

TEATRO ALLA SCALA



Fondazione di diritto privato

DECEMBER 7<sup>TH</sup>, 2004

MAPEI AND THE TEATRO ALLA SCALA, MILAN

# THE ART OF WORK







RESEARCH & DEVELOPMENT



PERSONALISED TECHNICAL  
CONSULTANCY SERVICE



ANALYSIS, DIAGNOSTIC APPRAISAL  
AND ON-SITE PROBLEM SOLVING



ON-SITE OPERATIONAL  
SUPPORT



SYSTEMS AND PRODUCTS  
FOR ALL ON-SITE NEEDS







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THE TEATRO ALLA SCALA REOPENS AFTER 912 DAYS OF WORK  
RENOVATED AND RESTORED





*In the photograph from left to right: Antonio Acerbo, the Engineer appointed by the Milan Local Council as Director of Works for the restructuring work on the Teatro alla Scala; Mario Botta, the Architect who coordinated the project regarding the stage tower and the new part; Elisabetta Fabbri, the Architect who coordinated the work carried out in the monument area.*

It may seem an etymological contradiction in terms to associate art with work. Art means talent, the ability and masterly skill which exalt the quality of man's application. It would not appear to have anything to do with the real sense of the word "work", which derives from the Latin word labor, and means fatigue, effort, breathlessness.

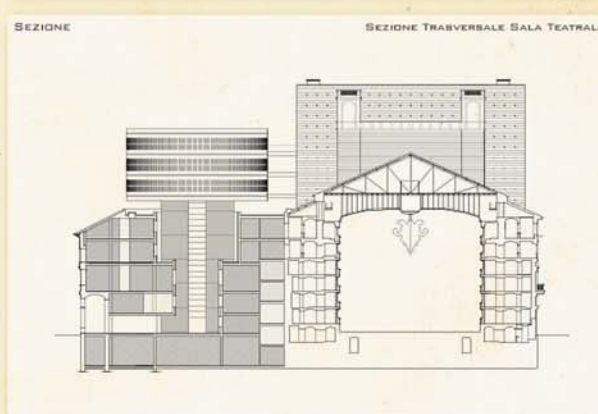
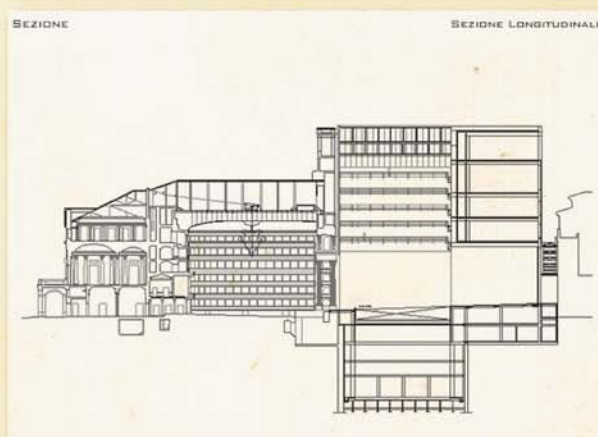
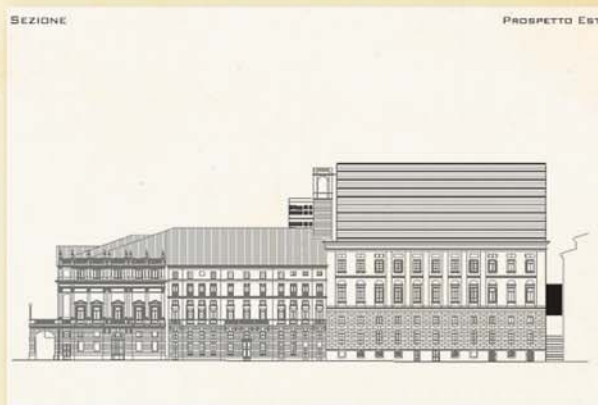
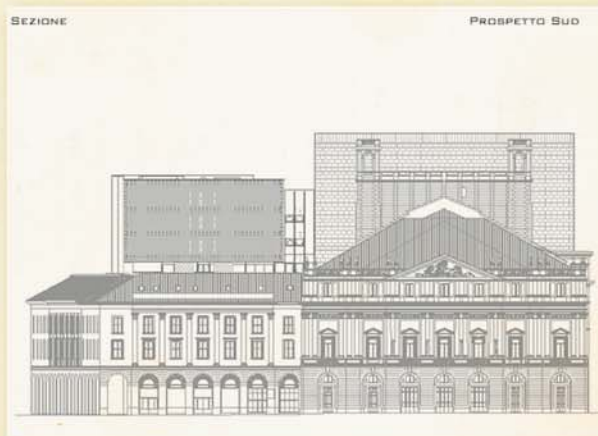
However, the capacity of conjugating these two concepts, which on the surface would appear quite distant, is the mission that Mapei has always pursued and which has decreed their success all around the globe.

The work of art is born out of the effort and fatigue to render an idea well-known, to turn a dream into concrete reality.

Command of technical know-how is the premise when constructing a company.

Striving for ever more advanced solutions makes it possible to explicate creative actions.

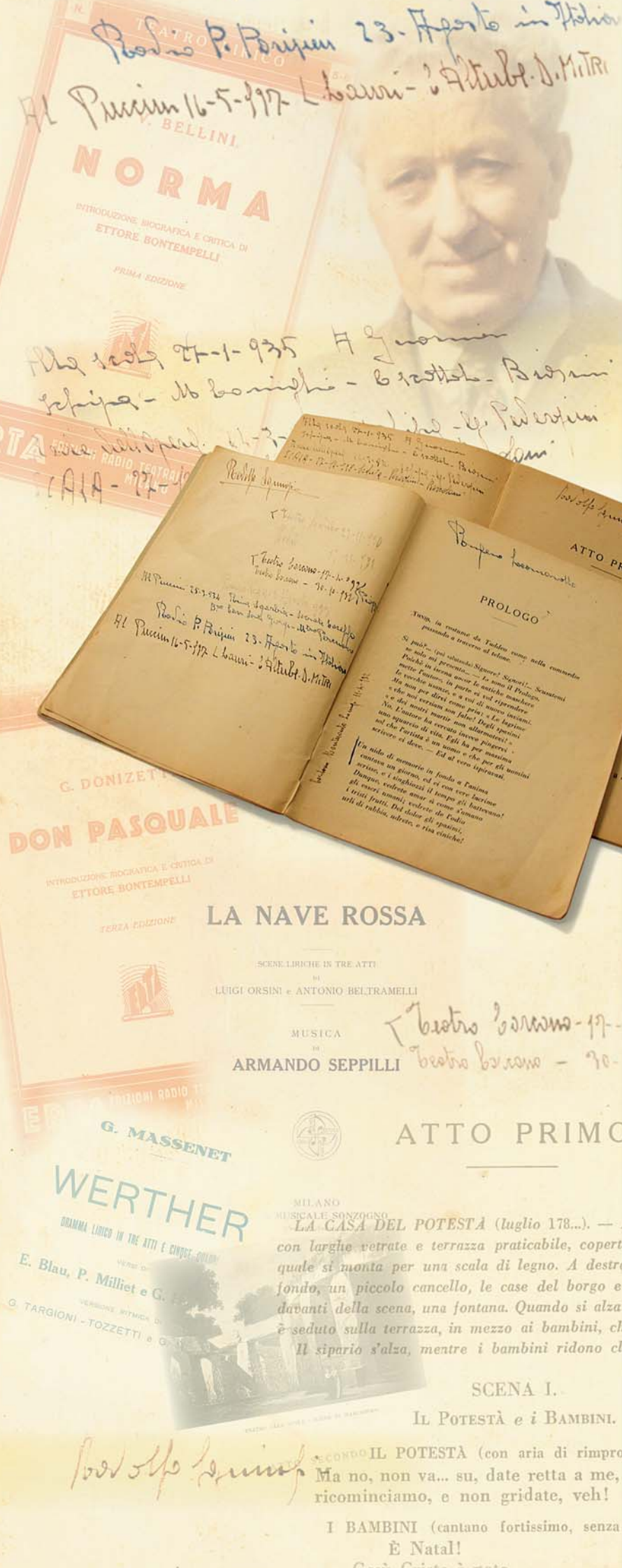
So, as a true artist would say that art can not be without hard work, Mapei has always been strongly convinced that work may never be separated from art. This strongly enrooted conviction has been expressed over the years with constant attention and increasingly masterful skill, towards the needs of "places of art". Whether we are talking about working in one of the great museums or simply rendering a medieval basilica more stable, the skill and technology, which is the fruit of Mapei's research, have contributed in making some of the most important arts and cultural centres more alive and long lasting, both at home and abroad. Activity at an international level which, nonetheless, has never led to Mapei distancing itself from the special attention it pays towards the territory which has witnessed its growth: Milan.



*Some drawings of the project, designed by the architect Mario Botta.*

The rebuilding and renovation work of the Teatro alla Scala is the most recent and most prestigious example in which the entirety of Mapei's skill, technology and research have been put into practice. And the company's great love of the Arts.





My father Rodolfo took me to the Scala for the first time in 1956: Maria Callas, Mario Del Monaco and Giulietta Simionato were reciting in *The Norma*, which for me was, and still is, a memorable performance.

20 years after losing my father, I still leaf through the opera programmes where he used to jot down notes, and it is as if I were with him again, together on a fantastic, itinerant musical voyage through the masterpieces of opera. His slightly faded handwriting, yet still decisive and elegant, often leads me back to the Scala.

Today, the most famous Opera House in the world is reborn, thanks also to the contribution of Mapei, something which I feel sure he would have wanted.

To my father Rodolfo, who passed on to me the passion for opera and music, and who taught me to tackle all tasks, whether small or large, with seriousness and enthusiasm, I dedicate this memorable moment.

To be Milanese who looks out towards the world was his unspoken lesson.

His Scala is more beautiful than ever, and the city of Milan, which he so loved, has rediscovered one of its most precious jewels.

Giorgio Squinzi



## TECHNOLOGY MEETS MUSIC

**I**n rebuilding and upgrading the Teatro alla Scala, Technology meets Music.

Mapei has contributed with their systems, innovative products and expert assistance, which represent the fruit of their commitment to research and innovation. The presence of Mapei on the Teatro alla Scala site was divided into three areas of activity:

- diagnosis of the materials, taking and analysing samples of plaster, render and gold-leaf frieze decors, in order to identify the most suitable type of renovation work;
- on-going technical assistance during the work, to recommend the most suitable technical solutions to solve the various on-site problems;
- technical support regarding the use and correct application of the products during the various application phases.

Approximately 40 Mapei solutions were employed on this prestigious site: from the range of systems for the building industry, to those used for constructing screeds, self-levelling products and smoothing compounds; various types of adhesive for laying ceramics, natural stone, terracotta, PVC and wood, up to systems for protecting the decorative finishes on the walls and epoxy resin systems for floors.

The numerous products employed in the renovation of the monument area have led to consolidation of the vaulted roofs of the corridors leading to the boxes (with EPOJET LV) and the installation of all the screeds in the main halls and in the stalls (with TOPCEM and TOPCEM PRONTO).

The sides of the corridors were filled before laying the paving stones (using STABILCEM SCC and ULTRA-PLAN MAXI), the plaster finishes were restored (with MAPE-ANTIQUE MC) and wooden floors were laid in

the loft (TOPCEM PRONTO and ULTRABOND P902 2K). Porcelain tiles were laid on the floor and on the walls in all the washrooms and in the areas behind the boxes (KERAFLEX).

The old terracotta floors in the boxes were cleaned up and all traces of unsuitable material were removed with KERANET, while the new terracotta floors laid in some of the boxes were bonded using KERAFLEX.

Also, the glass in the porthole windows in the access doors to the boxes were fixed in place using MAPESIL AC.

Another operation in the monument area was carried out by working directly with the installation technicians. The drainage and aeration systems were treated with special smoothing compounds and dust-repellent systems (PRIMER G, MAPEFLOOR FINISH 50 and MAPECOAT I 600 W) and the plasterboard walls were decorated (ELASTOCOLOR PRIMER followed by ELASTOCOLOR PITTURA).

Even though Mapei did not supply any specific products, they contributed to the restoration of the gold-leaf friezes by carrying out extremely sophisticated diagnostic work. The work carried out in this phase revealed that different layers of gold-leaf had been applied, one on top of the other, in successive periods. The analysis carried out in Mapei's research laboratories made it possible to date them and to identify their chemical composition, in order to select the most suitable materials for the restoration work.

For the restructured and newly-built area, Mapei studied the mix-design of the various blends of concrete, which were mixed using new nanostructure additives (DYNAMON SX14). All the screeds in this area, including the canteen and washroom areas, were installed









using quick-drying, ready-mixed products (TOPCEM and TOPCEM PRONTO), while in the studios area, the washrooms and the corridors a special adhesive for bonding porcelain and klinker tiles was used (KERAFLEX MAXI), while the joints were grouted with KERACOLOR FF.

In the office wing and adjacent corridors, including Maestro Riccardo Muti's office, pre-finished wood was laid: the screed was firstly consolidated (PRIMER MF + 0.25 QUARTZ) followed by the use of a epoxy-polyurethane adhesive system (UKTRABOND P902 2K), while all of the Botticino Cava was laid using white quick-setting and quick-drying adhesive (GRANIRAPID BIANCO). Wooden flooring was laid in some areas of the various practice rooms using ULTRABOND P90, while in other areas PVC was laid, using ADESILEX V4 adhesive in water dispersion.

The shower rooms, the canteen and the areas subject to infiltration were treated with rigid or flexible, high performance, cementitious-based waterproofing systems (IDROSILEX and MAPELASTIC).

Finally, some of the horizontal and vertical concrete substrates were evened out using systems from the building industry range (NIVORAOID, MAPEGROUT, MAPEFINISH and PLANITOP), while the 11 floors of corridors and service walkways around the stage tower were treated with a light, multi-layered finishing treatment (MAPEFLOOR SYSTEM 31).

**The most important opera house in the world is reborn. Thanks also to Mapei's desire to spread and support the wealth of Italian heritage.**



## **MAPEI AND THE SCALA: A CONTINUING TRADITION**

Mapei, which has always been close to the world of art and culture, has been an enrolled supporter of the Teatro alla Scala since 1984.

The company is continuously involved in the field of research, a sector in which 5% of the annual turnover is invested and in which 12% of the workforce are employed.

For a number of years, Mapei has been a keen sponsor of research in various sectors, including the Negri Weizmann Committee for "Music and Research, together for Health", and has organised a special concert on the 13th December to be held in the renewed Teatro alla Scala.

**The Mapei group, consisting of 40 associated companies with 41 production facilities in all five continents, is nowadays the most important manufacturer in the world of adhesives and accessory products for laying floors, and all types of dressing materials.**





**SYSTEMS AND PRODUCTS  
FOR NEW CONSTRUCTIONS  
IN CONCRETE**

**SYSTEMS AND PRODUCTS  
FOR REPAIRING BUILDINGS AND  
STRUCTURES IN CONCRETE**

**SYSTEMS AND PRODUCTS  
FOR RENOVATING MASONRY  
WORK IN HISTORIC BUILDINGS**

**SYSTEMS AND PRODUCTS FOR  
UNDERGROUND CONSTRUCTIONS**

**SYSTEMS AND PRODUCTS FOR  
STRUCTURAL REINFORCEMENT**

**WATERPROOFING SYSTEMS**

**SYSTEMS AND FINISHING  
PRODUCTS FOR FACADES  
AND FLOORS**





