE CC\* and MAPE-ANTIQUE FC/R\*) to dehumidify the walls.

SILEXCOLOR PRIMER\* was first spread over the walls to provide a protective coating, followed by the protective-decorative SILEXCOLOR PAINT\*, chosen in a similar colour to the original.

The same repair and finishing work was also carried out on the arches and vaults, which had been damaged by water seeping in down the years. Where necessary, the technicians advised carrying out reinforcement work with EPOJET\*, EPORIP\* and ADESILEX PG1\* on the interior walls.

### Side Facades

The side facades were treated with cementitious products and finished with MAPE-FRONT RASPAT\* single coat coloured render (a product marketed by Ibermapei, Mapei's subsidiary in Spain), chosen in shades close to the colour of the main façade.

### Other Areas

The bathrooms, kitchens and other private quarters used by the monks were tiled using KERASET\* and white ADESILEX P9\* cementitious adhesives, while the joints were grouted using KERACOLOR FF\* and ULTRACOLOR\*.



**\*Mapei Products:** the products referred to in this article belong to the "Products for Ceramic Tiles and Stone Materials" and "Building Speciality Line" ranges. The technical data sheets are available on the "Mapei Global Infonet" DVD/CD and at the web site [www.mapei.com](http://www.mapei.com). The Mapei adhesives and grouts conform to EN 12004 and EN 13888 standards.

**Adesilex P9 (C2TE):** high performance cementitious adhesive with no vertical slip and extended open time for ceramic tiles.

**Adesilex PG1:** thixotropic epoxy adhesive for structural bonding.

**Epojet:** two-component superfluid epoxy resin for injections.

**Eporip:** two-component epoxy based adhesive for cold joints and monolithic sealing of cracks in screeds.

**Keracolor FF (CG2):** high-performance cementitious grout, polymer modified, water-repellent with DropEffect®, for joints up to 6 mm.

**Keraset (C1):** cementitious adhesive for ceramic tiles.

**Mape-Antique CC:** pre-mixed cement-free brick-coloured dehumidifying mortar for repairing damp stone, brick and tuff masonry.

**Mape-Antique FC and Mape-Antique FC/R:** cement-free fine mortars, respectively light-coloured and light pink, for finishing dehumidifying mortars applied on stone, brick and tuff masonry.

**Mape-Antique MC:** pre-packed cement-free light-coloured dehumidifying mortar for restoring damp stone, brick and tuff substrates.

**Mape-Antique Rinzafo:** light-coloured salt-resistant cement-free pre-packed mortar to be used before applying Mape-Antique MC, Mape-Antique CC and Mape-Antique LC dehumidifying mortars on stone, brick and tuff masonry.

**Mapefer:** two-component corrosion-inhibiting cementitious mortar for protecting reinforcing rods.

**Mapefront Raspat:** single-coat coloured render for covering facades, distributed by Ibermapei (Spain) in Spanish-speaking countries.

**Mapegrout T60:** sulphate-resistant thixotropic fibre-reinforced mortar for repairing concrete.

**Mapelastic:** two-component flexible cementitious mortar for waterproofing concrete, swimming pools, terraces, bathrooms and balconies.

**Planicrete:** synthetic-rubber latex for cementitious mixes.

**Fibreglass Mesh:** alkali-resistant fibreglass mesh for reinforcing interior and exterior levelling compounds.

**Silexcolor Primer:** modified potassium silicate-based primer in water solution.

**Silexcolor Paint:** silicate-based, vapour-permeable protective and decorative paint system for cement- or lime-based renders for interiors and exteriors.

**Ultracolor (CG2):** fast setting and drying, high-performance, anti-efflorescence grouts for joints from 2 to 20 mm, available in 26 colours.

N.B.: This product has now been replaced by Ultracolor Plus.

All the products used for this project were supplied by Mapei SpA, except for Mapefront Raspat, which was supplied by Ibermapei (Spain).

## TECHNICAL DATA

**San Pedro Apóstol de Versalles** in Matanzas (Cuba)

**Work:** restoring, waterproofing and finishing work on the dome and roof; reinforcing, repairing and finishing work on the side towers and main facade; repair and finishing work on the side facades and interiors; laying and grouting of the tiles in the communal spaces.

**Year:** 2003

**Project:** Friar Minor Conventual Order (Fathers Silvano, Fernando and Roberto)

**Customer:** Friar Minor Conventual Order

**Mapei Distributor:** Arca '99 (Cuba)

**Mapei Co-ordinators:** Pedro Graniela (Arca '99) and Renato Soffi (Mapei SpA)

# Mapei FRP System

THE MAPEI FRP SYSTEM IS A COMPLETE RANGE OF PRODUCTS IN CARBON FIBRE, FIBREGLASS AND EPOXY RESINS, COMPOSED OF:

- **MAPEWRAP C and MAPEWRAP G**  
Uni-directional, bi-directional and quadri-directional carbon fibre and fibreglass fabrics
  - **MAPEWRAP C FIOCCO and MAPEWRAP G FIOCCO**  
A complete range of uni-directional carbon fibre and fibreglass cord, used for creating anchorage points
  - **MAPEROD C and MAPEROD G**  
Pultruded bars in improved-adherence carbon fibre and fibreglass
  - **CARBOPLATE**  
Pultruded carbon fibre plates pre-impregnated in epoxy resin protected by a double film of plastic
  - **CARBOTUBE**  
Pultruded tubes in carbon fibre impregnated in epoxy resin protected by a double film of plastic, used to consolidate vaulted structures and facing walls
- |                     |                |
|---------------------|----------------|
| - MAPEWRAP PRIMER 1 | - MAPEWRAP 31  |
| - MAPEWRAP 11       | - ADESILEX PG1 |
| - MAPEWRAP 12       | - ADESILEX PG2 |
| - MAPEWRAP 21       |                |

A complete range of polymeric resins, especially formulated for the preparation of substrates, for impregnating, bonding and anchoring fabrics, cords, bars, plates and tubes.



**INNOVATIVE SYSTEM  
FOR REINFORCEMENT,  
STATIC IMPROVEMENT  
AND SEISMIC  
STRENGTHENING OF  
REINFORCED CONCRETE,  
BRICKSTONE, TUFF OR  
STEEL STRUCTURES**

**A RUNDOWN FACTORY  
TRANSFORMED INTO A CAR-  
PARK FOR THE MODERN  
DOMINA SHOPPING CENTRE  
IN THE CAPITAL OF LATVIA**



# From old to new

Latvia's capital city of Riga may now be considered a reflection of the nation as it is today.

For centuries, Latvia has been the prey of Swedish, German and Russian domination. It finally became independent from the USSR in 1991, part of NATO in March, 2004, and of the European Union in May of the same year.

In Riga, a city on the Baltic coast which lies around the River Daugava, traces of the past and the aspirations for a more modern and more European future are both clearly visible.

The ancient city centre still boasts its centuries-old, German-style buildings, the outskirts are littered with huge, faceless grey buildings of the Soviet era, while the new city mostly dates back to the XIX century and is a mix of residential and commercial areas.

This is the most modern area of the city, tangible proof of how the standard of living of the Latvians has risen. Luxury foreign cars flash by, and this is where you will find the Stockmann department store, high-class hotels, coffee-shops and bars which stay open until the early hours of the morning and prestigious restaurants which offer both local and international cuisine.

## Strong Beams for the Car-park

The opening of numerous new shopping centres is just a part of the ongoing reclaiming process in the city, to meet the modern demands of its population.

The Domina Shopping Centre is just one of these, and represents the largest showroom in all the Baltic States for purchasing goods.

It was built in 2003, by renovating and extending an old factory in what was the Riga industrial district.

The centre covers an area of 110,000 m<sup>2</sup> and includes shops, coffee-shops, service centres, offices, a hotel, a beauty salon, a fitness centre and a multi-storey car-park.

The car-park was created by converting an old, three-storey building.

The ground floor is used for storage purposes, while the other two floors, with each one covering a total of 5,000 m<sup>2</sup>, is used to house the cars driven by visitors to the shopping centre. The second floor required strengthening of the main structure of the building, made up of a framework of 110 concrete beams, so that it would resist the flexural and shear stresses deriving from its new use.

In fact, the "double-T" beams are 12 m long and 111 cm high, and had nume-

rous cracks caused by excessive shear stresses, a clear sign of considerable structural fatigue.

The beams had to be repaired without modifying their original dimensions, while maintaining their original purpose and without interfering with the other building operations being carried out, and products from the MAPEI FRP SYSTEM proved to be the most suitable solution.

This innovative system uses composite materials such as fabrics, pultruded carbon fibre sheets and epoxy resins, which help to reduce operational problems and the time required to carry out repair work, strengthening and anti-seismic upgrading of concrete structures.

When the design phase was carried out, the structure was divided into four zones (A, B, C and D respectively), so that the strengthening work for each area could be designed according to the specific stresses calculated for each zone.

## Flexural and Shear Strengthening

Flexural stresses were sufficiently contrasted by bonding CARBOPLATE\* (E 170/100 and E 170/150 grade) pultruded carbon-fibre plates on the lower surfaces of the beams using ADESILEX

## PROJECTS

Background: view of the beams to be strengthened.

Photo 1.  
Close-up of beams with shear cracks.

Photo 2.  
Application of Mapegrout BM to increase the thickness of the beam in correspondence with the support pads.



1

Photo 3.  
Close-up of the layer of Mapegrout BM applied on both faces of the beam.

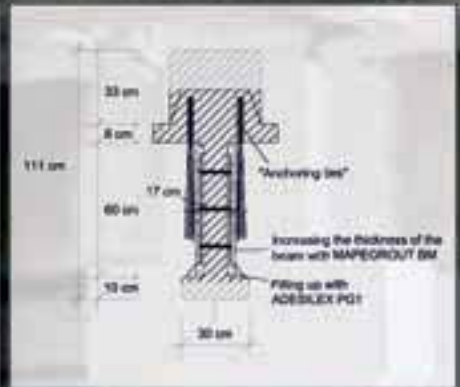
Photo 4.  
Application of Carboplate on the inner side of the beam to increase flexural strength.



2



3



4



PG2\* thixotropic epoxy adhesive. To carry out the shear strengthening on the other hand, since some areas were subject to extremely high levels of tangential stress, the core section of the beams had to be increased using MAPEGROUT BM\* two-component cementitious mortar with a low modulus of elasticity, after a previous application by brush of EPORIP\* epoxy adhesive to promote bonding. After removing the loose material on the substrates by sand-blasting followed by removal of waste material with a vacuum cleaner, all the cracks

were well sealed using ADESILEX PG2\* epoxy adhesive. They were then injected with EPOJET\* epoxy resin in order to definitively occlude all the micro-cracks which had formed. Electro-welded mesh was then applied on the two vertical faces of the beams using steel connectors, followed by an increase in the sections of the beams using MAPEGROUT BM\*, after applying EPORIP\* to guarantee high bonding strength. The choice of MAPEGROUT BM\* was dictated by assessing the mechanical

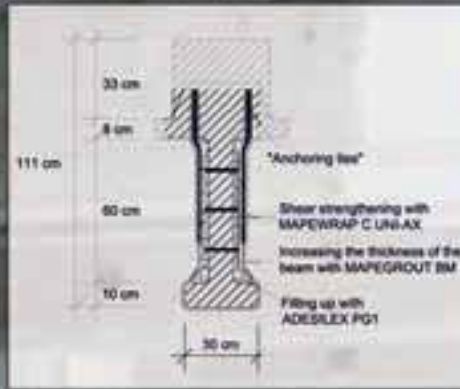
and environmental conditions (in this case climatic and dynamic variations) to which the structure would be subject once the strengthening work was completed. In fact, this product is particularly suitable for repairing the surface of degraded concrete structures (characterised by rather low mechanical strength), which are subject to small deformations under load, thermal cycles or which are exposed to particularly severe climatic conditions. Various layers of MAPEWRAP C UNI-AX\* (600/40 and 300/40 grade) uni-



Photo 5.  
Positioning anchoring ties made from portions of MapeWrap C UNI-AX 300/20.

Photo 6.  
Shear strengthening by applying "rods" of MapeWrap C UNI-AX 300/40.

Photo 7.  
Close-up of the shear strengthening.



**\*Mapei Products:** the products referred to in this article belong to the "Building Speciality Line" range. The technical data sheets are available on the "Mapei Global Infonet" CD/DVD and at the website

www.mapei.com.

**Adesilex PG2:** thixotropic epoxy adhesive with extended workability.

**Carboplate:** pultruded carbon fibre plates pre-impregnated in epoxy resin and protected by a double plastic film.

**Epojet:** two-component superfluid epoxy resin for injection.

**Eporip:** two-component epoxy based adhesive for cold joints and monolithic sealing of cracks in screeds.

**Mapegrout BM:** two-component thixotropic cementitious mortar with low modulus of elasticity for the repair of concrete.

**MapeWrap 12:** slow setting, thixotropic epoxy pully for levelling concrete surfaces.

**MapeWrap 31:** medium viscosity epoxy resin for impregnation with MapeWrap "dry-system".

**MapeWrap C UNI-AX:** high-strength uni-directional continuous carbon fibre fabric with high modulus of elasticity.

**MapeWrap Primer 1:** epoxy primer specific for the MapeWrap system.

directional carbon fibre fabric, in various sizes according to the level of shear stress, were applied using the typical MAPEWRAP cycle including an epoxy primer (MAPEWRAP PRIMER\*), an epoxy levelling grout (in this case MAPEWRAP 12\*) and an impregnation resin (in this case MAPEWRAP 31\*). To increase the height of the strengthening and to improve, therefore, its efficiency, a connection system was employed by applying portions of MAPEWRAP C UNI-AX 300/20\* fabric. They were rolled up and impregnated with epoxy resin to form a rod, and

then positioned on the upper end of the beams and sealed using MAPEWRAP 12\* epoxy grout.

### Guaranteed Parking

Thanks to the use of these innovative systems, the consolidation work of the beams was completed according to schedule, guaranteeing sufficient stress-resistance of the structure and, therefore, a building which is perfectly suitable for its new use.

Now, visitors to the centre may park their cars with ease and dedicate their time to worry-free shopping.



## TECHNICAL DATA

**Car-park, Domina Shopping Centre,**

Riga, Latvia

**Work:** static strengthening of the concrete beams

**Year:** 2003

**Customer:** P.K. Investment

**Project:** MSC Associati S.r.l., Como (Italy)

**Work Management:** MSC Associati S.r.l.

**Contractor:** RS Levati

**Mapei Distributor:** Velve M.S. Technologies, Riga

**Mapei Co-ordinator:** Giulio Morandini, Mapei S.p.A

## DOMOTEX 2007



The 2007 edition of Domotex, the biggest international show of carpets and floor coverings, successfully closed in Hannover on the 16<sup>th</sup> of January. The fair was very well attended (44,000 visitors) by people from 100 different countries, who were able to admire all the latest novelties and innovations in the sector presented by 1,360 exhibitors over a net exhibition area of 90,142 m<sup>2</sup>.

It is also worth noting the number of foreign participants: 80% of the exhibitors and 60% of the visitors came from beyond the German borders. As regards the visitors (mainly distributors and retailers of floor coverings, decorators and interior designers, architects, installers), 91% claimed they had key positions in companies working in the sector, with decision-making power for investments.

An extremely wide range of materials for floor coverings were on display at Domotex: handmade carpets, machine-made rugs, parquet, textile and resilient materials, lami-

nates, technologies for installing surfaces, installation, cleaning and maintenance machinery, and even a showcase devoted to stone materials and ceramics.

This explains why everybody was so pleased, as Stephan Ph. Kühne, Member of the Managing Board of Hannover-based Deutsche Messe (which is in charge of organizing the fair), argued: "Once again Domotex has set the beat for the new floor covering business year. Its leading status among international trade fairs of its kind was reconfirmed".

The event's solid worldwide reputation allowed the Domotex brand to make headway into new markets over recent years, giving rise to "young brothers" fairs in emerging nations: Domotex asia/CHINAFLOR's last edition registered 35,000 visitors and 850 exhibitors in Shanghai; DOMOTEX Middle East made its debut in Dubai last year, immediately achieving excellent results.

### The Mapei Stand

Mapei could not afford to miss such an important event, where for years now it has always had its own highly original stand and a wide range of products on display. The first thing visitors noticed when they approached the Mapei exhibition area was a huge basket of champagne. This was to remind people that this year was the 70<sup>th</sup> anniversary of the Company being founded. This was written on the basket ("70 Jahre MAPEI Feiern Sie mit; Celebrate Mapei's 70<sup>th</sup> anniversary with us) and also appeared as the background graphics for lots of the stand's panels and modules in the colour blue (blue is the Company colour) with silver strokes and the official 70<sup>th</sup> anniversary logo.

The stand was built over two levels, covering an overall exhibition area of 370 m<sup>2</sup>. The entire structure was shaped like a boat and its "top deck" (complete with chairs, tables and a desk bar) was designed







to provide a comfortable setting for guests interested in finding out more information from Company staff at the fair. The space was decorated with a panel portraying the Group's presence in five continents.

The lower level of the stand was open on four sides to draw in visitors and introduce them to Mapei solutions for installing textiles, resilient materials and wood. At the "hull" level of the imaginary ship in the lower section there was a reception area providing information and technical documentation, where visitors could fill in a form with their answers to a technical quiz. All the forms were then placed in a case ready for a special draw with various prizes up for grabs, such as an Apple iPod, the

world's smallest music player. A central area with tables and chairs behind the reception zone also provided somewhere for guests to talk to Mapei technicians and business staff. Over on the right hand side of the ship, there were three triangular exhibition islands specially equipped to display the various installation systems Mape developed for parquet, resilient and textile materials, and for coverings (made of PVC, rubber and synthetic grass) to be installed in sports facilities. The three fields of application (and the Mapei solutions for each of them) also appeared in giant photographs displayed on additional panels, revolving totems and special displays placed all around the stand. There was also a special bro-

chure on each of the three systems, available for visitors in both English and German. To underline the high quality of these systems, the Mapei exhibition area at Domotex also contained plenty of pictures showing how the Company's products have been used for various highly prestigious building projects, such as the works carried out on the Teatro alla Scala and on Palazzo Reale in Milan, plus those made at the Beisheim Center and Hotel de Rome in Berlin. It also focused on Mapei's careful attention to designing installation products with a low environmental impact, such as those belonging to the ECO range. This was particularly appreciated in a nation like Germany, which for some time now has been very con-

cerned about ecological issues. One more highlight was the Company's commitment to technological innovation and scientific research. To this field Mapei devotes as much as 5% of its turnover each year and employs 12% of staff in its laboratories. Giant photographs depicted the machinery and operations at the Mapei Research & Development Laboratories with a slogan referring to the Company's "70 years of technological leadership". Finally, the promotional campaign at Domotex made plenty of reference to themes related to the world of sport. First and foremost, it focused on the exciting 2006 FIFA World Cup campaign, during which Mapei was the official sponsor of the Italian National Football Team.



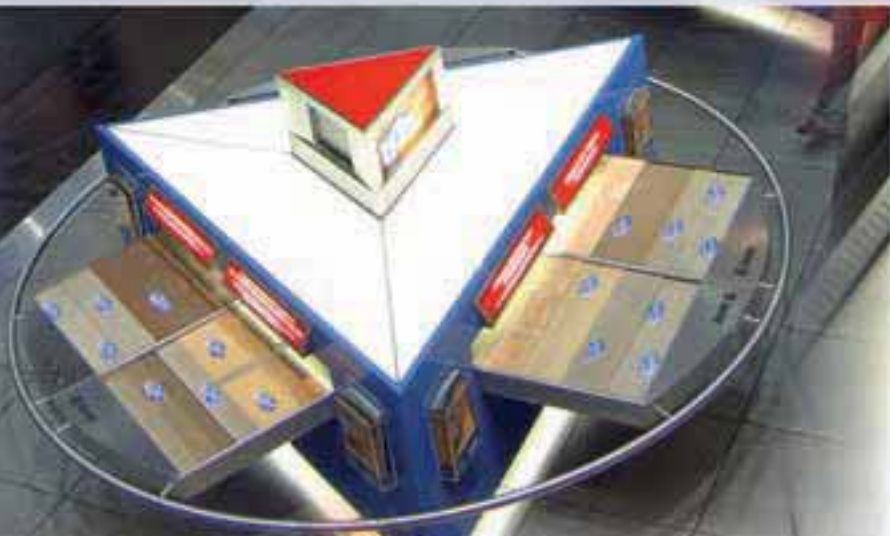


The slogan on some of the stand panels ("World champions for the products for installing floor and wall coverings") and the giant photographs of the Italian team celebrating with the World Cup were supposed to be a reminder of last July's glorious victory and, at the same time, underline Mapei's world leadership in the field of chemical products for building. Again in the field of sport, there were panels with "Olympic references" evoking the sports facilities (stadiums, swimming pools, cycling arenas, athletics tracks, gyms, etc.) and accommodation facilities for athletes, which, from the 1950's to the present day, were built using Mapei products for the Olympic Games held in the various host cities. Mapei also took this chance to invite its

clients and partners to meet again at the 2008 Beijing Olympics, because the Company is already supplying high-tech products for the buildings and sports facilities hosting the Games. There was a demonstration desk in the front left corner of the stand where some professional installers showed the public methods for using Mapei products while a presenter illustrated the various work phases (which were also broadcast live on the screens on the wall) and characteristics of the products. Once the demonstration was over, there was a special draw with the prizes being awarded straightaway to the lucky winners. All this attracted plenty of attention from visitors to Domotex, who rushed over in great numbers to watch these events.

### The Products on Display

From its entire range of products for the perfect installation of textile and resilient materials, wood and synthetic grass, Mapei chose to focus on some self-levelling and smoothing systems at Domotex. In particular, the Mapei stand presented the ECO and MAXI versions of ULTRAPLAN, ultra-fast drying self-levelling compound, the former characterised by extremely low emission of volatile organic compounds, the latter ideal for thicknesses of between 3-30 mm. Special attention was also paid to the combination of NIVORAPID cementitious levelling mortar plus LATEX PLUS admixture. This is an ideal combination for carrying out either repair or renovation work, because it produces an ultra-fast





cementitious compound with improved deformability and high bonding strength even to metal surfaces, old floors made of rubber, PVC, chipboard, parquet, linoleum etc.

These two products were also featured in a brochure handed out for the first time at the fair.

Among the products for treating substrates, plenty of attention was focused on the ECO PRIM PU 1K + ECO PRIM T system, combining an one-component hygro-hardening polyurethane primer for waterproofing and consolidating cementitious screeds and an acrylic primer in water dispersion, both solvent-free and with very low emissions of volatile organic substances.

This is a particularly innovative system because it does not require the layer of quartz sand usually sprinkled on to increase the bonding strength of the levelling compounds which is then applied to the substrate. After waterproofing with ECO PRIM PU 1K, this system allows ECO PRIM T to be quickly and easily applied after just 6 hours (up to a maximum of 24 hours) and installation operations to be carried out about two hours later.

As regards the adhesives for bonding the materials to the floor at Domotex, Mapei has focused on three products, each specifically designed for a different kind of flooring: ULTRABOND P990 1K polyurethane one-component adhesive for wood; ULTRABOND ECO 540 adhesive in water dispersion with very low emission of volatile organic compounds for linoleum; ULTRABOND ECO VS 90 universal acrylic adhesive in water dispersion, also with very low emission of volatile organic compounds, for PVC and rubber.

To provide visitors of Domotex with detailed information, Mapei GmbH, the Group's German subsidiary, published a new catalogue on the systems for installing parquet, resilient and textile materials, designed to be easier and quicker to read. The brochures referred to earlier in this article, each four pages long, were also handed out.

The brochures were devoted to products for installing wood, textile and resilient materials, synthetic grass and elastic coverings of sports facilities, respectively.

The next edition of Domotex is planned to be held in Hanover from 12<sup>th</sup>-15<sup>th</sup> January 2008.



## SIDE EVENTS

One of the reasons why the latest edition of the German fair was such a success was certainly the extensive program of lectures, seminars, exhibitions and special events, which really livened up the atmosphere at Domotex and provided everybody there with plenty of information and interesting input. For example, the **Carpet Design Award** set out to focus on 30 handmade carpets chosen from 140 items.

The **European Team Floorlaying Competition**, having now reached its fourth edition, attracted no less attention. Six teams from different nations (Austria, Germany, the Netherlands, Switzerland and the United Kingdom) took part in a competition to install all kinds of floors.

The Italian team won for the second year in a row.

The Mapei Group actually sponsored the event while Mapei UK and Mapei Suisse sponsored their respective nations.

It is also worth mentioning **Domotex Workshop**, a series of lectures, practical demonstrations and technical discussions which was extremely well attended.

**Floorforum** was another successful event presenting a collection of "signature" textile coverings and carpets by the famous designer Ulf Moritz.

The sector's international community was able to exchange views and know-how at **contractworld**, the annual international architecture forum and culminating in the **contractworld.Award** prize-giving ceremony for particularly innovative interior design solutions.

The exchanging of creative input between architects, interior designers and decorators was particularly lively at **contractworld.congress**, which was attended by 2500 experts, who discussed such famous designers as Kengo Kuma from Tokyo, Hermann Hertzberger from Amsterdam and Antonio Ortiz from Seville.



The one-component polyurethane adhesive

# Ultrabond<sup>®</sup> P990 1K

The deadline is approaching?  
Save your time with Mapei  
rapid-setting systems

**EASY TO APPLY**

Due to its viscosity properties, the product is fluid and smooth even at low temperatures. At the same time it guarantees excellent hold, making it easy to apply even on vertical surfaces

**COST-EFFECTIVE**

thanks to its excellent trowellability, its consumption is 20-30% lower than traditional two-component adhesives for wood

**SAVINGS FRIENDLY**

thanks to the new aluminium moisture-proof packaging, partially used product can be stored and reused to avoid waste

**ELASTIC**

thanks to its elasticity properties, it can compensate for the natural movements caused by temperature and moisture variations

**BONDING**

it guarantees perfect adhesion to all types of parquet onto all types of substrates without the need of applying primers

**ENVIRONMENTALLY FRIENDLY**

thanks to its special solvent-free chemical composition, it is hypoallergenic, safer and more environmentally-friendly than traditional two-component adhesives for wood.



**70<sup>th</sup>**

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70 YEARS OF SOLUTIONS  
FOR THE WELL-BEING  
OF THE BUILDING INDUSTRY



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One-component, solvent-free,  
moisture-curing polyurethane primer with  
extremely low emission of volatile organic compounds,  
for consolidating and waterproofing cementitious screeds

# Eco Prim<sup>®</sup> PU 1K



- × CONSOLIDATOR
- × DUST-REPELLENT
- × WATERPROOFING

- **IMPROVES**  
the mechanical properties of  
weak and crumbly cementitious  
surfaces
- **ELIMINATES**  
crumbling of old cement and  
anhydrite screed
- **CONSOLIDATES**  
screeds with a dusty surface
- **WATERPROOFS**  
damp substrates before laying  
parquet

 **MAPEI**  
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# Living in A CONTAINER HOUSE in Cyprus

## IMAGINATION AND MAPEI PRODUCTS JOIN TO FULFILL A WONDERFUL DREAM.

**W**hat about living surrounded by nature, among flowers and trees, close by the seaside? What about building your own house by yourself using original and cheap materials and saving, by the way, a lot of money?

We are going to tell you a story about dreams shared by most people and about the possibility to fulfill them using intelligence and creativity. To this purpose one has to fully believe in his or her dream and be familiar with the best materials available, as, in this case, of the innovative technologies Mapei offers the market of chemical products for building.

Mr Takis Zachariades managed to fulfill his dream: he built his own country house out of some container by using a number of Mapei products in a very

original way. The final result is marvelous and it is worth describing the several work stages that led to it.

Mr Zachariades is a client of Gevo Ltd, the local distributor of Mapei in Cyprus. He owned a piece of land of exceptional beauty in the countryside district of Larnaca. Since he was working and living in town he used to visit his field whenever he had the opportunity, in order to relax and spend some time in nature. As time went by he started cultivating some plants and trees there and bought one used container which he placed in the middle of the field and used it as a rest-house and warehouse.

Then he decided to build a permanent structure that he could use as a cottage-house. Trying to keep as low as possible the construction costs, he



over the container walls and floors. All rock-wool wall surfaces were then levelled with MAPETHERM AR1\*. This product is indeed used for bonding all types of thermal insulation panels (foam or extruded polystyrene, foam polystyrene, mineral fibers, cork, etc.) directly on render, brickwork or concrete walls or ceilings. Mixed with water, MAPETHERM AR1\* becomes a mortar featuring low viscosity, ease of application by trowel and high thixotropy: it can be applied on vertical surfaces without sagging and without letting even large sized insulating panels slip.

Gypsum boards were used to build the internal walls and the high performance C2TE adhesive KERAFLEX\* was used for the installation of tiles over them in the kitchen and bathroom areas. The two-component polyurethane adhesive KERALASTIC\* was used for the installation of tiles directly over the metal surfaces.

The high performance C2FTE adhesive ELASTORAPID\* was used for the installation of porcelain tiles on all internal and external floors.

Tiles were grouted with high performance ULTRACOLOR PLUS\* which is water-repellent thanks to the DropEffect® and antimold due to BioBlock® technology.

In the kitchen the two-component epoxy grout KERAPOXY\* was used for the grouting of the tiles. This product is particularly suitable for grouting tiles in food industries, thermal swimming pools, tanks containing aggressive chemicals, kitchen work surfaces, hospitals, supermarkets and all environments where complete hygiene and resistance to most chemical aggressions are required.

MAPESIL AC\* solvent-free, acetic-cross-linking mildew-resistant silicone sealant (available in 26 colours and transparent) was used to seal all expansion joints of the internal and external areas.

The photos of this project speak for themselves and it really gives you a thrill to go through the different work stages of this intelligent project, from the piled containers to the final wonderful result.

Once again Mapei plaid a major role in this story with its innovative products. On the other hand, one has to acknowledge that Mr Zachariades was able to use them in most creative way.

**\*Mapei Products:** the products referred to in this article belong to the "Products for Ceramic Tiles and Stone Materials" and "Building Speciality Line" ranges. The technical data sheets are available on the "Mapei Global Infonet" CD/DVD or at the web site: [www.mapei.com](http://www.mapei.com).

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

**Elastorapid (C2FTE):** highly deformable, high performance, fast-setting and hydration two-component cementitious adhesive, with no vertical slip and extended open time, for ceramic tiles and stone material.

**Keraflex (C2TE):** high performance cementitious adhesive, with no vertical slip and extended open time, for ceramic tiles and stone material.

**Keralastic (R2):** high performance two-component polyurethane adhesive for ceramic tiles and stone material.

**Kerapoxy (RG):** two-component acid-resistant epoxy grout, available in 26 colors, for joints of at least 3 mm. Can also be used as an adhesive.

**Mapesil AC:** solvent-free, acetic-cross-linking mildew-resistant silicone sealant, available in 26 colours and transparent.

**Mapetherm AR1:** one-component cementitious mortar for bonding and levelling insulation boards and for external thermal insulation systems.

**Planitop 560:** white lime-cement based finishing compound for very smooth finishing of both fresh and cured interior and exterior cementitious renders and concrete surfaces: can be applied from 0 to 3 mm thick.

**Ultracolor Plus (CG2):** fast setting and drying, high performance, anti-efflorescence, polymer modified grout, for joints from 2 to 20 mm. Water-repellent with DropEffect® and antimold Bioblock® technology.

## TECHNICAL DATA

**Container House, Larnaca (Cyprus)**

**Work:** thermal insulation, installation of porcelain tiles on the walls and floors, grouting of the tile joints, sealing of the expansion joints.

**Years:** 2005-2006

**Customer:** Takis Zachariades

**Project:** Takis Zachariades

**Installation Company:** Panayotis Costa, Nicosia (Cyprus)

**Mapei Distributor:** Gevo Ltd, Cyprus

**Mapei Co-ordinator:** Gianni Koropoulos, Mapei Hellas.

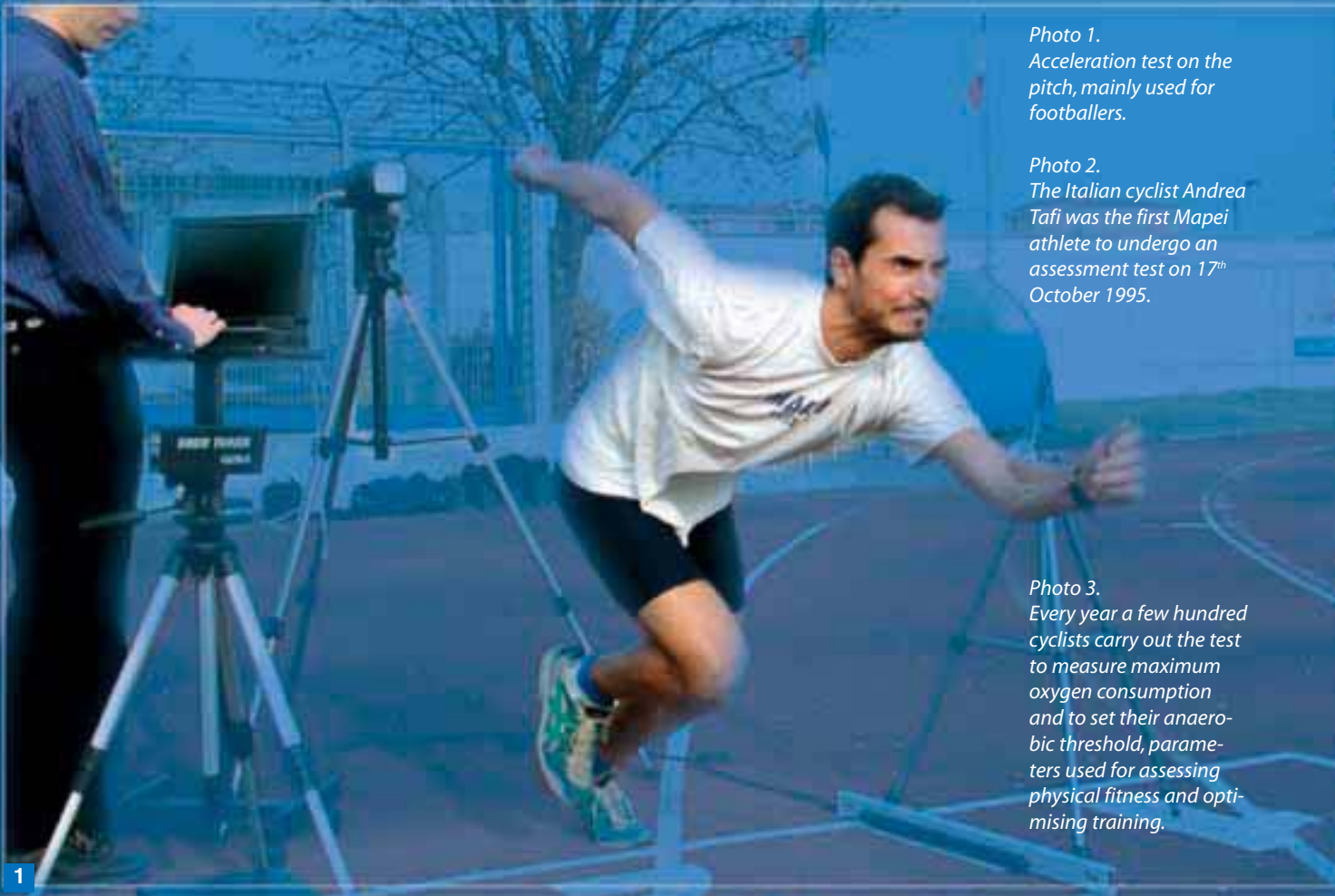
decided to buy a number of used containers and combine them in a two level structure, opening windows and doors at the appropriate places. By the time the containers were put together in the desired order, extruded polystyrene panels were used for external thermo-isolation by fixing them in the outer sides of the containers.

The polystyrene panels were then covered with MAPETHERM AR1\* combining it with a fiberglass mesh and using it as a leveling compound. The smoothing compound PLANITOP 560\* was used as a final layer over MAPETHERM AR1\*.

The surface was then painted with an acrylic paint.

In the inside areas hard rock-wool panels were mechanically installed





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Photo 1.  
Acceleration test on the pitch, mainly used for footballers.

Photo 2.  
The Italian cyclist Andrea Tafi was the first Mapei athlete to undergo an assessment test on 17<sup>th</sup> October 1995.

Photo 3.  
Every year a few hundred cyclists carry out the test to measure maximum oxygen consumption and to set their anaerobic threshold, parameters used for assessing physical fitness and optimising training.

Photo 4.  
Aniko Kalovics, an athlete from Co-Ver Mapei, during a test to prepare for the Carpi Marathon which she won.

# MAPEI SPORTS RESEARCH CENTRE: operating for over 10 years

by Mapei Sports Research Centre

The Mapei Sports Research Centre in Castellanza (near Varese, in northern Italy) was set up in the mid-1990s with the aim "to create a facility capable of providing the very best and latest of scientific support for training the Mapei Professional Cycling Team, so that it could be as successful as possible within the bounds of sports ethics," as Giorgio Squinzi, CEO of Mapei Group, declared.

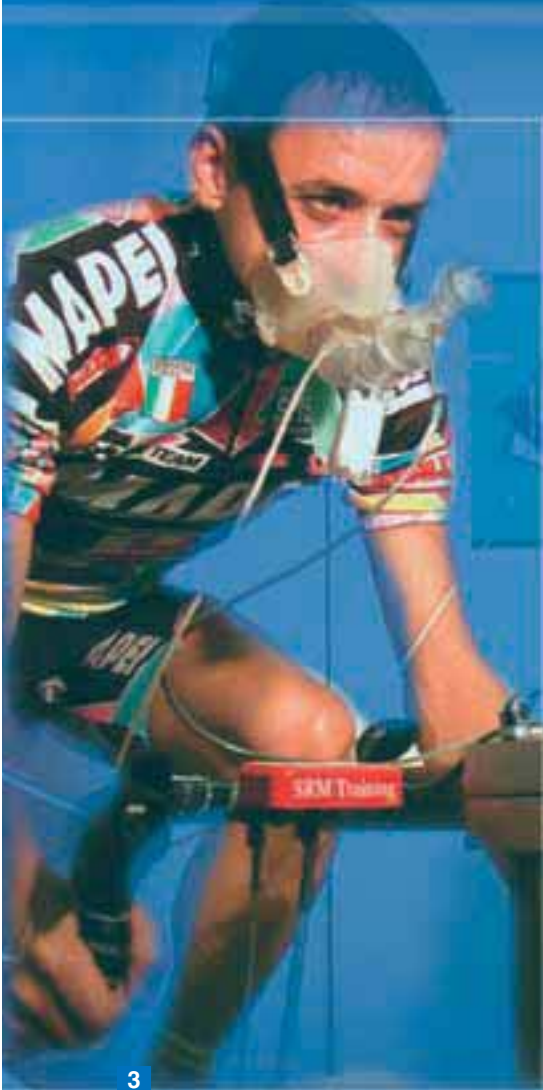
Prof. Aldo Sassi was put in charge of running the project after being asked to train the Cycling Team staff in summer '95. Up to those days the fitness and physical conditioning of cyclists was measured by increasing the intensity of their efforts either on an ergometer bike

or out on the track, keeping tabs on their heart rates (and, but only rarely, their lactic acid levels). Mapei Sports Research Centre adopted a special method, measuring oxygen consumption and working out the so-called "anaerobic threshold" (an important physiological parameter both for monitoring their physical fitness and optimising training) by analysing the air the athlete breathes in and out. The Italian cyclist Andrea Tafi was the first athlete to be tested on 17<sup>th</sup> October 1995. Meanwhile work was proceeding on building a fully-equipped physiology and biomechanics laboratory just for Mapei athletes, which opened on 9<sup>th</sup> December 1996: this is the date when the Mapei Sports Research

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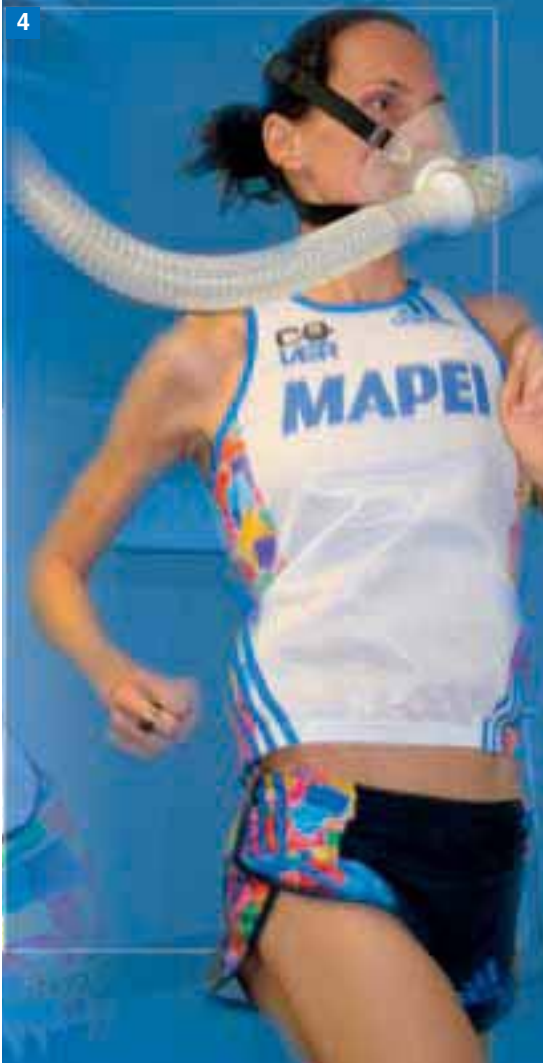
Centre officially came into being. In the same period lots of satellite youth cycling teams had formed around the Professional Cycling Team. On 22<sup>nd</sup> February 1998, a company (Mapei Sports Service s.r.l.) was set up to run the Centre. The Sports Lab and Physiotherapy Medical Clinic opened later, on 13<sup>th</sup> May. During the same year, work began on spreading information: a national conference on competitive walking was held on 26<sup>th</sup> June. In 1999 the Centre began its scientific output: the first results of research carried out at the Castellanza laboratories were presented at the annual conference of the

practised by top-class athletes, which facilitated scientific relations with the world's best-known researchers in physiology and sports science in general. A running programme was set up in 2004 – with the Co-Ver Mapei group – which resulted in plenty of importance experience being gained in this field too, crowned by winning performances that year at the Milan (Daniel Cheribo) and Florence (Benjamin Kiprotich) Marathons, followed by the Carpi Marathon in 2006 (Aniko Kalovics). A number of variously physically challenged athletes have also trained at the Castellanza facility, often setting records, such as the cyclists Giancarlo Cosio, Fabrizio Macchi and Alessandro Grassi, as well as the hand-biker Vittorio Podestà (2<sup>nd</sup> in the 2006 New York Marathon).

Mapei Sport Research Centre also provides help to athletes from various national teams: the Golf Federation in 2002-2003; the Cycling Federation from 1997-1999 (scientific cooperation is ongoing in various fields); the Australian Institute of Sport from 1999 to the present day; the Italian national men's and women's alpine skiing Teams since 2004.

All kinds of top sportsmen and sports-women from various sports currently work with the Mapei Sport Research Centre: over twenty professional cyclists (including Cadel Evans, the last cyclist to wear the pink jersey of the overall leader of the Tour of Italy over the "cubes" of the Mapei jersey), lots of champion mountain bikers (such as Tony Longo and Hannes Pallhuber from the Mapei-Merida team), the aforementioned skiers from Italian national men's and women's alpine skiing Teams (about 80), those from the Co-Ver Mapei Running Team, various professional football teams (including Sassuolo and Sampdoria), the freediving world record holder Gianluca Genoni, various fencers from the prestigious Società del Giardino in Milan.....together with hundreds of sportsmen and women of all ages and standards. Beside, over the last two years there has been a lot more clinical work in the fields of sports medi-

4



European College of Sports Science. In 2002 the Centre's experience gained working with cyclists and mountain bikers resulted in an international publication appearing in *Medicine and Science in Sports and Exercise*, the official journal of the American College of Sports Medicine and one of the world's leading reference in this sector. By the end of 2006, over a dozen articles had been published in scientific journals of international standing and there had also been about twice as many talks and posters at international conferences.

At the moment research is mainly being focused on cycling and football, but plenty of attention is also being given to the general issue of health among non-sportspeople, improving their fitness through physical exercise: for a number of years now a Corporate Physical Worksite Activity programme has been held at Mapei's two Company gyms in Milan and Robbiano di Mediglia.

The experience gained working with the Professional Cycling Team – which came to an end in 2002 – enabled powerful interaction between the research laboratory and sports as they are actually

ne and traumatology, with over 5,150 tests carried out and 3,300 people supported by the end of 2006.



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# A SUCCESSFULL CONFERENCE

An Audience of Over 300 at the Conference to Celebrate 10 years' Research at the Mapei Sports Centre

The Mapei Sports Centre commemorated ten years of research work at a conference held on 2<sup>nd</sup> December 2006 in the magnificent setting of the "Sala delle Colonne" at the "Leonardo Da Vinci" National Museum of Science and Technology in Milan. The audience of over 300 – sports authorities, researchers, sports doctors and technicians, and university students of Sport Sciences – included some of the most emblematic athletes in the history of the Mapei Professional Cycling Team, such as Franco Ballerini (the current sport director/trainer of the Italian National Cycling Team), Andrea Tafi, Daniele Nardello, Dario Cioni and Stefano Zanini, as well as other leading figures from the world of cycling (like Vittorio Adorni, Renato Di Rocco, Ernesto Colnago, Amedeo Colombo), soccer (Dr. Rodolfo Tavara; the trainer of the Italian National Team Claudio Gaudino; and the trainers of other professional squads) and other sports...the list is too long to mention even the most notable people in attendance. Prof. Aldo Sassi (Director of the Mapei Sports Research Centre) opened pro-



ceedings by remembering the key stages in the development of the facility. Giorgio Squinzi, CEO of the Mapei Group, underlined the importance the entire Group gives to research and the reasons why Mapei decided to adopt this approach to sport. An approach whose significance was also emphasized by Adriana Spazzoli, Head of Mapei S.p.A's Marketing Department and External Relations, whose speech talked about the links and connections between sport, communication and sponsorship. Dr. Claudio Pecci, Health Director of the Castellanza Centre, went on to discuss the future of sports medicine.

Franco Impellizzeri, Head of Research at the Mapei Sports Research Centre, outlined the first encouraging results of the Company's Corporate Worksite Physical Activity programme at Mapei's offices in Milan and at the plant in Robbiano di Mediglia (near Milan): cardio-circulation efficiency has increased by about 8% in all those who trained at least three times-a-week (including exercise outside the company gym), while people who trained less (or just



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*Photo 1.*  
From left, the former world cycling champion Vittorio Adorni, currently President of the Professional Cycling Council of the Union Cycliste Internationale; Adriana Spazzoli, Head of Mapei S.p.A's Marketing Department and External Relations, and Renato Di Rocco, President of the Italian Cycling Federation.

occasionally) saw no significant improvement in their cardio-respiratory parameters. It is, however, worth emphasising that most of those who took part in the programme saw improvements in their haematic profile (e.g. decrease in cholesterol level and increase in HDLs); this was particularly obvious in those who combined exercise and a healthy diet.

During the afternoon session chaired by Dr. Luigi Simonetto (Head of Mapei Sports' traumatology and orthopaedics service) there were speeches by researchers working at the Centre – Sassi and Impellizzeri were followed by Ermanno Rampinini (Head of the Laboratory) and Andrea Morelli (Head of the Biomechanics Lab) – and other speakers, chosen from the researchers with whom Mapei Sport works closely: Piero Mognoni (ITBA-CNR – Institute for Biomedical Technologies – Italian National Research Council – Milan), Samuele Marcora (University of Wales-



3

Bangor – United Kingdom), Carlo Castagna (Tor Vergata University – Rome), Nicola Maffiuletti (Schulthess Clinic – Zurich), and David Bishop (University of Western Australia).

Most of the talks focused on issues related to sports which the Castellanza Centre has researched into over recent years (cycling, running, football and skiing), illustrating the most significant results of studies carried out at the Mapei Sports Research Centre over the last few years.

RM

*Photo 2.*

Aldo Sassi, Director of the Mapei Sports Research Centre.

*Photo 3.*

Professor Piero Mognoni, physiologist at the ITBA CNR (Institute for Biomedical Technologies – Italian National Research Council) in Milan and consultant for Mapei Sports ever since the facility first came into operation.



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*Photo 4.*  
The speakers at the afternoon scientific session. From left: Ermanno Rampinini, Andrea Morelli, Carlo Castagna, Nicola Maffiuletti, Aldo Sassi, David Bishop, Franco M. Impellizzeri and Samuele Marcora.



# Symphonica Toscanini

MAPEI SPONSORS THE SYMPHONICA TOSCANINI ORCHESTRA, CONDUCTED BY LORIN MAAZEL

On November 28, 2006, the Symphonica Toscanini officially kicked off its world tour, "In the Footsteps of Toscanini... a Symphony of the Air," at a press conference held at the Parker Meridien Hotel in New York. This unique orchestra features something new on the Italian and international music scenes. It enjoys complete freedom and independence regarding its musical programme and performs all over Italy and the world, rather than remaining in a single permanent location. Mapei enthusiastically accepted the privilege of sharing with the orchestra the role of a major partner in a cultural project aimed at promoting the best music in the world.

Mapei and the Symphonica Toscanini Orchestra share constant determination to push forward, high technical competence, great creativity, continuous study and research, which make the association between art and technology a natural bond.

The newborn Symphonica Toscanini Orchestra includes 200 excellent musicians and is **conducted by Lorin Maazel**, one of the most important and representative living orchestra conductors. **Throughout 2007 the orchestra celebrates the 50<sup>th</sup> anniversary of Arturo Toscanini's death** by re-staging, on the Symphony of the Air concert tour, some of the memorable music tours and concerts that the Italian Maestro performed all over the world. As a major partner, Mapei will escort the Symphonica Toscanini Orchestra on this unforgettable music adventure, which

has on the schedule **4 international music tours** (in the USA, South-America, Japan and Israel) and **40 concerts in Europe**: these, by the way, are all countries where Mapei also enjoys a solid presence.

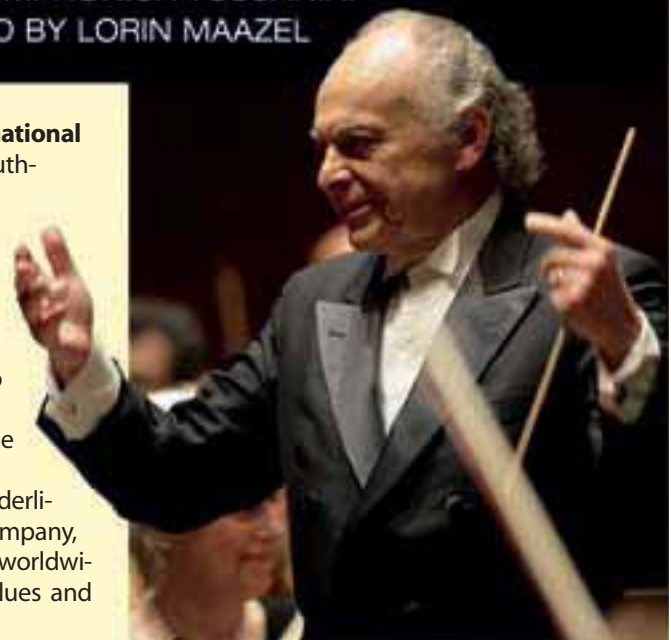
This **orchestra's international flavour** and its evident link to Toscanini are further elements that paved the way for a close relationship with Mapei.

The sponsorship powerfully underlines the Italian spirit of our Company, which is continuously growing worldwide while retaining its basic values and principles.

The support Mapei has always given to arts and culture is a corporate creed that originates far back in time.

The Company has always been emotionally linked to great music, and has been especially involved with the Teatro alla Scala in Milan for the past several years: as the theatre's partner in many events and activities (such as the celebrations of the lyric singer Renata Tebaldi and conductor Guido Cantelli, who, by the way, was one of Toscanini's most favourite students) and, on a very practical note, as the supplier of products and technologies, which contributed to the theatre's last renovation and restoration works.

Since 1984 Mapei has been one of the Teatro alla Scala's "supporters subscribers" and last year, on the 7<sup>th</sup> of December, partnered with the Teatro alla Scala for the grand opening of the Theatre's 2006/2007 artistic season.



And now a new adventure is beginning! More than 1,000 Mapei guests have already enjoyed the honour and the excitement of being present at the Symphonica Toscanini Orchestra's concerts in Toulouse (France), Bergamo (Italy), Rome and Seville (Spain).

As the Symphony of the Air began its international tour, over 500 Mapei guests enjoyed the concerts held in US cities such as Washington, Fairfax, New York, Chicago, and Wheaton, Lawrence, Costa Mesa, Berkeley and Las Vegas.

For information about the Orchestra's next concerts, please visit the website: [www.symphonicatoscanini.com](http://www.symphonicatoscanini.com).

Mapei and the Symphonica Toscanini Orchestra - a partnership featuring great unity of purpose from its very beginning - formed their bond just as the company celebrates its 70<sup>th</sup> anniversary.



LORIN MAAZEL AND  
GIORGIO SQUINZI  
RECALL THE  
MAESTRO'S MODEL  
FIGURE

The world celebrates Toscanini on the 50th anniversary of his demise



*Above: the concert for the Teatro alla Scala's re-opening on 11 May, 1946.*

*On the right: the concert's playbill.*

On January 16, 2007, the world celebrated the 50<sup>th</sup> anniversary of Arturo Toscanini's death, which took place in New York in 1957. Mapei partnered with the Symphonica Toscanini to honour the Maestro with an exceptional concert, performed in New York at the Lincoln Center's Avery Fisher Hall.

The New York Philharmonic Orchestra, which calls Avery Fisher Hall its home, and also conducted by Lorin Maazel, joined the Symphonica Toscanini in their performance dedicated to the great Italian orchestra conductor's memory.

#### Maazel's Recollections

Maazel's long and prestigious career enjoys a special relation with Toscanini's figure due to a number of intense recollections and emotions. Maazel is fond of recalling: "Toscanini told me 'God bless you,' caressing my head in a fatherly way. I was 11 years old and he looked like a giant to me. To my eyes, he was like a God and I was struck by the fact that he personally acknowledged me, even if only for a few minutes." This unforgettable event

marked Maazel's career, which was, in some way, itself "blessed" by the Maestro. In 1941 Toscanini attended a then young boy Maazel's conduction of a concert rehearsal performed by the NBC Symphonic Orchestra (which had been founded in 1937 as a vehicle for conductor Toscanini).

Throughout this year Maazel and the Symphonica Toscanini Orchestra will be committed to honour the exceptional Italian conductor with an intense concert schedule. Mapei decided to support this remarkable event, not only because it has always been emotionally linked to great music, but also because it intends to pay a passionate homage to Arturo Toscanini – an exceptional Italian who was renowned worldwide but reached the apex of his career in Milan, where he was official Conductor at the Teatro alla Scala. In addition, Milan is a city Toscanini was very fond of throughout his life



*The Teatro alla Scala in Milan with serious damages due to the Second World War bombing.*



On the 7<sup>th</sup> May, the Symphonica Toscanini played Beethoven's 9<sup>th</sup> Symphony to celebrate the 50<sup>th</sup> anniversary of the Treaty of Rome, which established the European Economic Community.

and the city where he is buried, in the Monumentale cemetery.

### Giorgio Squinzi's emotions

Toscanini's genius, international value and fondness for Milan are not the only things that closely link Mapei to this exceptional Maestro.

The Company's founder, Rodolfo Squinzi, and his son Giorgio, Mapei's CEO, have personal memories and intense feelings related to Toscanini, which make this celebration and the Company's partnership with the Symphonica Toscanini especially remarkable.

Giorgio Squinzi movingly recalls Toscanini: "My father Rodolfo was especially fond of Toscanini, not only for his talent as an orchestra conductor, but also for his symbolic value. For those belonging to my father's generation, Toscanini embodied political integrity in opposition to the main conformism of his times.

When I was only three years old" Squinzi says, "my father took me to the concert conducted by Toscanini on the occasion of the Teatro alla Scala's re-opening in 1946. Needless to say, I only keep a vague recollection of this event; but my father mentioned it to me many times afterwards.

What I most clearly remember is the Milanese people's participation in Toscanini's funeral: they invaded the Duomo Square when his body arrived in Milan one month after his death, which happened on 16 January, 1957. The citizens of Milan deeply loved

Toscanini and considered him a real Milanese, even if he was born in Parma, since they had known and appreciated him first as the Artistic Director and Main Conductor of the Teatro alla Scala and later, after his return from the USA, as the Conductor of the theatre's re-opening concert."

The Squinzi family's endless love for music, for Milan and for the Teatro alla Scala is a constantly rewarding feeling, making Mapei feel proud of supporting prestigious symphonic orchestras, such as the one conducted by Maazel, as well as of its contribution, with its products and technologies, to the Teatro alla Scala building's last renovation and restoration works.

### Symphonica Toscanini's celebrations

Throughout 2007 the Symphonica Toscanini will follow in the footsteps of orchestral tours Toscanini led during his life in order to contribute to a better understanding of both his figure and his age, a world which witnessed Mapei's birth and growth.

Celebrations began in the prestigious location of the Italian Embassy in Washington, on January 11<sup>th</sup>.

The event took place also thanks to the Italian Ambassador (and host) Gianni Castellaneta's strong determination. The Symphonica Toscanini orchestra successfully performed a number of musical pieces by several composers (most of them being Italian), to an audience of Washington VIPs and key figures from the local political, cultural

and entertainment world.

The Symphonica Toscanini's American tour reached a high point during a special performance in New York, in the Avery Fisher Hall at the Lincoln Center, on the 16<sup>th</sup> of January.

On this occasion, the orchestra commemorated Arturo Toscanini's death in a joint-performance with the New York Philharmonic Orchestra, which Toscanini conducted from 1928 to 1936.

The extraordinary success of this performance is well portrayed by an Italian newspaper's heading reading: "A Napoleon-sized Maazel thrilled New York". Maazel's conduction was indeed extraordinary, and the public replied with an enthusiastic ovation. Maazel dedicated an encore to the Toscanini baton that had been officially given to him a few hours earlier at the New York Metropolitan Opera.

The Symphonica Toscanini's concerts in the USA go on with a music project devoted to Ludwig van Beethoven.

In April and May, the orchestra plays all his nine symphonies at the Conciliazione Auditorium in Rome, honouring Toscanini's extraordinary conduction of these music pieces, which to this day is still a milestone in the history of orchestra conduction.

In July the Symphonica Toscanini will play Giuseppe Verdi's *Requiem Mass* in Busseto (near Parma, Italy), Verdi's hometown. In 1913 Toscanini spent four months in Busseto to celebrate the 100<sup>th</sup> anniversary of this beloved composer's birth by conducting several music performances and two operas: *Falstaff* and *Traviata*.

To celebrate Arturo Toscanini's holiday and rest times in Isolino San Giovanni (later renamed as Isolino Toscanini) on the Lago Maggiore lakeside, in the beginning of August 2007 an artificial isle will be built on the lake to host the Symphonica Toscanini orchestra and the choir performing Verdi's *Aida* and *Requiem Mass*. These pieces will all be performed again during the Symphonica Toscanini's tour in South America, where the 19-year-old Toscanini made his debut with *Aida* and began his great conductor career.

Another remarkable date of the Symphony of the Air project is the tour's final concert, which is scheduled for the end of 2007 in Israel.

The event is intended to celebrate Toscanini's 1937 conduction of the first concert of the Palestinian Orchestra, today called Israel Philharmonic Orchestra.





# MAPEI FOR THE GREAT MUSIC

MAPEI SPONSORS  
THE SYMPHONICA TOSCANINI ORCHESTRA  
CONDUCTED BY LORIN MAAZEL

A PARTNERSHIP FEATURING GREAT UNITY  
OF PURPOSES SINCE ITS VERY BEGINNING

MAPEI AND THE SYMPHONICA TOSCANINI ORCHESTRA SHARE  
THE FOLLOWING VALUES:

DETERMINATION TO PURSUE EXCELLENCE,  
TECHNICAL COMPETENCE,  
CAREFUL MANAGEMENT OF HUMAN RESOURCES  
AND INTERNATIONAL SPIRIT

SYMPHONY OF THE AIR IN THE FOOTSTEPS OF ARTURO TOSCANINI  
ON THE 50<sup>TH</sup> ANNIVERSARY OF HIS DEMISE  
TOUR 2007

THIS IS MUCH MORE THAN A TOUR'S NAME  
IT IS CELEBRATION  
AND ACKNOWLEDGMENT

FOR FURTHER INFORMATION ON THE SYMPHONICA TOSCANINI ORCHESTRA'S CONCERTS  
PLEASE VISIT THE WEB SITE [WWW.SYMPHONICATOSCANINI.COM](http://WWW.SYMPHONICATOSCANINI.COM)





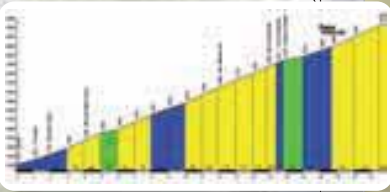
## Programme

- 8.45 a.m. **Half Marathon**  
(for National Athletic Associations' members only)
- 9.15 a.m. **Re Stelvio-Mapei Competitive Cycle Race – Female**  
**23<sup>rd</sup> edition** (for UDACE and National Athletic Associations' members only)
- 9.30 a.m. **Re Stelvio-Mapei Competitive Cycle Race – Male**  
**23<sup>rd</sup> edition** (for UDACE and National Athletic Associations' members only)  
**Mapei Bike Ride** (for all those interested, alongside champions of the former Mapei Professional Cycling Team and other sport VIPs)
- 9.40 a.m. **Running Race Open to All**
- 2.00 p.m. **Timelimit of the Races**
- 4.00 p.m. **Prize-giving Ceremony** in Piazza Kuerc in Bormio

A free training schedule for runners and cyclists is available from: [www.mapeisport.it](http://www.mapeisport.it).

## Course

A 21.097 km climb from BORMIO (1,225 m a.s.l.) to the STELVIO PASS (2,758 m a.s.l.)  
Difference in level: 1,533 m.  
**Starting Line: via al Forte (Bormio City Centre)**  
**From 2.00 p.m. a shuttle bus service will be available from the Stelvio Pass to Bormio.**



## Entry fee

- 20 euros\***  
including **Mapei Day jersey**
- Clothes transport service up to the Stelvio Pass
  - Refreshment points alongside the course and at the finish line
  - Shuttle bus service from the Stelvio Pass to Bormio (for both bicycles and athletes)
  - Mapei Day medal
  - Photo and race certificate (both available and downloadable at [www.mapeiday.com](http://www.mapeiday.com))
  - personal time of the athletes (service supplied by Winning Time)

**N.B. FREE ENTRY**  
**on the website [www.mapeiday.com](http://www.mapeiday.com)** for Mapei customers using their customer code and for readers of Realtà Mapei using their Realtà Mapei code.

\*For entries from 16<sup>th</sup> April to 15<sup>th</sup> June. From 16<sup>th</sup> June to 10<sup>th</sup> July the entry fee is **30 euros**.

## Entries

**from 16<sup>th</sup> April to 10<sup>th</sup> July**  
at the web site [www.winningtime.com](http://www.winningtime.com) or else at the Unione Sportiva Bormiese Headquarters via Manzoni - Bormio

## Hotel Information

Please contact Consorzio Turistico Alta Valtellina phone number: +39 0342 902765 e-mail: [info@altavaltellina.so.it](mailto:info@altavaltellina.so.it)  
Special hotel prices for accommodation and lunch at a number of hotels and restaurants.



The event is supported by the Bormio City Council  
With the contribution of Contea Sport – Bormio



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