

INTERNATIONAL

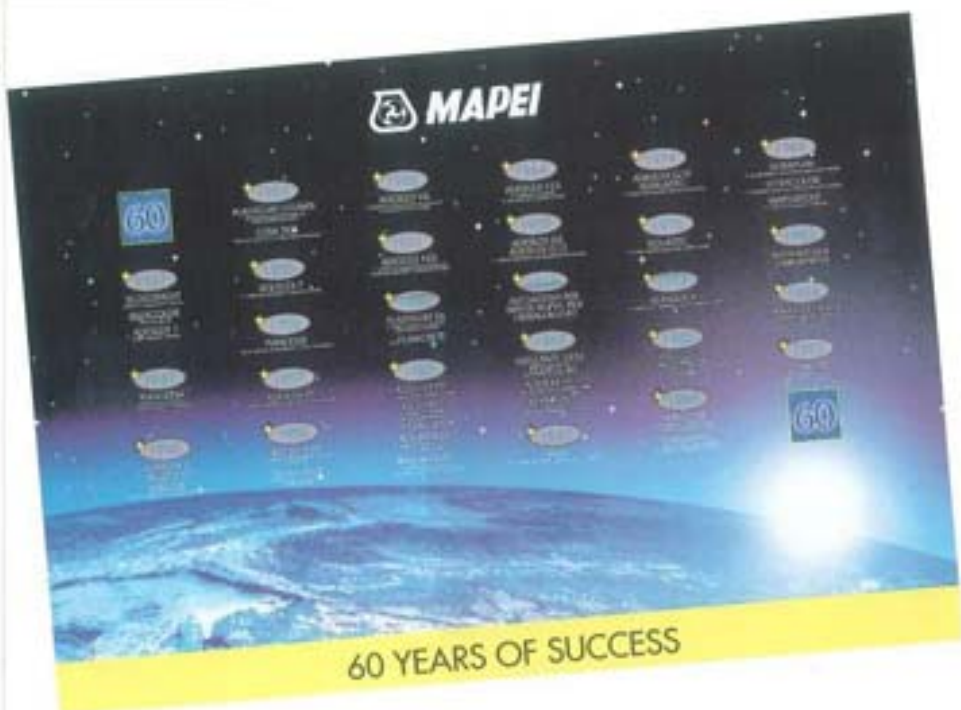
REALTĂ MAPEI

M A P E I

60

1937 • 1997

4



Inside Realtà Mapei International you will find a poster of the most significant products of our company in our *60 years* of growth. It is a nice way to share with our readers these *60 years* of success.

EDITOR/DIRETTORE RESPONSABILE
ENGLISH EDITING AND TRANSLATION/TRADUZIONE
EDITORIAL ASSISTANTS/SEGRETERIA DI REDAZIONE

Adriana Spazzoli
 Natasha Calandrino, Robert Smith, Mara Ronchetti
 Raffaella Busecchian, Anna Calcaterra, Carla Fini

GRAPHIC DESIGN AND ART DIRECTION/PROGETTO GRAFICO - IMPAGINAZIONE
COLOUR SEPARATIONS AND LAYOUTS/FOTOLITO
PRINTING/STAMPA

Magazine - Milano (Italy)
 Overscan - Milano (Italy)
 Arti Grafiche Beta -
 Milano (Italy)

Published and edited by/Direzione e redazione

MAPEI
 Via Cafiero, 22 - 20158 Milano (Italy)
 tel. 2/376731 - fax 2/37673214
 INTERNET: <http://www.mapei.it>
 E-mail: mapei@mapei.it

EDITOR/EDITORE

MAPEI S.p.A.

Realtà Mapei - Bimonthly magazine - Registered by the Tribunal of Milan n. 363/20.5.1991
 Realtà Mapei International is published 4 times per year

All articles published in this issue can be reproduced, with the authorization of the publisher, quoting the source.



TEAMWORK

Our story	page 4
A constant growth	page 6
Mapei in Italy and abroad	page 7

PROJECTS

Construction specialists	page 10
--------------------------	---------

PRODUCT SPOTLIGHT

Four product lines	page 16
--------------------	---------

TECHNICAL ASSISTANCE

Continuous training and service at its best	page 18
--	---------

COMMUNICATION

Dedicated marketing	page 20
---------------------	---------

MAPEI SPORT DIVISION

Passion for sport	page 22
-------------------	---------

RESEARCH

Safety, environment and health in the Mapei Group	page 24
"Leading edge" research	page 26

PRODUCTION

Producing the highest quality	page 30
-------------------------------	---------

FOR A SUSTAINABLE DEVELOPMENT

The Responsible Care program	page 32
"Open house" at Mediglia	page 34
Mapei: our 1 st Environmental Report	page 36
"Open house" at Villadossola	page 40

BEYOND THE YEAR 2000

The projects of the year 2000	page 43
Mapei Group gets organised for the year 2000	

The names of the products should not correspond to the North American production. For such information call 001-800-42 Mapei North America.

1937

19



Mapei is here

This will be the theme of this issue of *Realta' Mapei International*, a special issue completely dedicated to our company to celebrate, together with our readers, 60 years of growth.

1937 - 1997: sixty years in which the Squinzi family, with the help of highly qualified employees, has transformed a small company, that produced coloured plasters, into a multinational world leading producer of adhesives for flooring and coverings.



There have been three fundamental entrepreneurial principles at the base of this development: product specialisation, the quality of research and internationalisation of the activity.

A development facilitated by first-class technical assistance, permanent training and functional logistics.

Mapei's constant growth has always happened while respecting for the environment and this is demonstrated in the first Mapei Environmental Report presented this year at the Robbiano di Mediglia (MI) plant, during the "Open House" event.

Now, let us walk together through the challenges faced, the successes achieved, the objectives reached and the projects planned for the future. We thank everyone who has worked together with us and has helped us to reach these all important objectives. For now, we wish everybody a Happy 1998 marked with the slogan "Winning together!"

The Editor
Adriana Spazzoli

OUR STORY

From a small company on the outskirts of Milan to a multinational world leader in the market of adhesives and chemical products for the building industry.



Sixty years ago Mapei was a small company on the outskirts of Milan, dealing with paints, plasters and materials for external and internal coverings for buildings, hospitals and airports.

Then came the idea: concentrate on a particular market niche, the one for flooring installation products. An idea that has had great success: today that small company has become a multinational organization that in its entire history has never closed a balance in the red and has never applied for any assistance in the form of cash subsidies from the government.

Its story is also the story of an Italian family, the Squinzi, two generations of entrepreneurs: Rodolfo, the founder, and Giorgio, the son.

On the 12th of February 1937 Rodolfo Squinzi, the ninth amongst his eleven brothers and sisters, founded Mapei in Milan. The name Mapei means "Materiali Ausiliari Per l'Edilizia e Per l'Industria"

("Auxiliary Materials for Construction and Industry"). Although not yet thirty, but having worked from the age of twelve - the time of his father's death - on building construction sites, he started his own company, understanding what the market required. In fact, he started to produce, with only three employees, coloured paints and casein-based adhesives.

The outbreak of the Second World War stopped all activities. When peace was restored, Squinzi went back to producing

PHOTO 1



Photo 1
1938 - Ospedale Maggiore, Milan - Italy
Façades covered with SILEXCEMENT, fire protective and waterproofing paint. Staircase covered with QUARZOLITE, decorative plastic coating.

PHOTO 2



Photo 2
1949 - Villa Reale (The Royal Palace), Milan - Italy
Façades covered with SILEXCOLOR, silicite-based stone paint for external use.

Photo 3

1956 - The Pirelli Skyscraper, Milan - Italy.
Eighty thousand square metres of linoleum and Pirelli rubber floorings, installed with ADESILEX 3 on masonite panels. Designed by Gio Ponti, it is the first example of floating floors in Italy.

PHOTO 4



Photo 4
1964 - MM1 subway, Milan - Italy
Ceilings and floors covered in cement-renders with coloured additives and with PLASTIGUM 56 (today known as PLANICRETE)



Photo 5
1986 - Financial Plaza,
Phoenix - USA

Fountain in enameled
porcelain stoneware
installed with
KERABOND +
ISOLASTIC. Grouting
carried out with
KERACOLOR +
FUGOLASTIC.

PHOTO 5



Photo 6
1972 - Olympic
swimming pool,
Munich - Germany

Three thousand square
metres of Freudenberg
studded-rubber
installed with
ADESILEX G12,
epoxy based adhesive.

plasters and paints. Later he began to concentrate mainly on adhesives for construction, ending up specialising in a well defined market niche: that of products for the installation of floorings. Initially linoleum, then ceramic tiles, carpet, PVC, natural stones. In the Sixties, when the Italian ceramic tile market rose sharply, Mapei was ready to seize the opportunity and offer standard and innovative products. Up to that time

PHOTO 6



ceramic floor installers were forced to mix every time on site the traditional cement mortar they needed; today they find instead a more advantageous product with a quicker installation time and improved results. From this development Mapei

started to deal with other types of adhesives, sealers and products such as diversified special mortars, waterproofers, concrete additives, giving clients first-class products, technical assistance and service. Apart from specialising in chemicals for the construction market, Squinzi brought about a constant improvement to the products thanks to a research laboratory which, with time, and with the assistance of his son Giorgio, an

industrial chemistry graduate, became more and more innovative. Now, Mapei has four laboratories in Europe and North America that have become focal points for product development, while working in close with international universities and scientific institutes.

Mapei's research is focused on high quality, but does not ignore safety and environmental issues, up to the point of codifying in 1996, inside an environmental rule-book, the principles followed by the company regarding safety and the tools used to observe those principles to the maximum degree. In 1978 Rodolfo Squinzi started the process of Mapei's internationalisation by opening a factory in Canada. Following his father's death in November 1984, Giorgio Squinzi pursued the expansion into Europe, North America and the Far East concentrating on the opening of production plants at strategic points of the world's building industry. This produced a practically vertical increase in sales, which over the last ten years have been multiplied by a factor of ten.

Photo 7
1994 - Zaventem
Airport, Brussels -
Belgium

125.000 square
metres of granite
flooring, installed
with GRANIRAPID
on MAPECEM
screeds. The largest
building site with
natural stones.

Of the nineteen Mapei plants only four are in Italy, a clear strategy for total competitiveness in a world market based on technology and marketing. In 1994 Mapei, by now a small multinational world leader in its field, acquired the Italian "white glue company" Vinavil. Being one of Vinavil's most important clients, this was an important integration for Mapei in the world of strategic raw materials (vinyl acetate polymers), enabling Mapei to widen its range of products. This is the beginning of a new phase of development. □



MAPEI'S HEAD OFFICE AND PLANTS IN ITALY.....



Mapei SpA head office and research and development center - Milan, Via Cafiero 22

Mapei's headquarters is in Milan, Italy. Recently it has split leaving in the old head office in Via Cafiero general management and the research laboratories, and transferring to a nearby seven-storey building the commercial offices, the administration offices and the technical assistance. In the vicinity of Milan, at Robbiano di Mediglia, Mapei's main production unit is located.



Head office of the commercial and administration offices, marketing and technical assistance - Mapei SpA Milan - Viale Jenner 4



Vinavil SpA Plant - Island 12 Petrochemical - Ravenna

Plant and research center - Vinavil SpA Villadossola (Verbania)



Mapei SpA plant - Robbiano di Mediglia (Milan)



Mapei Centro Sud SpA head office and plant - Latina

...AND ABROAD

The Mapei Group, besides the 4 plants in Italy, has 15 others spread around the world: 5 in Europe, 7 in North America, 2 in South America and 1 in the Far East.



- 1) Ibermapel Sa plant - Amposta - Spain
- 2) Mapei France SA plant - Montgru Saint Hilaire - France
- 3) Mapei GmbH head office and plant- Traismaier (Wien) - Austria
- 4) Mapei France SA head office and plant - Saint Alban (Toulouse) - France

- 5) Mapei Benelux Sa head office and warehouse - Grâce-Hollogne (Liege) - Belgium





6) Mapei Inc. head office, plant and research center - (Montreal) - Canada
 7) Mapei Inc. Vancouver plant - Canada
 8) Mapei Corp. - Phoenix plant - USA
 9) Mapei Corp. head office, plant and research center - Garland (Dallas) - USA

10) Mapei Corp. plant - West Chicago (Chicago) - USA
 11) Mapei Corp. plant - Fort Lauderdale - USA
 12) Mapei Australia Pty Ltd. head office and warehouse - Southport - Australia
 13) Mapei Far East Pte Ltd. head office and warehouse - Singapore



CONSTRUCTION SPECIALISTS THE BUILDING SITES GIVE US PRESTIGE

From 1937 prestigious building sites are the proof of the quality of Mapei's products. In these pages some of the most recent works.

Mapei is the world leader in the production of adhesives and complementary products for the installation of floorings and all kind of wall coverings: from ceramic tiles to natural stones, from carpet to linoleum, from vinyl products to parquet. The company is also specialised in other chemical products for the building industry such as waterproofers, special mortars, additives for concrete and products for the restoration of historic buildings.

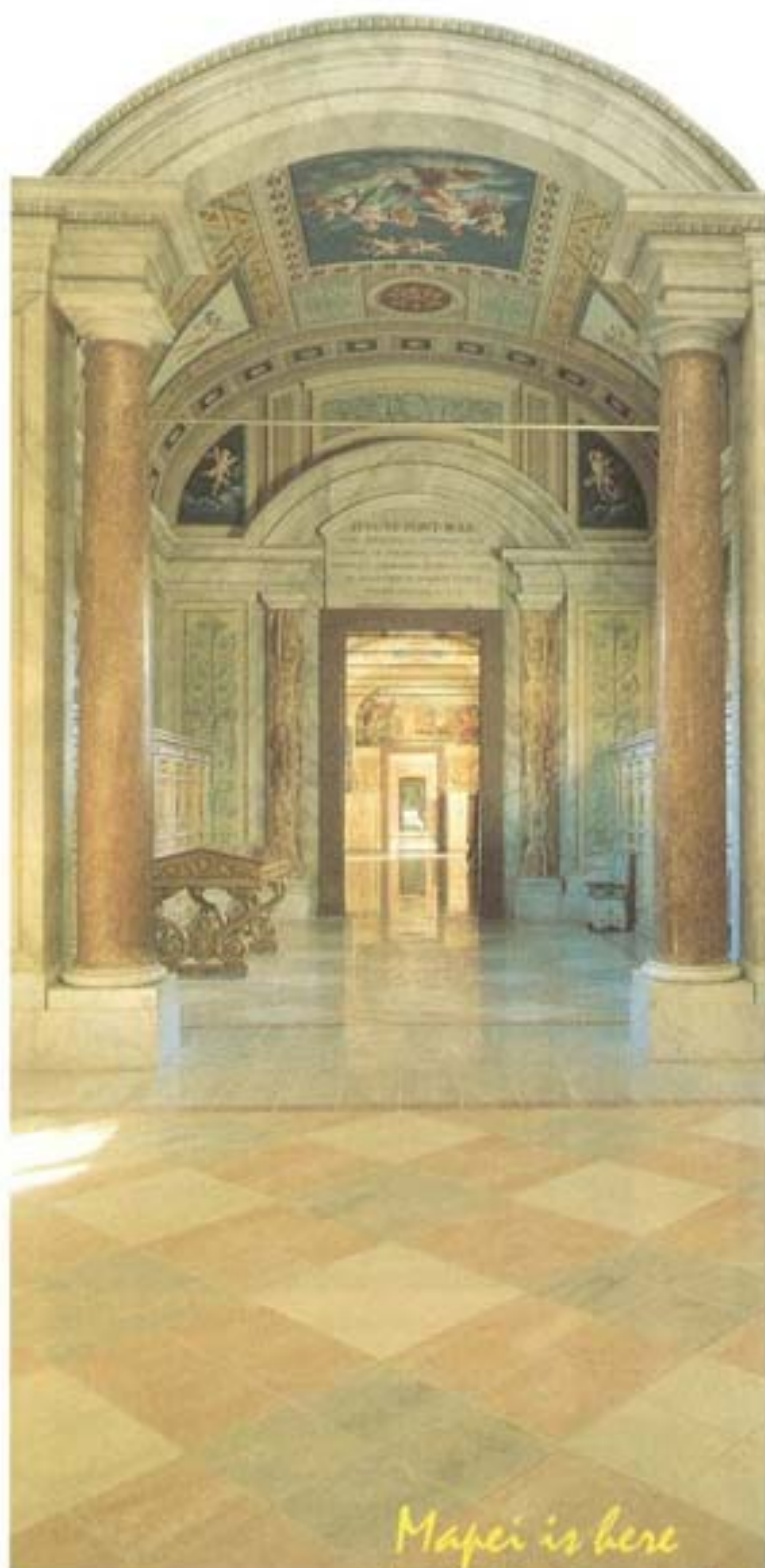
Mapei is an international company able to offer to its clients products with a high technological content, a reasonable quality-price ratio and is able to guarantee the best possible assistance in every corner of the world, thanks to its technology, its people, its innovative products. The Quality Certification ISO 9001, obtained in 1995, represents a valid confirmation of its good company procedures. In particular, Mapei is able to design specific solutions for each client. From being exclusively a manufacturing company Mapei has in fact become also a company able to provide a service that can provide effective solutions to all building site problems. □



Mapei is here

**Kuwait City
communication tower**

*Symbol of Kuwait's
liberation: 372 metres high of
concrete covered with 14,000
square metres of impervious
tiles installed with
KERABOND + ISOLASTIC
and grouted with
KERACOLOR*



Vatican Museums

The 1,700 square metres of the Sistine Galleries, after undergoing the wear and tear of the fifteen thousand visitors walk the corridors every day to enter the Vatican Museums, have been renewed by installing porcelain tiles in harmony with the original stone floorings, using "Mapei's record products": MAPECEM, GRANIRAPID and ULTRACOLOR



Storebaelt Halsskov bridge - Denmark

The challenge of the longest suspension bridge in Europe was met with Mapei's products. The Danish islands were united with continental Europe thanks to the performance of MAPEFILL and MAPELASTIC.

Mapei's solutions for great projects





Clinica del Lavoro - Pavia - Italy
 For the installation of floorings and coverings of the Clinica del Lavoro in Pavia, Mapei's adhesives for resilients have been used: ADESIVEX F57 for woven-non-woven fabrics, ADESILEX VS45 for PVC sheets, ADESILEX V4 for the installation of vinyl floorings and ADESILEX LP for rubber.

Mapei is here



RNIA ring road - Geneva - Switzerland
 More than 80 installers have worked for two months on the installation of 440.000 tiles with GRANIRAPID.



Mapei is here

Gio Ponti fountain - Milan - Italy
 Made in the Fifties and dismantled for the construction of the Milan subway, Gio Ponti's fountain has undergone an attentive restoration. Even art has required Mapei's products such as the superplasticiser MAPEFLUID NS and the products for the installation of ceramic tiles, GRANIRAPID and KERACOLOR.



Villa Medici - Florence - Italy
 The mortars of the MAPE-ANTIQUÉ line have allowed the restoration of a highly compromised building, guaranteeing a quality intervention.



Mapei is here



Mapei is here

**Funerary monument for Rudolf Nureyev
Paris - France**

An unusual realisation, but undoubtedly scenographic, to remember the greatest dancer of this century: a mosaic reproduction of a kilim carpet. The work has been realised with special tiles bonded to the support with KERALASTIC.



Mapei is here

**Palazzo in the historic center of
Pisa - Italy**

Extreme quality and durability for a restoration intervention thanks to Mapei's advanced products: in the photograph the execution of the plastering of MAPE-ANTIQUE CC and in the magnified area you can see the thickness of the new plaster.

Changi Airport - Singapore

The porcelain tiles were installed with GRANIRAPID and the expansion joints have been carried out with MAPEFLEX PU21.



Mapei is here



Mapei is here

**Repaving of XXV Aprile square in
Massa Carrara (MS) - Italy**

This project, designed to be compatible with a group of buildings in the Liberty style, planned paving divided into eight squares surrounded by a frame in Serena Stone, installed with KERALASTIC, grouted with ULTRACOLOR and sealed with MAPEFLEX PU21.

Ceramic tile and natural stone line

Ceramic, porcelain and agglomerated or natural stone tiles are materials largely used for floors and walls, almost everywhere: airports, universities commercial centres, swimming-pools and in our homes. They exhibit extremely diverse and advanced characteristics, colours and performance. Consequently, there is always a need for new products for their installation, that have more sophisticated formulations but are easier to use and are capable of lasting a longer time.



Below, more than 30.000 square metres of 7 mm thick granite tiles installed on MAPECEM screeds with KERALASTIC. The grout joints have been filled with ULTRACOLOR

FOUR PRODUCT LINES

Mapei's products, adhesives and chemical products for construction, contribute to the quality of life, modifying and improving the esthetics, the comfort and the safety of the environment where we live. Mapei's products in fact, are everywhere in our homes, under floor coverings, in the concrete of pillars or on the surfaces of historic buildings, help often invisible but always inseparable from the elements by which they assure the cohesion through their adhesive force. Besides their solidity and stability, the wide range of performances and colours that some of them can offer, these products also constitute a help and a stimulus to architects and designers for the realisation of more beautiful, healthy and safe buildings.



Commercial Centre Mall of America - Bloomington (Minnesota) - USA

Above, more than 400.000 square metres designed for shopping and social meetings. Substrates, adhesives for installation, grouts for ceramic tiles and natural stones of any type. A Mapei solution to last in time.



Adhesives and sealers, a solution for any requirements. Thanks to the considerable efforts in research, Mapei has a complete range of products from which to choose the most suitable method of installation, in any situation and anywhere in the world. A range that includes cement adhesives, paste adhesives, hydraulic binders for screeds, primers, levelling compounds, grouts, sealers and other complementary products that can be used even in situations that used to be considered technically impossible giving scope for a wide range of possibilities:

- repair work without the expense of demolition
- greater speed of operation that means quicker completion times;
- a progressive elimination of dangerous products from building sites;
- the use of grouts and joints, that are not only functional but are also decorative elements.



Mapei is here

Denver International Airport - Denver (Colorado) - USA

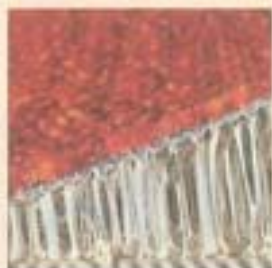
Wood and resilient textile line

Carpet, linoleum, vinyl products, rubber, cork and parquet are flexible, thin and warm.

Therefore they are used for schools, hospitals, offices, homes and on ships. To some degree they can be found everywhere.

Being thin and resilient they require particularly resistant and perfectly smooth substrates and high performance shock-resistant adhesives.

Mapei has a product, a system and a solution for every application.



Carpet and PVC on one of the world's most prestigious ships were installed with AQUACOL T, the solvent free adhesive in water dispersion.

The major athletic events all over the world are performed on rubber tracks installed with ADESILEX G19 polyurethane adhesive. Mapei solutions for sport.

Ecological chemicals: the ECO adhesives

The ECO line of adhesives in water dispersion, are solvent free and exhibit extremely low levels of volatile organic substances and have been launched by Mapei on the American market.

They are now available in Europe to gradually replace the traditional range of adhesives for wall and flooring coverings of every kind. Besides adhesives, Mapei can also offer a vast range of binders for screeds, primers, levelling compounds, waterproofers and other ancillary products. A range that has revolutionised construction methods.



This is the trademark of the ECO line.



The Olympic Stadium - Atlanta (Georgia) - USA



On the right, for the installation of parquet, Mapei offers a complete, rapid and secure system that includes screeds, primers, levelling compounds, and adhesives suitable for the diverse characteristics of wood.



Apartment in Florence - Italy



Cruise ship Costa Victoria



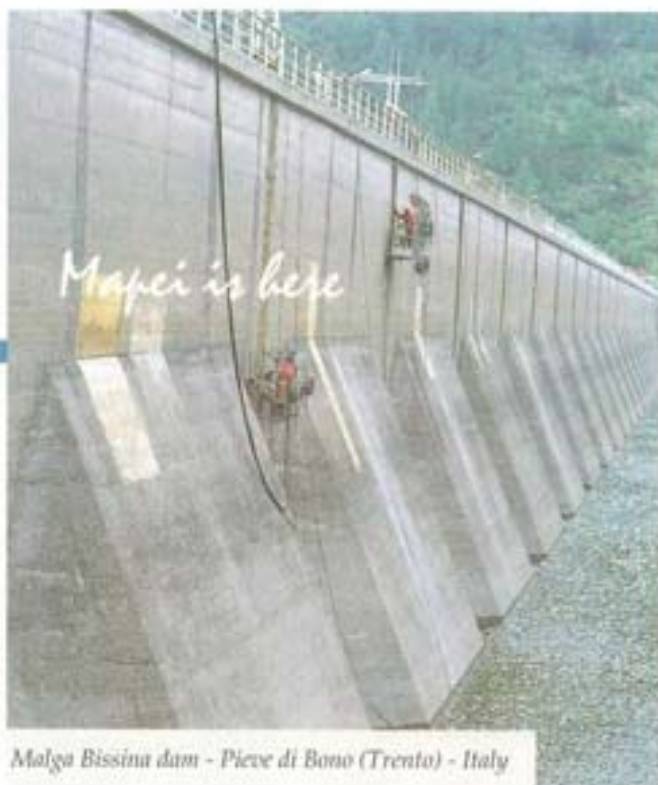
Building and major construction line

3

Since 1937, this line has played an important part in the history of Mapei. Concrete, once thought to be indestructible, is subject to a series of heavy chemical and atmospheric attacks which, in the long term, cause its deterioration. The rise in building costs means that it is always more practical to restore it. Even in very serious situations. The same applies to the masonry of historic buildings as in new constructions. Today, Mapei can offer the most appropriate selection of materials for every kind of restoration work.



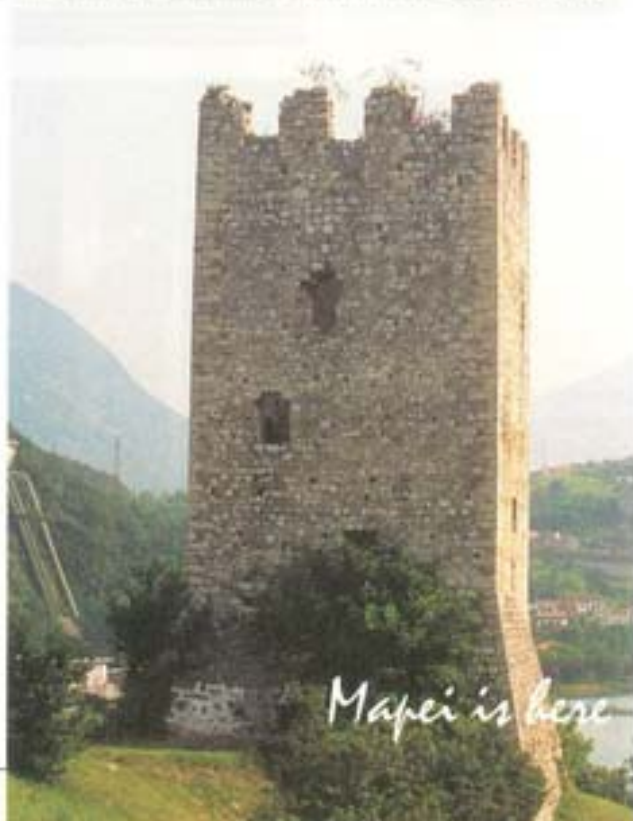
The deterioration of the concrete caused by atmospheric agents required restoration work using specific products such as MAPEGROUT THIXOTROPIC and MAPEFINISH. A Mapei solution for restoration and preservation.



Malga Bissina dam - Pieve di Bono (Trento) - Italy



The tower of San Floriano - Vittorio Veneto (Treviso) - Italy



Chemical products to solve any building problem

Thanks to sixty years of experience Mapei has an enormous range of chemical products for building and major construction works: hydraulic binders, ready-made mortars, waterproofing and protective agents, structural adhesives, flexible sealants, and special renders.

The right product for every situation; from dams to viaducts, from historic buildings to the constructions for the future. For this reason Mapei can answer any building or project requirement for the modern age as well as for restoration programs.

The restoration of this 15th century tower was achieved with the use of the MAPE-ANTIQUÉ product line. Mapei solutions to preserve tradition.

Mortar and concrete additives line

This is the latest range, launched in 1992.

A complete range, produced to ensure that concrete possesses all the essential requirements to meet the technological challenge of the new millennium.

The development of new additives and innovative technologies has already brought, for example, a considerable improvement in the mechanical performance of cement conglomerates. Today it is possible to reach resistance to compression strengths of up to 200 Mpa.



4

The distance between the concrete mixing equipment and the building site and the lengthy process of casting concrete are not a problem anymore. The superplasticiser MAPEFLUID X404 enables the preparation of fluid concrete conglomerates with a long workability time, without compromising the mechanical resistances during brief curing periods.

A paper factory - Toscolano Maderno (Brescia) - Italy



Telecom district office - Florence - Italy



Mapei is here

Highly sophisticated production

Hyperplasticisers, superplasticisers, air entraining agents, accelerating agents, anti-evaporation and release agents are developed for the purpose of increasing impermeability, durability, mechanical resistances; but, at the same time, of maintaining the workability of the concrete for the third millennium. The use of metallic and polymeric fibres improves the tenacity and the ductility of the material.

The use of elastic polymer-cement coverings to protect steel coverings extends the concrete life even in the most hostile environments and under the most serious working conditions. □

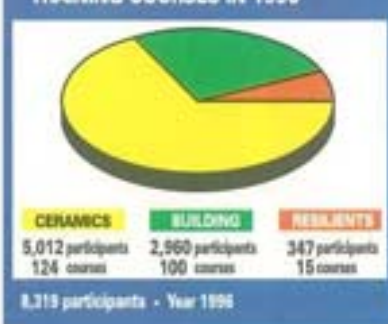
MAPEFLUID PZ500 based on the technology of micronised silicon-dioxide, is a superplasticiser additive that produces concretes with a high level of impermeability, strength and durability.

CONTINUOUS TRAINING AND SERVICE AT ITS BEST

A busy agenda of courses and seminars to deepen and update the knowledge of those who work in the sector: Mapei's Technical Assistance personnel are in the first rank also as instructors.

Training is a subject of great importance at Mapei. Continuous training for the employees; but, especially for the designers who serve the clients. Mapei organizes refresher and proficiency courses on the different techniques of installation, for retailers and installers, the people who really utilize the products. These courses, held by staff from the technical assistance departments of the individual associated companies, consist of practical demonstrations with the support of informative data and audio-visuals. Periodically, in collaboration with various individual professional bodies, Mapei organizes meetings for the designers and the site managers. These meetings are under the direction of experts and based on the most important subjects in the field, from mixture control to the restoration of historic buildings, from problems connected with concrete to the encapsulation of asbestos.

TRAINING COURSES IN 1996



One product, one brochure

Compiled according to the product line into four different files, the technical brochures are available in many languages and provide exhaustive documentation on each product. As well as being a guide to the use of a product, they also give information on its technical and physico-chemical characteristics, information which acts as a protective measure to safeguard the user. These instructions are also found in the safety sheets and on the packaging.



BUILDING CONGRESSES



GRANIRAPID

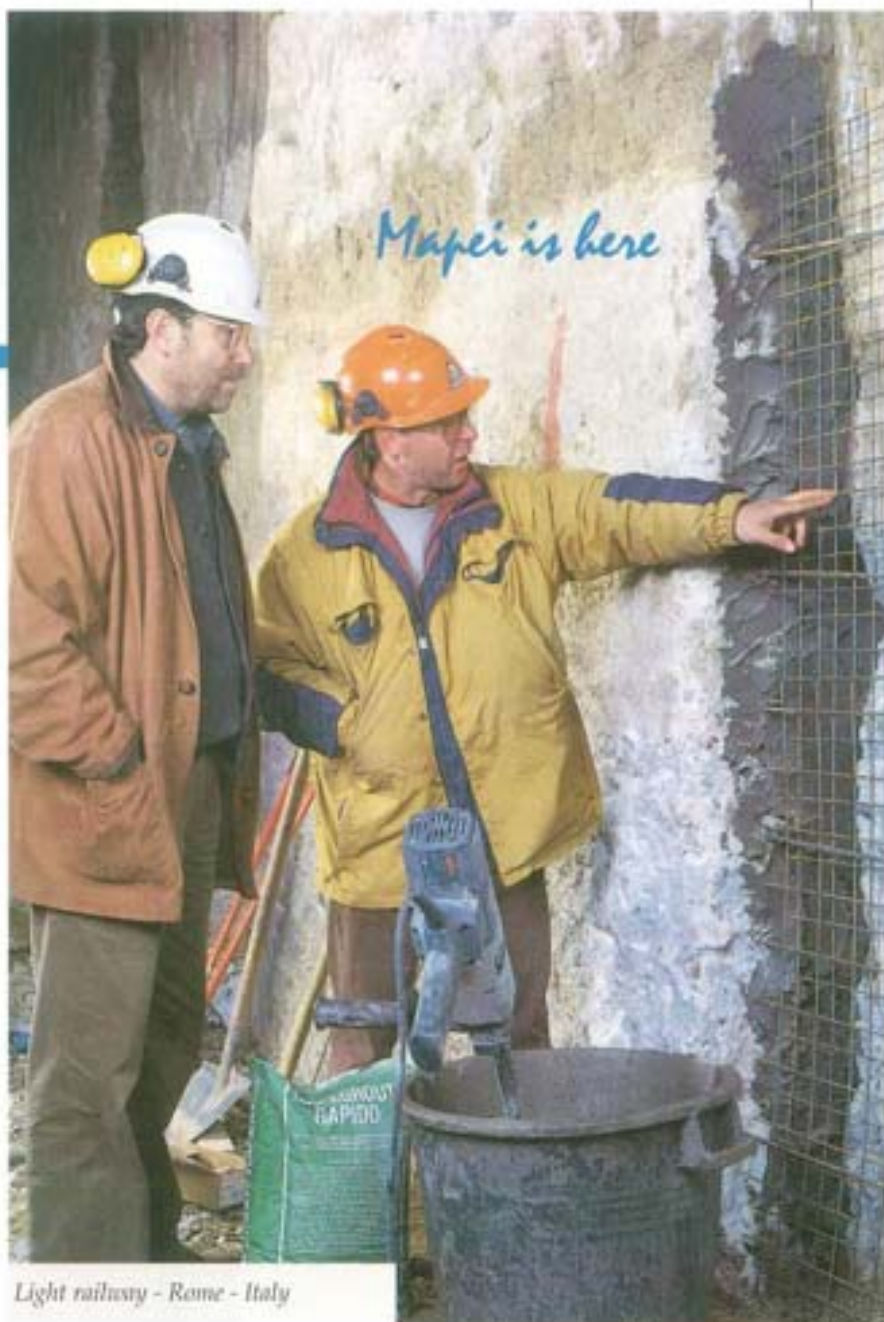
LIGNOBOND

MAPECEM

MAPEFLUID X404

MAPEBOND TISSOTROPICO

Whether before or after the sale of a product, the assistance given to the customer is one of Mapei's keys to success. Indeed, the client figures at the top of the list in the Mapei code of values. Telephone assistance in the most simple cases but, in more complicated situations, also on site assistance. This service is supplied in every corner of the world by highly qualified technicians who are expert in every sector. People who can show the client the correct way to use the products and how to solve problems which might spring-up when applying a particular product, and who will accept any requests for laboratory tests on materials. □

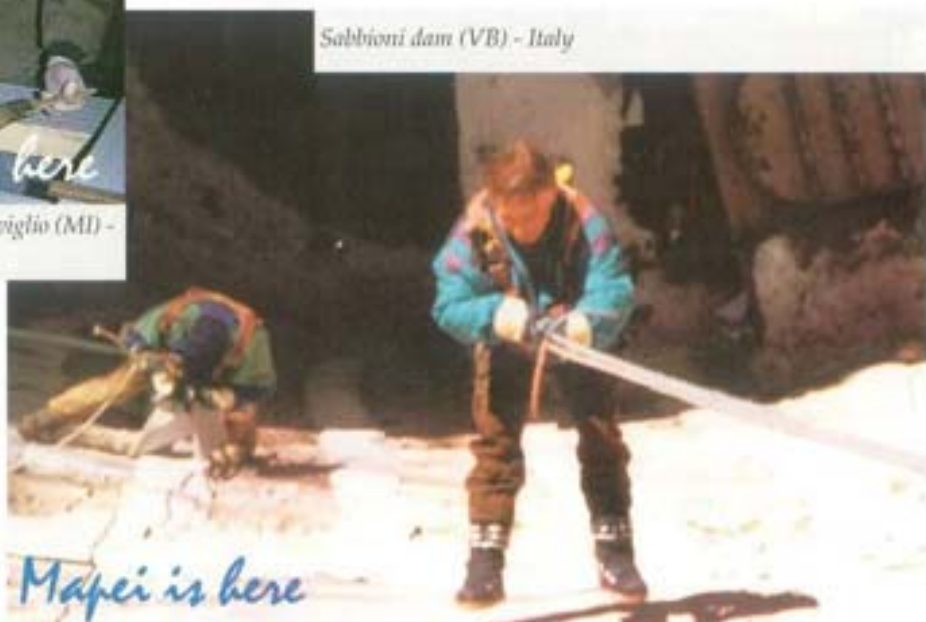


Light railway - Rome - Italy



Findus cold storage - Trezzano sul Naviglio (MI) - Italy

The Mapei technical assistants are ready to go into tunnels, climb dams and work in the Arctic temperature of a cold storage warehouse to guarantee service to the client.



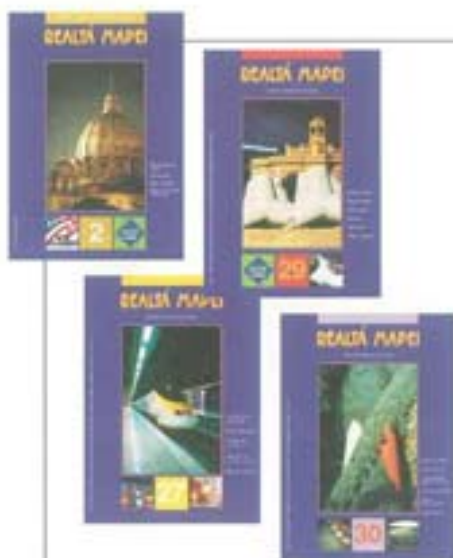
DEDICATED MARKETING



Mapei specialises in a market niche and consequently the products are directed at a specific target. Mapei prefers a very solid marketing policy; a strategy of specific marketing for each product line, each different market, each type of clientele, followed up by purposely designed operations and marketing tools. This means: few but well aimed advertising campaigns using posters and TV commercials; sponsorship tied to very important projects and also many practical initiatives for staying directly in touch with the clients - such as participation at trade fairs, held all over the world, a great deal of documentary material consisting of videocassettes and brochures for the different lines and products and our bimonthly magazine where general and technical topics for the construction market are dealt with. □



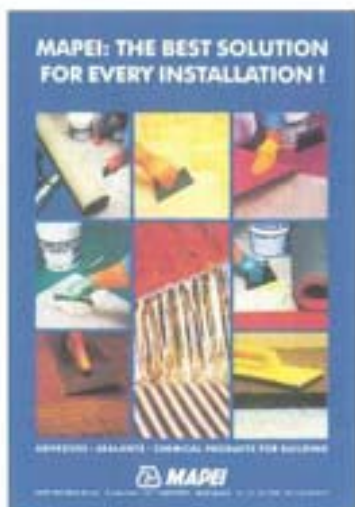
Bologna, Hannover, Las Vegas, Valencia, Basil, Budapest, Sidney, Singapore, Brussels ... From Europe to the Far East on to North America, Mapei is there with its own stand at the main exhibitions in its sector. A constant commitment to communication.



Sent to clients and designers who are subscribers, *Realta' Mapei* has reached its 33rd issue and the Italian version has a distribution of 85,000 copies per issue. The English language version of the magazine, called *Realta' Mapei International*, has a print run of 30,000 copies.



Mapei also has a rich video library where the installation techniques and the correct use of its products are illustrated. Many are the awards that Mapei has so far received. Amongst many the award won in 1994 at the Berlin World Festival of Industrial Film.



An entertaining and original way to promote Mapei products is through printed publicity campaigns. The Group has also made a series of TV commercials over the last few years.



Every Mapei package contains an informative summary in accordance with regulations of the country where the product is to be sold. In the tables are reported identifying data of the product together with instructions for application and the final performance.



PASSION FOR SPORT

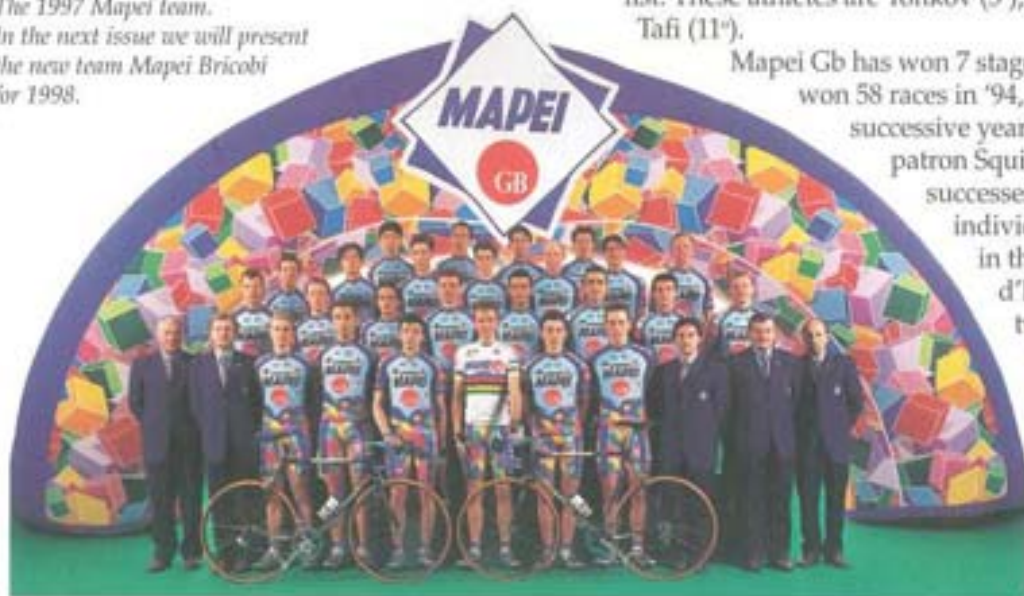


The centenary Paris-Roubaix, the most beautiful victory!

The Squinzi family have cycling in their blood. The founder of Mapei, Rodolfo, used to get up at 4 a.m., two hours before going to work, to train. He was already racing in the 20's at the time of Ottavio Bottecchia and Alfredo Binda. He was a good long-distance rider and sometimes he won even though he lacked a final sprint.

This passion was transmitted to his son Giorgio, who despite limiting himself to amateur cycling, had always dreamt of having a super team that could bring victory to the Mapei colours, ever since the time he used to cheer for Fausto Coppi. He also wanted to create a Research Centre for sport. Both these dreams have come true: sport seen as a form of communication and research.

*The 1997 Mapei team.
In the next issue we will present
the new team Mapei Bricobi
for 1998.*



MAPEI GB, 1994-1997 TEAM LEADER

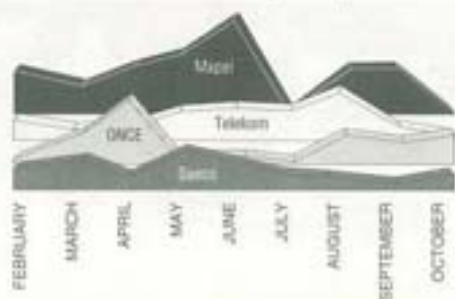
1997 has been a record season for Mapei Gb. The team with their characteristic cube shorts obtained 95 victories. Mapei Gb participated in 307 competitions in '97. The team triumphed in 31% of the races run. In the victory classification per Sport Groups is followed by Telekom (43), Once (42) and Saeco (31). In each month of the road season it has always won. It was the first team to win in the same year 4 National Championships, thanks to Gianni Faresin in Italy, Tom Steels in Belgium, Yoshiyuki Abe in Japan and Oscar Camenzind in Switzerland.

Mapei Gb is also at the top of the podium placings. There have been 156 in '97, against 92 by Telekom. As many as 19 athletes, equal to 76% of Mapei Gb team, have lifted flowers to the skies at least once. This is another record. Only Mapei Gb can boast, at the end of 1997, three athletes in the first 11 positions of the UCI list. These athletes are Tonkov (5^o), Museeuw (9^o) and Tafi (11^o).

Mapei Gb has won 7 stage races in 1997, has won 58 races in '94, 81 in '95, 82 the successive year. The company of patron Squinzi boasts in all its successes three victories in the individual World Cup, two in the team one, a Giro d'Italia, a Tour of Spain, two world titles on road, two Paris-Roubaix, a Tour of Flanders, two Swiss Grand Prix, one English, a Tour of Lombardy. Twice the team has made the hour record.

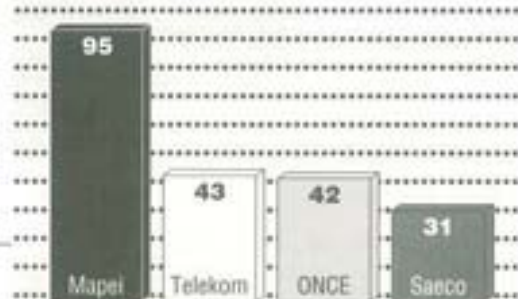
1997 in figures

Victories during the year



*The graphs
have been
taken from
Tuttociclismo*

Higher number of victories





A special victory

Mapei closed 1997 with a special victory: the reopening of the Vigorelli track after the restoration work which lasted over a year. Mapei in fact has financed and contributed to finish the restoration of the glorious Milanese velodrome, that has been inaugurated on the 10th of December and that will return to host cycling activities starting next spring.



A wide ranging commitment

Mapei's commitment to sport is without a doubt oriented mainly towards cycling, both at a professional and amateur level. But Mapei sponsors diverse sport disciplines: from cross-country with Dario Cioni, to motor racing and sailing.



A research centre dedicated to sport

It is not only at the service of Mapei's own champions but of all cyclists, indeed of all sportsmen. There is a centre at Castellanza, between Milan and Varese; a three-storey building erected in an area of 1,000 sq. metres, with two surgeries, a gymnasium fitted out with physiotherapeutic equipment and a room set up for training programmes. Because investing in research is part of Mapei's philosophy, there is also a bio-mechanics laboratory with the Elite system of kinematics analysis. In the first six months of '97 more than 350 sportsmen have used the services of the Mapei Research Centre at Castellanza. Besides various tests for the evaluation of physical condition (determination of the maximum oxygen consumption and the so-called anaerobic threshold), at the Centre numerous other tests are carried out such as the kinematics evaluation for the correct saddle position.

The centre is under the direction of Aldo Sassi and the laboratory is also used in the fight against doping on. Apart from the research and

biomedical activities carried out there, the centre is also utilised for specific testing and experimentation on behalf of other industries that operate in the sports sector. In the final analysis, this is also an engineering activity for the development of new products. □





SAFETY, ENVIRONMENT AND HEALTH IN THE MAPEI GROUP



The defense of the environment from pollution, both inside and outside the production units, the safety and hygiene of the workplace constitute an integral part of the activity of the Mapei Group. Besides the respect of the requirements set out by current laws and regulations, Mapei is committed to carry out its own activity with constant attention towards the improvement of the measures to:

- prevent health damage to its employees, to its clients and to the local communities;
- prevent all possible accidents linked to its activities and to those companies which are Mapei's partners;
- prevent or reduce the impact of its own activity and products on the environment, thanks to an adequate system of research, design, production, distribution and disposal of waste products.

The fundamental principles for the respect of this commitment are:

- strong and constant action aimed at involving all collaborators in caring for safety, environment and health, from a viewpoint of general responsibility;
- collaboration with the other chemical companies, with local authorities and communities for the identification of measures to minimize the environmental



This is the ECO line trademark



impact and the risks to health from the production activity;

- information for the users on the safe use and transportation of the products and their waste disposal;
- internal and external transparent communication on the forecast objectives and on the achieved results.

Mapei and the environment: some concrete examples

Mapei products not only do not have to constitute a danger to the health and safety of those who manufacture them and to those who live in the vicinity of the plant, but they must also be secure for those who transport and use them. With this aim Mapei works in two principle directions: the formulation and technological research for products with a minor environmental impact, with improved toxicology characteristics and less risk of inflammability, with provision for timely and complete information on

Mapei and the environment, in these pictures some concrete examples:

the environmental chamber of the laboratory in Laval, Canada;
the Eco trademark that labels an adhesives line free of polluting volatile substances;
precise information on packaging and indications on Safety Sheets combined with the products for the safety of the users.
On the right Roberto Leoni, responsible for Safety, Health and Environment at Mapei.

all the basic themes of toxicology, environmental impact and safety related to its products.

For Mapei the improvement of the safety of products passes through the continuous updating of formulations and packaging on the basis

of toxicology information received first hand by its technicians through an active and constant participation in national and European organizations such as AVISA (Association of paints, inks, adhesives and sealers manufacturers),

FEDERCHIMICA

(Italian Federation of chemical industry) and FEICA (European Federation of adhesives manufacturers), in which the main national and multinational companies analyse the new issues emerging in the sector, looking for common solutions to resolve them.

This, for example, in the past has already caused Mapei to eliminate, in anticipation of national regulations and before many other manufacturers in the same market, raw materials such as asbestos, pentachlorophenates and formaldehyde and to use specially approved UN packaging for the transportation of inflammable or corrosive products. Today Mapei is internationally bound, amongst other things, to face and resolve the problem of domestic pollution derived from chemical products used for floorings and buildings.

This responsibility is realised on one side by the development of an adhesives line free of volatile polluting substances and, on the other, in the active participation in the elaboration of analytical control methods of emissions potentially released over time from products applied in homes.

Mapei puts maximum attention into the identification of risks to safety, health and environment linked to the use of its

products and inserts all information and indications regarding precautions to be taken to minimize the risks in Safety Sheets, that are prepared for all products, including those distributed as experimental samples, whether or not they are considered dangerous by national and European regulations.

The environmental Management System

Although a Safety, Health and Environment function has been in place for many years, Mapei decided in 1996 to formalize the Sistema di Gestione Ambientale (SGA) - Environment Management System - of the Mediglia plant in conformity with what is provided by UNI EN ISO 14001 regulations. For this reason the SGA Manual has been prepared, containing: the environmental policy of the company and site, identification and quantification methods of environmental effects deriving from diverse activities, organisation and responsibilities of the SGA, surveillance, measurement, registration and checking, formation and communication methods. Along with the manual, formal procedures have been issued regarding the execution of all relevant activities with potential environmental effects.

It is Mapei's intention to request from Certichim by the end of 1997 the certification of conformity of the SGA of the Mediglia plant to UNI EN ISO 14001 regulations.

This environmental certification, if achieved, will go together with the quality certification already obtained in 1994 following ISO EN 9001 regulations. □



"LEADING EDGE" RESEARCH

Mapei has always put its most considerable efforts into research. In fact 5% of its sales (around 30 billion Lira in 1996) is earmarked for investment in research and development.

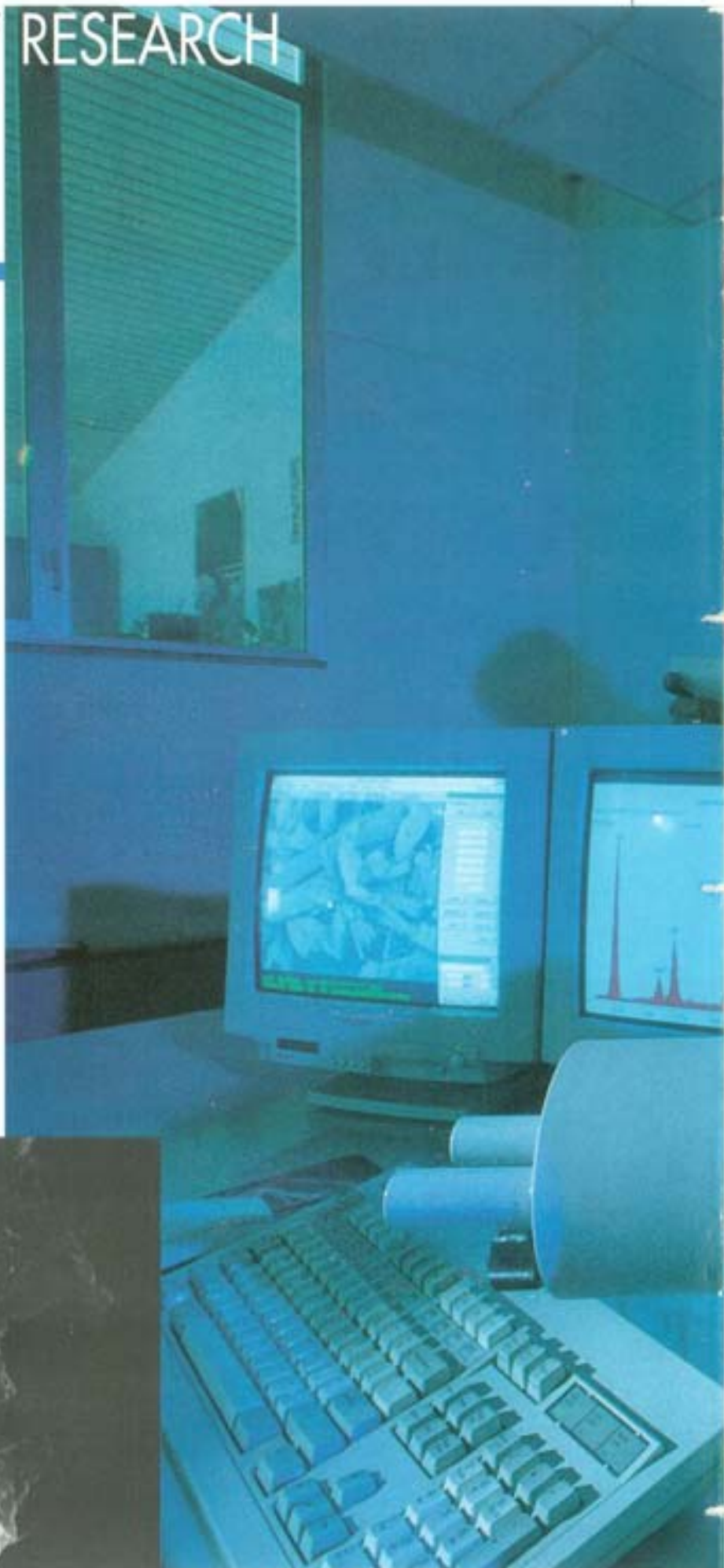
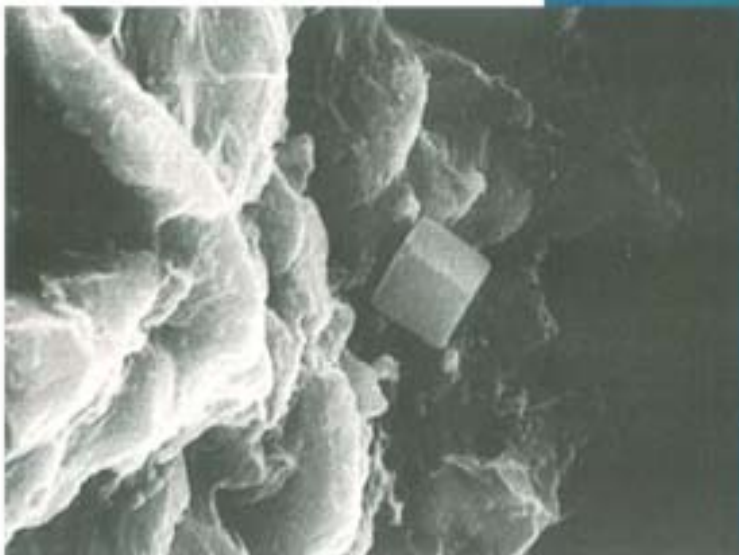
Mapei has four main research centres, two of which are in Italy (Milan and Villadossola), and one each in Canada (Laval) and in the United States (Garland). They are laboratories, with "state of the art" instruments, which work in close cooperation with each other as well as with universities and institutes of scientific and industrial research.

The laboratories also provide support to the technical assistance departments to solve the most difficult problems of their clients.

Besides these, there are quality control laboratories in operation in all 19 of Mapei's factories.

In the Milan laboratory a Philips XL30 electron microscope can penetrate into the structure of a material with a magnification of 300,000 times to reveal its innermost chemical secrets.

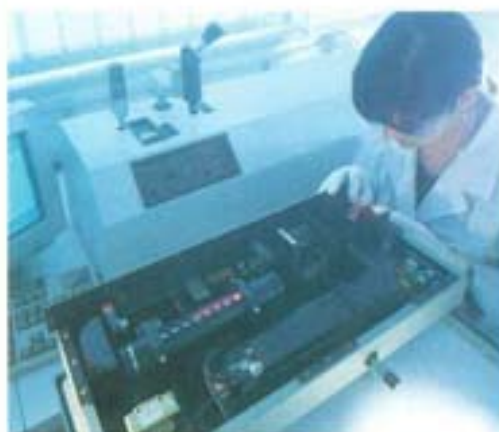
Detail: photo of tricalcium aluminate (Ca_3Al) magnified 60,000 times.





Innovative technology

Being able to analyse the raw materials, the products and everything associated with them, is fundamental for technological development. For this reason the Mapei laboratories have the instrumentation and the most advanced techniques in chemical and physico-chemical analysis at their disposal, such as x-ray diffractometers, together with spectrometry and chromatography of every type. To all this add a vast array of other analytical techniques, which enable every characteristic of the various products to be assessed.



Below: an analysis with the ICP-plasma spectrometer.

Above: a granulometric analysis of a specimen using a granulometric laser.





Research for man and the environment

One of the driving forces that urges Mapei forward in its research is the concern in the development of products which will be less harmful to those using them and less damaging to the surrounding environment. In this direction, besides the development of formulas from which all the harmful or hazardous components are gradually being eliminated, there is a particular commitment to the development of adhesives containing no volatile solvents that maintain an excellent level of workability and adhesion. For this purpose an environmental chamber has been built at the research centre in Laval, Canada, with a special large instrument for measuring the emission of volatile organic compounds (VOC).

Mapei invests 5% of its sales in research, slightly less than 8 billion Lira in 1990, 12 billion in 1992, around 20 in 1994, 31,5 billion in 1996.

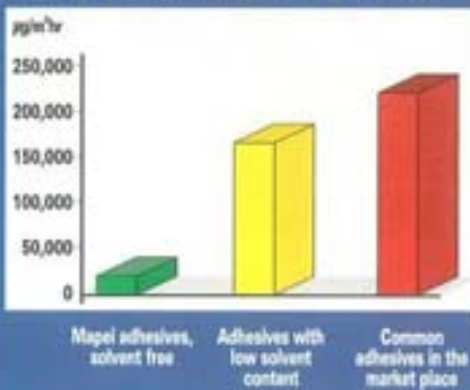
The research staff is more than 12% of the employees; there were 60 at the beginning of the 90's, this number has more than doubled in 1996 with 150 researchers distributed between the four laboratories.

The largest number of researchers work in the Research Centre in Milan which has the responsibility for coordinating the work of the other three laboratories.

It also acts as the central analytical laboratory for the entire Group. Research is the sector in which Mapei continues to take on the highest number of employees, in particular young people with a degree or a professional diploma.

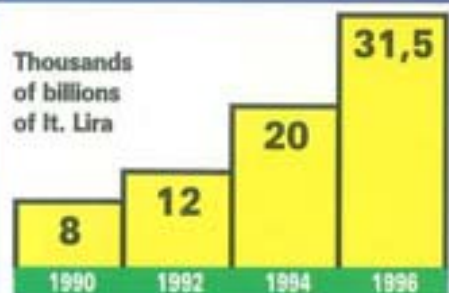
The sputtering of a specimen. The last step in the preparation for the electron microscope SEM.

VOC Emission (after 1 hour)



INVESTMENTS IN RESEARCH

Thousands of billions of It. Lira



155 employees in research equal to 12% of personnel (year 1996)



Compression test performed on a concrete cube with MAPEFLUID X404 additive with an electronic press.

The most severe international standards

The only way to completely reveal limits and properties of the materials is to torture them. This is carried out daily in the Mapei laboratories, following the most stringent international standards and regulations ISO, CEN, ASTM and DIN. Besides, obviously, the specific international regulations. The most sophisticated equipment is used for torturing the materials, such as electronic dynamometers, presses and other equipment sometimes used under extreme conditions of temperature and humidity, reached in special climatic chambers. The experience gained by the technicians in this field has made it possible for them to accept highly prestigious positions like the presidency of two CEN committees, the board commissioned to elaborate the European regulations and also to represent Italy in over a 100 committees and working groups. □



Left, elongation to rupture test on AQUAFLEX waterproofing membrane carried out with an electron dynamometer.

Below, x-rays diffractometer; this equipment determines with extreme precision the chemical composition of materials.



Left, tear resistance test on the MAPELASTIC polymer-cement system using an Instron electron dynamometer.

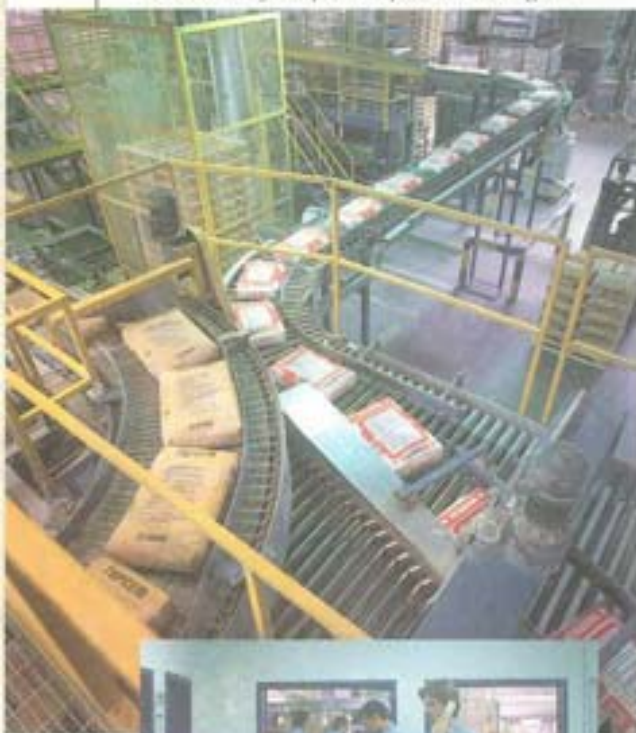


HIGH QUALITY PRODUCTION

Of the nineteen plants that Mapei has all over the world (which we described on pages 8 and 9) we present in these pages the Robbiano di Mediglia plant.

Mapei's high degree of specialisation in the building industry market has made production efficiency essential, particularly with high quality and diversified chemical products, from powder adhesives to liquid and paste products, up to polymers for a global quantity that now reaches a million tons. So much production calls for highly automated equipment, another strong point for Mapei, which has created 19 plants around the world to provide the best logistics and close contact with our clients. These plants couple efficiency in production with respect for the environment.

Two views of the powder plant in Mediglia



In bulk

Tankers of raw materials arrive in bulk (in the photograph above at Robbiano di Mediglia) and the materials are later processed in totally automated plants



*Left: automatic line for filling liquids.
Above right: automatic line for filling paste adhesives.
Below, in the Robbiano di Mediglia plant everything is completely automated.*



Respect for the environment
Safe plants for those who work there and for the surrounding environment. Mapei is, and has always been, very committed to "ecological chemicals" that respect nature. For some years Mapei have supported the Responsible Care

international project, the commitment of the world chemical industry to the environment, safety and health.

Everything automated

In the factory at Robbiano di Mediglia on the outskirts of Milan everything is completely automated, with a production of 3,600 25 kilo bags per hour.

A certification of quality

In 1995 Certichim certified Mapei according to the ISO 9001 regulations, "for research, development, production, commercialisation and customer assistance for adhesives and chemical products in the building industry". Mapei was the first Italian company in the adhesives field to obtain this recognition. But now, there are three certificates. The first was awarded for Mapei's work in Italy, the second for that of Vinavil, the third for the associated company in Canada. And the number is destined to grow.

Efficient logistics

To ensure that clients receive rapidly the products ordered, efficient logistics is absolutely essential. Mapei is particularly advanced in this field: a good 80% of the orders are dealt with within 48 hours, whether the products are packed or in bulk.



An esterification reactor.



The brand that identifies Mapei SpA Quality Assurance System, according to the ISO 9001 regulations.





THE "Responsible Care" PROGRAM

The commitment of the world chemical industry for a responsible management of the problems related to health, safety and environment.

Responsible Care: a public commitment

In the last twenty years there has developed in public opinion a particular sensitivity towards pollution and with it the concept of personal and collective responsibility has grown more and more. In the most industrialised countries the attitude of public opinion towards the direction of growth is getting to a more and more critical attention.

The chemical industry has started the **Responsible Care** program: the term means the responsibility that the industry takes upon itself for the industrial development to be correct and to provide for the conservation of resources and the environment for future generations.

A more responsible world

The concept of **Responsible Care** has been adopted for some years by many important associations of chemical industries around the world, including Federchimica (National Federation of the Italian chemical industry).

Responsible Care is a concept initially developed in 1984 by the Canadian Chemical Producers Association (CCPA) and from 1988 also implemented by the Association of Manufacturers of Chemical Products (CMA) in the USA.

In Italy it has been translated into an initiative that through concrete actions has the objective of transforming the low regard of public opinion towards chemistry, into appreciation and approval. This must happen through improvements that are continuous and demonstrable in the fields of environmental protection, of health, of product safety and of technology, of response capacity and the prevention of emergencies.

Through **Responsible Care** the chemical companies have publicly taken on the commitment towards a responsible management of the health, safety and environment problems.

In Italy this initiative has now reached the



fifth year of activity. Mapei has been one of the first chemical companies in Italy that have joined the **Responsible Care**

program, convinced that this is a further step towards that "total safety" that is nowadays a cornerstone on which any future industrial development must be based. Today around 160 companies, that represent over 60% of the sales and of the employees of the chemical industry operating in Italy, adhere to this program. But more must still be done in order to obtain a wider consensus from companies, especially the medium and small ones.

Open House

In line with the **Responsible Care** programme, also this year the "Open



"OPEN HOUSE" AT MEDIGLIA



On Sunday the 28th of September the Robbiano di Mediglia plant opened its gates for the fourth time to the large crowd of employees, their families and people living in the vicinity, for the "Open House" event.

"Open House" has become a pleasant date that many have been waiting for, seeing the always positive response obtained; in fact during the years the number of participants has greatly increased.

Giorgio Squinzi gave the usual welcoming message to the participants in his dual role of Chairman of Mapei and Chairman of Federchimica. He has

underlined the importance of the initiative to consolidate the relationship of credibility with the Italian society. "Open House - as Giorgio Squinzi said -

Responsible Care, as well as SET, the Emergency

Transport System that will be operating in a short while to offer to the authorities and to the relevant technical structures (Fire Brigades, USSL, Civil Protection and so forth) efficient assistance in case of accidents during the transportation of chemical products in Italy, are only some projects and initiatives voluntarily put into effect by the Italian chemical industry



to guarantee a balanced growth and the progress of the Italian society on the threshold of the year 2000 for the quality of life". Roberto Leoni, responsible for Safety, Health and Environment at Mapei, in his

speech presented a new important initiative that coincide with the Open House event: it is the Mapei's first Environmental Report (of which we are going to talk more in the next few pages). Then was the turn of the Mediglia Mayor, Cesare Loris Mannucci, to express his satisfaction for the initiative, taking the opportunity to guarantee a quick



approval to the expansion works of the Robbiano di Mediglia factory, which has been now waiting for some seven years.

Also the trade union representative, Loris

Mazza, present for the first time at the event, highlighted the importance of moments like this one that allow the opening and the dialogue and allow to see the equipment that protects the environment and assures health to workers and citizens alike. A visit to the plant followed the speeches. There has been remarkable interest of visitors in the technical plants of the different departments and above all for the safety systems present inside the plant complex.

The public listened with attention to the explanations of the technicians working in the laboratory that control the quality of products and raw materials, asking questions about the control systems for the air quality emitted into the atmosphere.

It was an interesting and pleasant moment of encounter and dialogue, fundamental for a relationship based on maximum transparency and clarity. □



Also this year many children have entered the plant area at Robbiano di Mediglia.





In combination with the "Open House" day at the Robbiano di Mediglia (Milan) plant, Mapei has officially presented its first environmental report, in line with the Responsible Care principles and with what is provided in the EEC Regulation n.1836/93. It was a further opportunity for a dialogue between a company, the authorities and public opinion, for a better understanding of objectives and expectations. The report adopted the methodology proposed by Federchimica, agreed at

European level in the CEFIC (European Council of Federation of Chemical Industries), that utilises, as indicators of environmental performances, the absolute quantities (in ton/year) of atmospheric emissions, water discharges and production of waste. The choice of the indicators takes into account both the European Directions and the Italian laws. The report presents the evolution of the environmental and safety data at the Mediglia plant during the period 1991-1996.





The environmental report presents the evolution of environmental and safety data at the Mediglia plant during the period 1991-1996.

Accidents

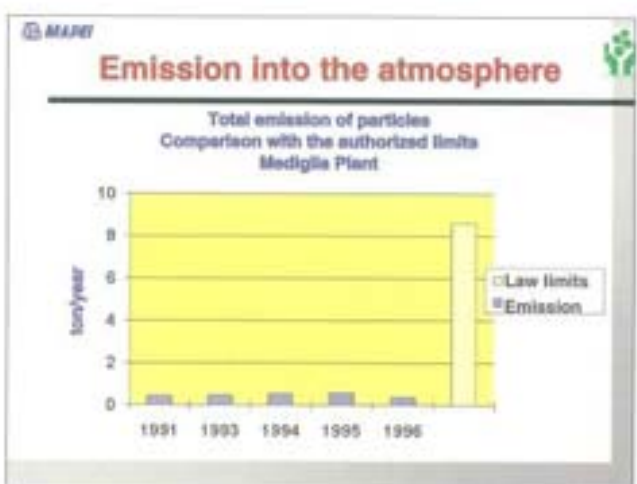
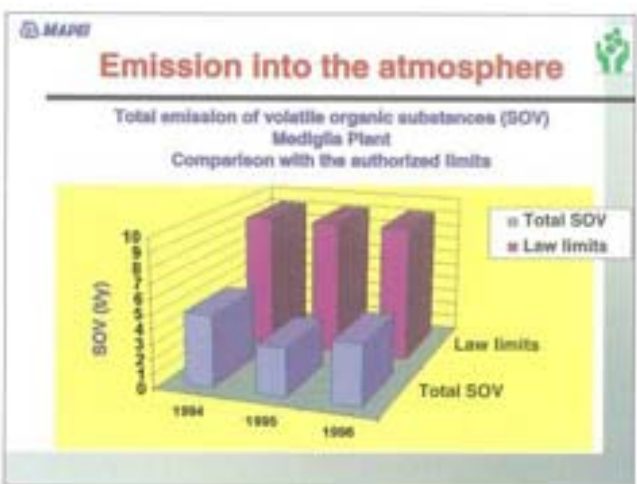
In 1996 at the Mediglia plant there have been recorded 14 "INAIL" accidents against 17 of the previous year, with a decrease of 17.6%. Also the index of frequency and gravity have decreased respectively 30.5 and 3.6%. If we evaluate then the trend of the accidents from 1991, figures are even more positive (total accidents -42%, frequency index -74%, gravity index -34%). This result has been obtained through interventions on the plant, but also and above all through organisation, training and procedures.

Waste

In 1996, a total 853 tons of waste have been disposed of against 1,142 tons for 1995 with a reduction of 25.3%, made on toxic-noxious waste (-11.1%) and specials (-41.4%), while refuse easily assimilated with the urban ones have had an increase (7.7%). The trend of the years 1991-1996, nevertheless, has been of a continuous increase, linked to production growth. As far as toxic-noxious wastes are concerned, though, their quantity in 1996 has been substantially the same as that of 1991, that means, taking into consideration the high increase in

Waste

	Year (1)	Year (2)	Variation
Toxic - noxious	18	16	-11,1
Specials	761	446	-41,39
Specials easily assimilated with urban ones	363	391	+7,7
Total waste	1142	853	-25,3





production for that period, a decrease in the quantity of waste/quantity of product ratio; this has been mainly realized through an optimization in the methods and number of washes with organic solvents of some machines.

Emissions into the atmosphere

The significative emissions into the atmosphere of the Mediglia plant consist of powder, deriving from the production of cement based mixtures and volatile organic substances, mainly solvents, deriving from the manufacturing of organic based adhesives.

Both for sometime have been subject to control at least annually and are within the authorized limits.

For powders there is a reclamation plant, while respect of the emission limit for volatile organic substances is assured, thanks to a system of aspiration and flow hoods suitably sized and designed to optimize on one side the protection of the equipment operators and on the other to minimize the forced evaporation of solvents due to the passage of air flows that are too high.

It is worthwhile highlighting that in 1996

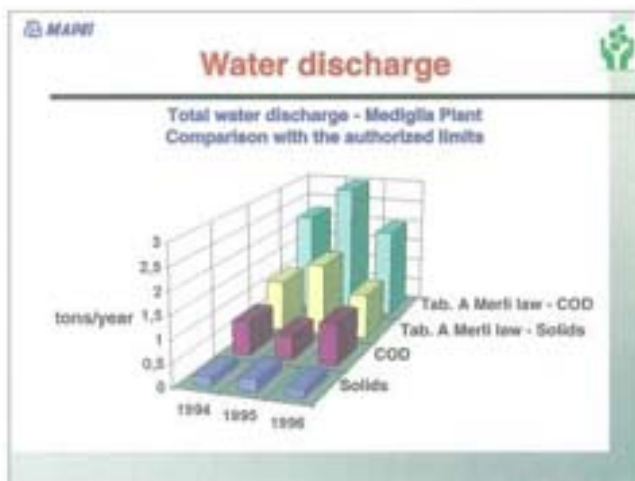
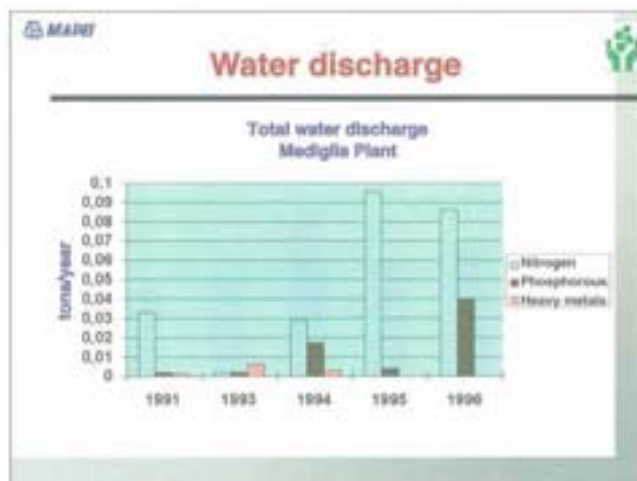
the volatile organic substances, as raw materials, have represented less than 1% of the total raw materials used in the plant.

In 1996 the emissions registered a reduction of 40.7% of particles (powders) and an increase of 28.2% of volatile organic substances. For both types of emissions the quantities are remarkably lower than those authorized.

The analysis of the emissions in the 1991-1996 period shows a substantial constancy in the quantity of particles emitted in those years, which means a reduction of emissions per produced ton. As far as the volatile organic substances are concerned, besides the oscillations due to the difficulty of analysis, there is a growth of emissions in absolute value that follows the growth in production, with quantities that are on average constant in relation to the produced quantities.

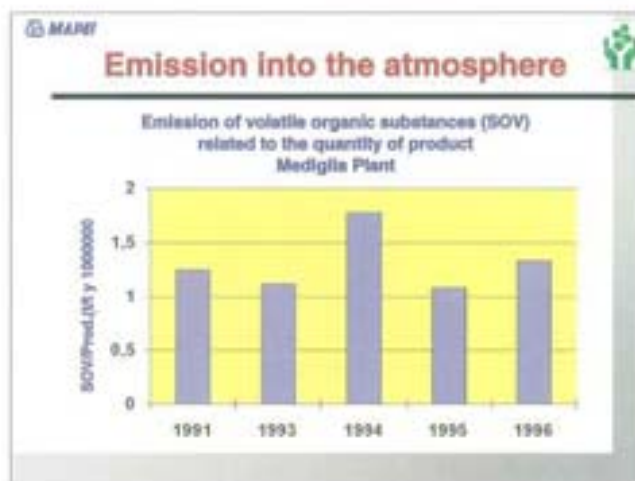
Water discharge

In the Mediglia plant the process waters, used for the washing of the reactors, constitute only 1-2% of all the potable water consumed.



Emission into the atmosphere

	Year 1995 (t)	Year 1996 (t)	Variation %
Particles	0.556	0.322	-42.1%
SO ₂ , NO _x , CO, CO ₂	n.d.	n.d.	-
Volatile organic compounds	3.2	4.1	28.2%
Volatile inorganic compounds	0	0	-
Heavy metals	0	0	-



"OPEN HOUSE" AT VILLADOSSOLA

PHOTO 4



Vinavil SpA, born in 1994 after the acquisition by the Mapei Group of the acetovinyl polymers production activity that once belonged to EniChem Synthesis, continues the Italian tradition in fine and secondary chemicals placing itself at the top of the sector in Europe. The company, joining this year for the first time in the "Open House" event, promoted by Federchimica, has invited, on Sunday the 21st of September, the local community to visit the production plant

PHOTO 1



in order to understand the various aspects of the company's activity particularly related to the environment. And the response has been really exceptional: as many as 1,200 people, former employees, pensioners, local administrators, women and many youngsters coming from all over the province lined up to collect the pass at the main entrance, that allowed them to join

PHOTO 2



the guided tour of the plant. In the first building, where there was also a photographic exhibition showing the main events in the history of the plant (photo 7), a brief welcoming ceremony took place lead by Giorgio Squinzi, Chairman and Managing Director of Vinavil, joined also by Franco Ravadoni, mayor of Villadossola (photo 1). "When we acquired Vinavil - said Giorgio Squinzi during the presentation - it was a company comparable to a terminally ill patient. Today that is not the case anymore, the patient still needs treatment but he is improving and is well on the way to recovery".

Remarkable efforts have been made in the three year life of the Company, it is enough to say that for safety and environmental hygiene over 5 billion Lira have been invested in the Villadossola plant. This is equal to 30% of total investments and an additional 2,5 billion is forecast in the short term.

The interventions carried out range from the reduction in water consumption, and therefore water discharge, to the continuous monitoring of emissions and plant interventions designed to improve the working environment and safety as well as personnel training.

Following the short introduction speeches, the tour of the plant took place. The plant manager, Eng. Lilla, together with his colleagues, has conducted the numerous visitors, divided into groups of

PHOTO 3





PHOTO 5



PHOTO 6

PHOTO 7



PHOTO 8

15 to 20 persons, through the key areas of the plant.

First they visited the Research Centre, that can be considered as the historical laboratory of the Italian chemical industry, the place where great chemistry was born. After years of neglect, it has been completely restructured and now is organised into laboratories with a total area of over 1,000 sq. metres and a testing facilities area of about 700 sq. metres (photo 2-3).

The Research Centre has available the most modern equipment for testing of polymerisation, for the complete physico-chemical analysis of latex products and for the evaluation of the application properties of the products (photo 6). The actual value of this equipment can be estimated, including the test plants, at more than 5 billion Lira.

At the Centre there is a staff of 31 persons of which more than 50% are graduates

and the others have a diploma or a technical qualification.

This staff has been reassembled in the last three years with the employment of numerous young people with a degree or a diploma who are professionally growing under the

guidance of experienced personnel.

From the Research Centre they have moved on to the EVA plant (photo 4), unique in Europe, passing in front of some old and obsolete buildings that will be demolished and in front of the new railway siding, recently reactivated, that allows for the reception of raw materials and for the shipment of finished products directly by rail (photo 8). This

system represents on the one hand a saving for the company, but on the other contributes also to a lesser environmental impact avoiding dangerous loads on the roads.

The EVA plant was a patent, finalized in the 70's, for the polymerisation of vinylacetate together with ethylene with the purpose of conferring particular characteristics to the product. This patent gave rise to the actual plant which came into production in 1977 and was extended in '85.

From the beginning the plant was born with a certain level of automation and had available a processing computer which is still functioning. Now the installation of a new computerised control system is under way, that will substitute the old system, notably amplifying the automation possibilities and allowing an improvement of quality in terms of reliability and the safety of the plant (photo 5). Only this intervention has required an investment of 2,1 billion Lira. The visitors then moved on to the water treatment area (photo 10-11-12). All the water that is required for cleaning the equipment is channeled, through a special drain, into the treatment plant tank and is then subjected to a clariflocculation process.

The water used in the production cycles, after purification, is channeled in a unique drain that, through a tank with a volume of 400 cubic metres equipped

PHOTO 9



with motorised gates, discharges into the Ovesca stream. Upstream from the tank the pH, the cloudiness and the organic substances content are continuously monitored with three diverse instruments. If the instruments record abnormal values, they activate an alarm, automatically close the gate and the emergency starts.

Vinavil also highlighted its projects for solid waste disposal: at present an oven for the combustion of waste and for the cleaning of the filters of the production cycles operates. Moreover the realisation of a small incinerator oven was planned, but unfortunately recently there has been a block placed on any investment of that kind in the Toce river area. We hope that the local administrators will change their minds and give permission to go ahead. As far as the safety is concerned it has been highlighted that, as per the Decree Law 626, there is a Protection and Prevention Service (SPPV) and an Ecology and Safety Service shift (SEST).

Recently a test field has also been built for the exercises of the emergency team (photo 13) to which the operators of the plant belong in order to have 24 hour coverage.

The tour then took the visitors, amongst which were the students of Industrial Chemistry from the University of Milan, in front of the old carbide oven destined for a museum (photo 14-15). The "Open House" event

PHOTO 13



PHOTO 10



allowed everybody to verify Mapei's intent to innovate and develop the Villadossola company, while at the same time preserving the incomparable historic patrimony present inside the factory, patrimony constituted also and above all by human resources of great value. This event, destined to be repeated in future years, will allow the participants to understand first hand the further improvements that will occur in time. □

PHOTO 11



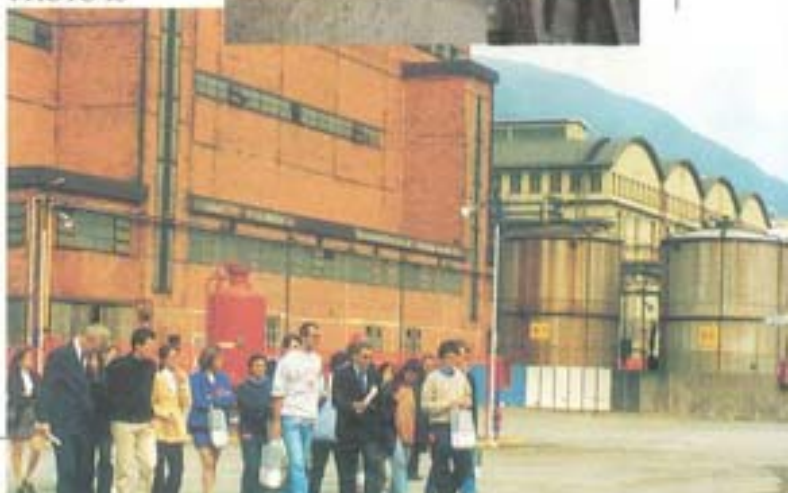
PHOTO 14



PHOTO 12



PHOTO 15



THE PROJECTS OF THE YEAR 2000

One must have clear and firm strategies to trigger new ideas for development; one needs to have up-to-date and innovative marketing, the capacity to observe and absorb new cultures, new styles, new energies; to demonstrate sure and lively creativity; to have speed of decision and actions; always to increase the company's productivity, anyway in a continuous way; to succeed in keeping a broad



Mapei is here

concept first in the mind and then in action; to become a leader of production costs, quality control, logistics, research, distribution and assistance; to be strong enough to anticipate problems. In other words to be a quality company. And always to have a plan. Mapei has all this. □

S. Francis Basilica - Assisi - Italy

*Mapei is working in order for the basilica, extremely damaged by the earthquake of the 26th and 27th of September '97, to return, in the year 2000, as we see it in the picture above. The high technology of Mapei products has so far allowed the consolidation of the gable of the basilica, restore and reinforce the vaults, anchor more than 15 sq. metres of Giotto's frescos and restore the lesions made to the vault of the Basilica Superiore.
Mapei solutions to preserve tradition.*



Mapei is here

**The Jubilee Church
Rome - Italy**

Mapei products will contribute to the construction of the church dedicated to "Dio Padre di Misericordia" (God Father of Mercy), designed by the architect Richard Meier for the celebration of the Jubilee of the Year 2000 in Rome.



**High speed train -
Cassino (NA) - Italy**

The great projects such as that of the Italian high speed railway line (TAV), require high technology such as MAPEFLUID X404, hyperplasticiser additive used for the preparation of high performance concrete of the beams of the viaducts.

**The Olympics of the future -
Sydney - Australia**

The Olympic Games of the new millennium will take place in the land of the kangaroos; GRANIRAPID has already been used to ensure the bond of the impervious tiles lining the Aquatic Center in Sydney, Australia, host of the Olympic Games 2000. The grouts have been filled with KERACOLOR + FUGOLASTIC



**The highest towers in the world - Kuala Lumpur -
Malaysia**

One of the largest development projects in the world, the Kuala Lumpur City Center (KLCC) which includes the Petronas Twin Towers, the two highest towers in the world whose 452 metres of steel challenge the oscillation caused by the winds. The granite flooring of the 170 floors of the two towers have been bonded with KERAFLOOR + ISOLASTIC on screeds reinforced with PLANICRETE 50. Another important element of the project is the Suria commercial centre, whose 10,000 square metres of external cladding consisting of Malaysian ceramics, have been installed with KERABOND + ISOLASTIC and ULTRACOLOR. Many other Mapei products have been used in this futuristic project that will be completed in the year 2000; Mapei solutions for the future.

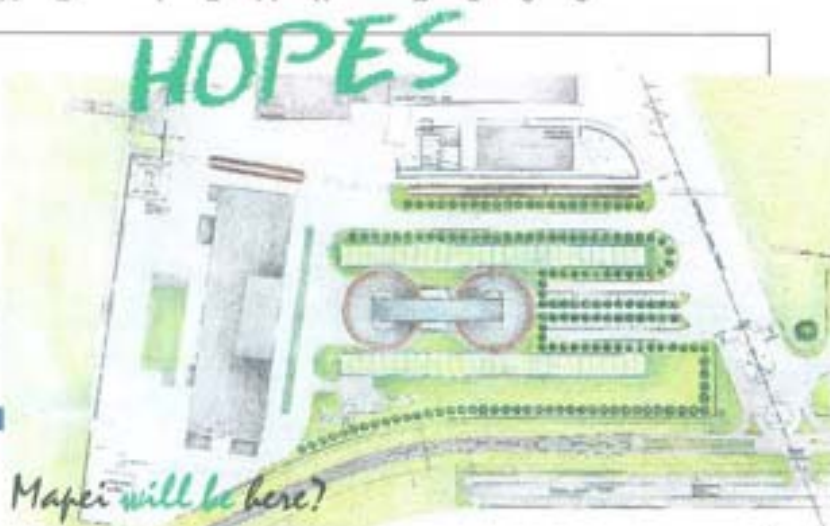
THE MAPEI GROUP GETS ORGANISED FOR THE YEAR 2000

In the previous pages we have celebrated the first 60 years of life of Mapei retracing the main steps that have characterised the company's development.

From 1998 the Mapei Group will get organised to face the year 2000 with new projects and new ambitious goals. Among the main objectives, the start of the production in the new plant in Weferlingen, Germany, and the expansion of those in Fort Lauderdale and Garland, in the USA.

There is always the hope to be able to finally realise also the expansion of the Robbiano di Mediglia plant, on the outskirts of Milan. This project unfortunately remains today in the fog of bureaucracy. We hope that the Italian bureaucratic brakes will not oblige us to expand further abroad, if they continue to block what was planned as the most important production plant of the Group.

Moreover, the widening of the product range with its constant improvement and a service more and more



The project for Mapei's head office and laboratory at Robbiano di Mediglia (MI).



The expansion of the Fort Lauderdale (USA) plant in completion.



The new offices at the Garland (USA) plant during the construction phase.



The new plant in Weferlingen (Germany) that will start production in May 1998.

efficient and qualified remain among the principle objectives of the Group also in the next few years; this not only for the needs of the clientele, but also to reach the objective of sustainable growth in respect of the environment, developing in particular the ECO line products. Finally, the certification of the Environmental Management System according to the UNI EN ISO 14001 regulation is the objective of all Mapei's people to be achieved within the year 2000. □



For Every
Situation

