

quaderni di assorestauro



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**ROME
L'AQUILA
MANTOVA
FERRARA
CENTO
FINALE EMILIA**

ACTA OF THE INTERNATIONAL WORKSHOP

**MANAGEMENT POLICIES, PRELIMINARY
EMRGENCY INTERVENTION AND
CONSERVATION AFTER THE EARTHQUAKE
OF ABRUZZO, EMILIA ROMAGNA
AND LOMBARDIA REGION**



Project financed by the Italian Institute for Foreign Commerce & Assorestauro

ITALIA
Italian Trade Promotion Agency



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Quaderni di Assorestauro



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■ sponsor presentation

ITALIA

Italian Trade Promotion Agency

The Italian Trade Promotion Agency-ICE is the Government agency that supports the globalization of Italian firms, under the strategies of the Ministry of Economic Development. ICE helps to develop, facilitate and promote Italian economic and trade relations with foreign countries, focusing on the needs of SME, their associations and partnerships. ICE sustains Italian firms in their internationalization processes and promotes worldwide the marketing of Italian goods and services, Italian investments, as well as the image of “Made in Italy” products around the world.

ICE provides information, support and consultancy to Italian companies on foreign markets, promoting and fostering export and cooperation in all areas - industry, agricultural and agri-food, services, etc. - with the target of increasing and make more effective their presence on international markets. ICE works closely with the Italian Regions, the network of the Italian Chambers of Commerce, business organizations and other public and private entities.

ICE headquarters are in Rome, with a large network of offices around the world and acts as “Trade Promotion Sections” of the Italian Embassies or Consulates.



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associazione italiana per il restauro architettonico, artistico, urbano
italian association for architecture, art and urban restoration

Assorestauro is the first association established in Italy for materials, equipment and technology producers and service providers for the restoration and heritage conservation sector. Among the associations involved in this sector, which includes various institutional bodies that represent designers or restorers, **ASSORESTAURO** is the first to finally give voice to the industry and the sector of specialised services, promoting their interests in promotional, legal and cultural areas. **ASSORESTAURO** seeks to represent the sector, both nationally and internationally. In regard to the Italian market, an increased sensitivity towards our architectural heritage, together with the diffusion of new technologies, point to a growth in the sector in recent years, both from the cultural point of view (debates, magazines, conventions, exhibitions) and from that of technology (innovative materials, machines and equipment, software, plant design etc.). This provides the industry with a great opportunity for increasing and strengthening the occasions for dialogue, which are often lacking, with professionals, on the one hand, and with institutions (Government departments, Universities) on the other. As far as foreign markets are concerned, there is a clear perception of the need to capitalise on the great prestige that Italy enjoys abroad in matters of cultural heritage and on the remarkable investment in cultural technology that Italian companies have made in recent years, in order to translate specialist skills and know how into business opportunities abroad.

ASSORESTAURO therefore has the scope of coordinating, protecting and promoting the interests of its associated companies, and fostering their progress and development, endorsing their products and services and representing them in their relations with the institutions and organisations working in the field of research and training, regulations and promotion. It also acknowledges the support and patronage of the patronage of DNA.Italia Trade Show and Events, recognising, together with its associated companies, the value of a trade fair appointment that has become an international point of reference.

The company carries out the following specific activities:

- it promotes studies and research and collects news, items and statistical data useful for sector information, and carries out studies, monitoring and analysis of the situations and developments in the markets;
- it participates in the elaboration and publishing of international regulations for the qualification of associated companies, assisting them and protecting them in the certification of the quality and security systems of their products and services;
- it directly and indirectly organises training or updating courses, research and conferences for the development and dissemination of technologies and the use of their products;
- it promotes and holds conventions, synergies and agreements among associations throughout the world.



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■ An international glance... more than a wink of understanding

In the last few years, our Association has focused part of its activities on international markets, thanks to the constant support of ICE (Italian Trade Promotion Agency), to the long-established partnership relation with foreign institution and, not least, to the growing demand by the associated companies, that are beginning to look to international markets, even in the sector of restoration, as an interesting solution for their qualified activities. It is certain that, on the other side, many foreign markets continue to look to Italy as a clear example for the management of Cultural Heritage and for the excellence in the management of restoration intervention, both in terms of design and analysis, both in terms of a strict operational profile. The excellence in restoration, which increasingly moves from craft-works dynamics to organized and qualified companies, is now increasingly a fertile ground to operate stably in international markets.

At the core of an effective penetration into foreign markets, should be considered the need for



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collaboration between the various professionals involved in the sector and the need to establish cooperative relationships among competitors on the Italian market. Leaving aside the strong competition that has marked, holding them back, the promotional activities abroad is now an imperative, in view of the fact that very often the companies, by themselves, are not sufficiently organized to deal efficiently with challenges abroad.

The action of Assorestauoro cannot go beyond the creation of real opportunities, continuing in that action of seduction of International Institutional and beyond the promotional support offered by projects funded by national or local institutions. But if it is true, as Milan Kundera wrote, that ... flirting is a promise of sexual occurring without a guarantee ... and ... the possibility itself remains in the realm of theory, in suspense ... (1) the determination of the companies to cooperate with each other and with foreign partners, their willingness to equip themselves with a wide documentation in English (if not in the local language, as would be sometimes useful), supporting focused investments, are now on essential to capitalize on the network of relationships built over the years by ICE and Assorestauoro, widely represented in the training course that again is leading by our Association.

This year we are managing with few international projects: MED-ART in partnership with the Turkish GDF, co-financed by Emilia Romagna Region and ICE, the restoration of Huber Palace in Istanbul, MAE-REGIONI-CINA in partnership with Lombardy Region and co-financed by MAE and, last but not least, the project of the School of Restoration in Russia in partnership with ICE and CNRPM. All this projects have attracted the attention of many of the member companies and contributed to increase our membership. The trail is now open, it's up to us to work correctly to make it concrete.

M. Kundera, The Unbearable Lightness of Being, Faber and Faber, London, 1984



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■ Safeguarding Heritage between technique and strategy

The seismic events that hit Abruzzo (6th Aprile 2009) and more recently the lower part of the Po Valley (the 20th and the 29th of 2012) have shown, once more, that it isn't sufficient to have at disposal good techniques to face risks. Besides the preventive measures, that should be undertaken as part of a global strategy, immediately after an earthquake it is necessary to consider from the very beginning the real problems of the future recover and reconstruction. Often it isn't clear the general strategy so that, even if apparently we can have good results, in terms of provisional safety, we risk to compromise the future.

In this document, we don't want to present a further report on the damage produced by the earthquakes, but to profit of the reflection that these events have produced to look ahead to the future and present some concrete proposals on what could be done for the safeguard of our Architectural Heritage.

Here some points to discuss:

Prevention: **“Map of risk - Priority chart”**

The philosophy of prevention is one of the main issue discussed after each earthquake, but then, immediately forgotten. What happened for the Basilica of St. Francis of Assisi is an emblematic example. In October 1991 a workshop was organized in Assisi to examine some damage and cracks produced in the Basilica. The “Corriere della Sera” has reported in detail the results of this workshop, warning on the risks and the need of urgent preventive measures. Nothing happened and six years later two vaults collapsed during the earthquake of September 1997.

On the 28th of February in 1998, five months after the earthquake, an international workshop was organized with the aim to develop a “risk chart” to prevent possible similar situations. However, unfortunately, the document was ignored and nothing was done to prevent the disasters in Abruzzo and Emilia.

Historical centres

Attention should be given to town centres and small built-up areas whose value consist not in the individual element but in the context in which they are. A massive intervention of propping and consequently a prolonged closure of activities cause an increase in degradation and future costs and destroy the social fabric which represents the true value of an historical centre: this is unfortunately what was happening in L'Aquila.

Temporary feasibility

Feasibility is one of the most important problems that arise immediately after an earthquake. The procedure for issuing a certificate of occupancy, however, can be delayed, particularly in the case of cultural heritage, by several factors, including the time required for a complete un-

derstanding of the situation of instability and accountability that becomes sometimes very heavy. All of this can lead to excessive caution.

It should be noted, therefore, the importance of the “Temporary Feasibility” criterion which allow a time-limited use, including temporary and/or partial investigations and periodic check on structures to verify and monitor the evolution of the conditions of feasibility awaiting of more massive and expensive work. The explicit regulation of this criterion, clarifying responsibilities and legal aspects, would allow the technician to act notwithstanding the most restrictive laws, avoiding excessive precautions that could have a profound impact on the cost and recovery of activities.

It has to be consider also that, being safety of probabilistic nature, for a short time it is possible to accept situations not acceptable for a long time.

Temporary measures, Partial measures

Of particularly relevance is the definition of safety and performance levels that ca/should be pursued in the implementation of seismic improvement interventions on cultural heritage. The choices of action may involve, in fact, both a distortion of the property on which they operate and a burden of responsibilities and role of the designer. It is also recognized that temporary measures, or part of them, may be considered as a first step towards the establishment of a comprehensive project of repair and/or consolidation in which “Partial measure” criterion has a substantial role.

It is of utmost importance to explicitly include temporary improvement measures in guidelines and standards, clearly defining specific performance levels.

As far as the emergency management is concerned, the necessity to preserve the integrity of the cultural heritage, in the context of a correct restoration approach, requires the necessity of applying interventions of extreme urgency “compatible” and “reversible”. Chaining, for example, can be in many cases an active solution for final consolidation purposes with the advantage of allowing an immediate use with less bulk and obstruction, compared to widespread propping.

Conclusion

A lot of works has been done and most important issues related with the Preservation Conservation, strengthening and maintenance of the cultural heritage have been discussed.

Too often, however, the decisions undertaken are not transformed in actions and remain just as good intentions.

Massimo Cialente
 Mayor of L'Aquila

■ The earthquake of L'Aquila: some notes by the Mayor



IL SINDACO DELL'AQUILA

Although it has already been four years since that tragic night, when the world collapsed onto our territory, we are still here today having to face reconstruction, especially of the historical centre. 40 hectares of history, still wrapped up in scaffoldings; the shrine of an incredible number of old buildings, churches, squares, monuments, fountains.

Enchanting views abandoned to silence, to humidity, to the muffled noise of the military jeeps still patrolling the red zone today, the place where the town most felt the forces of nature.

If you don't know L'Aquila, you know nothing of the symbiotic relationship its inhabitants have always had with its historical centre, so strong that the people are often identified with the city itself.

The earthquake of April 6, 2009 destroyed the houses and, most of all, deeply jeopardized an ancestral identity, often referred to as "aquilanità": that feeling of being one with the walls, inhaling the air of the market, the colours of the bars, the smell of the restaurants, the heat of the people gathering spontaneously with no need to call each other. The suburbs are starting to get back to life, although many "class E" houses have not been rebuilt, yet. 28 thousand people are still sleeping out of their houses and this long waiting, due to a slow and difficult administration, is starting to have a negative impact on the citizens, more and more disheartened every day.

Recently, the Minister for Territorial Cohesion, Mr Fabrizio Barca, confirmed that, starting from March 21, over 2 billion euros are likely to be allocated for all the cities hit by the earthquake and this will eventually mean to make a huge step forward.

5 billion euros will be needed to rebuild the historical centre and 3 billion euros will be required for the reconstruction of the "crater", with 1 billion and a half already spent.

"Acceleration" must therefore be the new keyword: an urgent intervention kicking over the reconstruction before spring; in the case of L'Aquila, this means starting the works along the central axis of the historical centre.



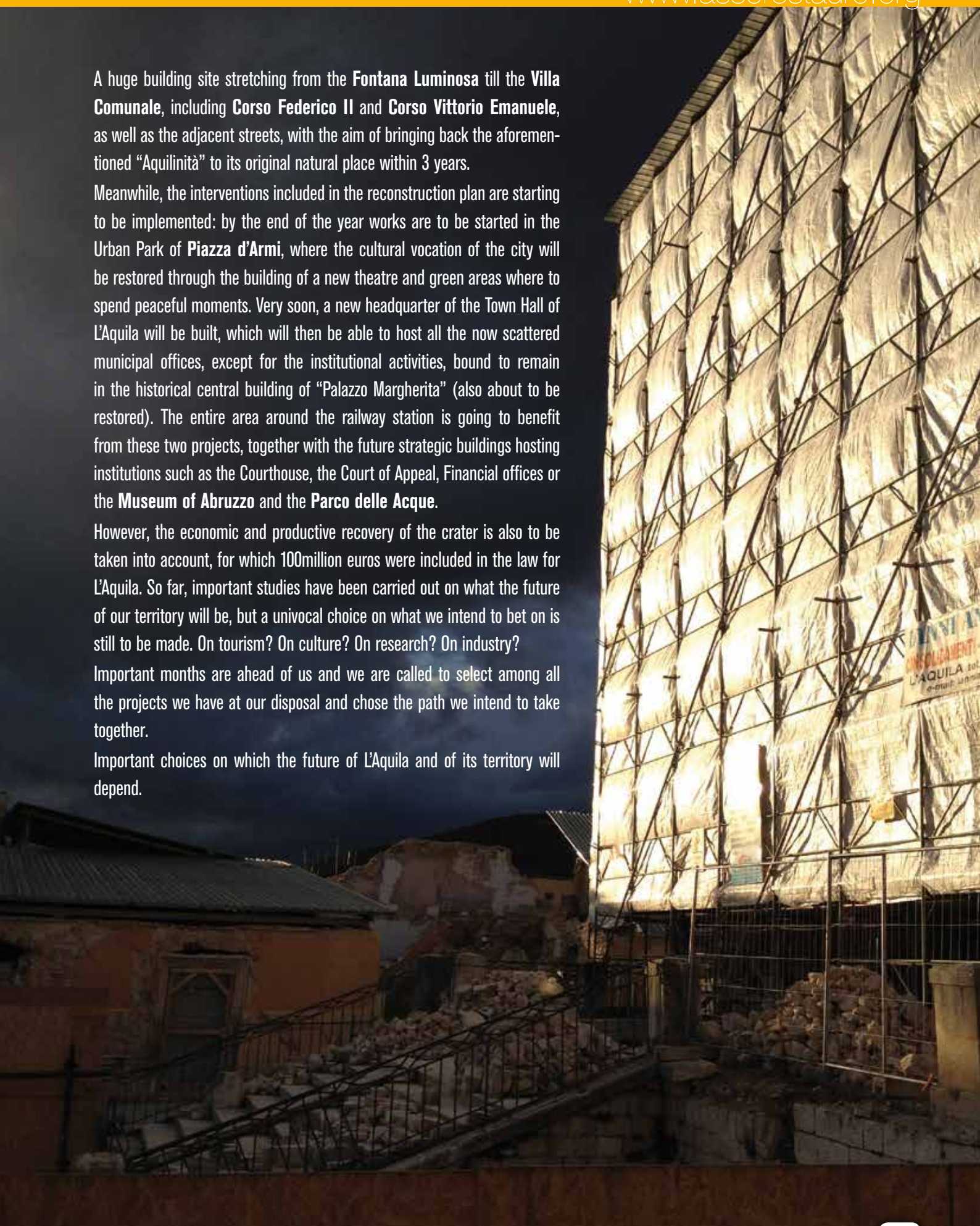
A huge building site stretching from the **Fontana Luminosa** till the **Villa Comunale**, including **Corso Federico II** and **Corso Vittorio Emanuele**, as well as the adjacent streets, with the aim of bringing back the aforementioned “Aquilinità” to its original natural place within 3 years.

Meanwhile, the interventions included in the reconstruction plan are starting to be implemented: by the end of the year works are to be started in the Urban Park of **Piazza d’Armi**, where the cultural vocation of the city will be restored through the building of a new theatre and green areas where to spend peaceful moments. Very soon, a new headquarter of the Town Hall of L’Aquila will be built, which will then be able to host all the now scattered municipal offices, except for the institutional activities, bound to remain in the historical central building of “Palazzo Margherita” (also about to be restored). The entire area around the railway station is going to benefit from these two projects, together with the future strategic buildings hosting institutions such as the Courthouse, the Court of Appeal, Financial offices or the **Museum of Abruzzo** and the **Parco delle Acque**.

However, the economic and productive recovery of the crater is also to be taken into account, for which 100million euros were included in the law for L’Aquila. So far, important studies have been carried out on what the future of our territory will be, but a univocal choice on what we intend to bet on is still to be made. On tourism? On culture? On research? On industry?

Important months are ahead of us and we are called to select among all the projects we have at our disposal and chose the path we intend to take together.

Important choices on which the future of L’Aquila and of its territory will depend.





History of the Vatican Museums

The Vatican Museums originated as a group of sculptures collected by Pope Julius II (1503-1513) and placed in what today is the Cortile Ottagono within the museum complex. The popes were among the first sovereigns who opened the art collections of their palaces to the public thus promoting knowledge of art history and culture. As seen today, the Vatican Museums are a complex of different pontifical museums and galleries that began under the patronage of the popes Clement XIV (1769-1774) and Pius VI (1775-1799). In fact, the Pio-Clementine Museum was named after these two popes, who set up this first major curatorial section. Later, Pius VII (1800-1823) considerably expanded the collections of Classical Antiquities, to which he added the Chiaromonti Museum and the Braccio Nuovo gallery. He also enriched the Epigraphic Collection, which was conserved in the Lapidary Gallery.

Gregory XVI (1831-1846) founded the Etruscan Museum (1837) with archaeological finds discovered during excavations carried out from 1828 onwards in southern Etruria. Later, he established the Egyptian Museum (1839), which houses ancient artifacts from explorations in Egypt, together with other pieces already conserved in the Vatican and in the Museo Capitolino, and the Lateran Profane Museum (1844), with statues, bas-relief sculptures and mosaics of the Roman era, which could not be adequately placed in the Vatican Palace. The Lateran Profane Museum was expanded in 1854 under Pius IX (1846-1878) with the addition of the Pio Christian Museum. This museum is comprised of ancient sculptures (especially sarcophagi) and inscriptions with ancient Christian content. In 1910, under the pontificate of Saint Pius X (1903-1914), the Hebrew Lapidary was established. This section of the museum contains 137 inscriptions from ancient Hebrew cemeteries in Rome mostly from via Portuense and donated by the Marquisate Pellegrini-Quarantotti. These last collections (Gregorian Profane Museum, Pio Christian Museum and the Hebrew Lapidary) were transferred, under the pontificate of Pope John XXIII (1958-1963), from the Lateran Palace to their present building within the Vatican and inaugurated in 1970.

The Museums also include the Gallery of Tapestries, a collection of various 15th and 17th century tapestries; the Gallery of Maps, decorated under the pontificate of Gregory XIII (1572-1585) and restored by Urban VIII (1623-1644); the Sobieski Room and the Room of the Immaculate Conception; the Raphael Stanze and the Loggia, which were decorated by order of Julius II and Leo X (1513-1521); the Chapel of Nicholas V (1447-1455), painted by Fra Angelico; the Sistine Chapel, which takes the name of its founder, Pope Sixtus IV; the Borgia Apartment, where Pope

Alexander VI lived until his death (1492-1503); the Vatican Pinacoteca, created under Pius XI (1922-1932) in a special building near the new entrance to the Museums; the Missionary-Ethnological Museum which was founded by Pius XI in 1926, arranged on the upper floors of the Lateran Palace and later transferred, under Pope John XXIII, to the Vatican where it has been opened again to the public in the same building which housed the former Lateran collections. In 1973 the Collection of Modern and Contemporary Religious Art was added and inaugurated by Pope Paul VI (1963-1978) in the Borgia Apartment. The Vatican Historical Museum, founded in 1973 and transferred in 1987 to the Papal Apartment in the Lateran Palace, houses a series of papal portraits along with objects of the past Pontifical Military Corps and of the Pontifical Chapel and Family and historic ceremonial objects no longer in use. The Carriage and Automobile Museum is a section of the Vatican Historical Museum. In the year 2000, the Vatican Museums opened a new large entrance that provides visitor information and other services; on display are many new artworks, two of which were specially created for this grand entrance hall.



*Extract From: S. Stano, J. Agresti, I. Cacciari, D. Ciofini, M. Mascalchi, I. Osticioli, A.A. Mencaglia, in Applied Physics A, Published on line 24 November 2011

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■ Laser cleaning in conservation of stone, metal, and painted artifacts: state of the art and new insights on the use of the Nd: YAG lasers

Laser cleaning represents the most important contribution of physics to the conservation of cultural heritage. Despite the pioneering works dating back to the early 1970s, this innovative technique started to be systematically investigated and then extensively applied only 20 years later. A number of scientific investigations were reported over the last two decades in journals, conference proceedings, and books, focusing on the efficiency, selectivity, and then effectiveness of laser ablation, as well as on the possible advantages it can provide with respect to traditional cleaning techniques. This triggered an early level of dissemination of the laser approach in conservation practice. At least 300 Nd:YAG laser systems are presently operative in conservation laboratories and restoration yards all over Europe and abroad. At the same time, laser technologies for conservation also increased their presence in exhibitions and fairs, as well as in formation and tutorial frameworks. Moreover, case studies of important masterpieces also stimulated the interest of mass media, which gave a big resonance to the present innovation, thus extending its dissemination up to the social level. All this is concrete evidence that laser cleaning technologies moved from research laboratories, to commercial production, and then to restoration yards. Such a unique case of technological and methodological transfer in conservation of cultural assets was entirely determined by the scientific contribution provided by various research institutions. The latter can still play an important role in order to rigorously extend the exploitation of experimental results already demonstrated and address open cleaning problems, thus making durable the methodological revolution the laser approach is producing in conservation practice. First of all, systematic studies dedicated to the ablation phenomenology and interpretation of the basic laser material interaction mechanisms are still needed in order to develop practicable solutions for cleaning of wall and easel paintings. At the same time, further insights in stone and metal cleaning can be helpful in order to extend the domain of application. From a disciplinary point of view, the present application is suffering from lack of thorough physical studies similar to those carried out along the last decades for optimizing biomedical and industrial applications of laser ablation. The results of the latter represent the starting point for interpreting the ablation processes involved in laser cleaning of cultural assets, but exhaustive descriptions must also take into account a number of peculiar features not encountered elsewhere. The variety of ablation channels involved is indeed the widest, according to the different material stratifications, multiplicity of possible degree of cleaning and aims of the laser treatments, which makes the physical approach extremely complex. On the other hand, objective technological and methodological choices should be based on the interpretation of the interaction. *





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Visit to the laboratories of Istituto Nazionale per la grafica

Giovanna Pasquariello

THE LABORATORY OF BIOLOGY AND ENVIRONMENTAL CONTROL

It was in 1965 that the Gabinetto Nazionale delle Stampe set up a laboratory of microbiology to apply the sciences of biology, chemistry and physics to the conservation of drawings, prints and photographic material.

Renamed the laboratory of biology and environmental control in 2000, the department maintains its focus on the problems regarding the biological deterioration of ancient and modern graphic and photographic works and performs diagnostics to identify and establish the characteristics of potentially dangerous biological agents (micro-organisms and insects). It examines, tests and evaluates the suitability of materials and products in use or considered for use in restoration operations so as to ensure correct preventive conservation. It monitors the environmental conditions of premises used to store and display the collections of the Istituto Nazionale per la Grafica (ING) in order to assess the interaction between artwork and environment and prevent situations of biological and microclimate risk. It plans dusting operations, identifies the most suitable methods of disinfection and disinfestation, and provides technical assistance and advice not only to the various departments of the ING but also to other branches of the heritage administration and public or private bodies. The laboratory of biology and environmental control harnesses a range of scientific disciplines including biology, climatology, chemistry, physics and aero-biology as applied to paper and photographic works in order to develop strategies of preventive conservation for those working in the cultural heritage sector and the items concerned. In collaboration with other research centers, it works on the development and testing of innovative technologies and simulations of samples with chemical and physical characteristics similar to those of the original artefacts so as to ensure that new products to be used for decontamination, conservation and restoration are both effective and chemically inert. It develops guidelines for specific non-destructive and non-invasive methods and techniques to monitor and safeguard works of graphic art. It is also involved in establishing officially accepted standards for the scientific community at the national (UNI) and international (ISO) level.



THE RESTORATION LABORATORY FOR WORKS OF ART ON PAPER

It was the restoration laboratory set up within the Gabinetto Nazionale delle Stampe by Adolfo Venturi in 1895 that took the first steps for the conservation and protection of works of art on paper in Italy. As shown by his correspondence and the official documentation of the period, the director was concerned not only to identify a valid nucleus of ancient works of graphic art to serve as a basis for a new museum, but also to ensure the preservation of a national artistic

heritage exposed in various respects to great risk in the absence of scientific guidelines for its conservation, management, and cataloguing. In his capacity as chairman of the permanent committee of fine arts, Venturi formally requested Professor Brioschi, the President of the Accademia dei Lincei, on 21 January 1892 to part with a specific section of the illustrious Biblioteca Corsini collection, now owned by the academy, in order to create a national collection of prints of European standing. Having obtained this, he now needed someone capable of scientifically and successfully addressing the many and complex aspects of the difficult task of preserving works of art on paper, being well aware that Italy was far behind as regards studies in this field: “We have had no experts on the history of engraving since Zani and the others, except during the Napoleonic kingdom of Italy.” The choice fell on the German art historian Paul Kristeller, already known within the international scientific community for his work with Lippman, the director of the Kupferstichkabinett in Berlin. On the occasion of this crucial battle for the creation of a coherent museum system in Italy and the preservation and promotion of the national heritage of prints and drawings, Venturi realized that it was essential for studies in the history of art and engraving to develop a scientific discipline of conservation capable of becoming the operative tool required to address the considerable problems connected with preservation of the heritage.

The work carried out by Kristeller with Venturi and the correspondence between them provide a basis to reconstruct the criteria informing the initial decisions, which demonstrate the great competence achieved in the specific field of the conservation of works of art on paper. Under the supervision of the Ministry Venturi was prompted as early as 1895 to include conservation among the priorities in view of the precarious state of preservation of the prints and drawings. The energetic measures taken included detaching the more precious prints and drawings, removing stains from them, giving them new mountings, and placing them in wooden or cardboard boxes inside cupboards away from dust. This operation also made it possible to quantify the collections and assess each item at its true value.

The guidelines laid down by Venturi and followed to such good effect by Kristeller from the very outset are the constants characterizing the conservation of artworks on paper throughout the 20th century. In the 1960s, when Italy's economic development permitted more sustained investment in the historical and artistic heritage, the carefully considered work of Lidia Bianchi led to an authentic upgrading of the Gabinetto Nazionale delle Stampe, above all through the employment of skilled professionals and specialists. Conservation was no longer something carried out by personnel on an occasional basis but the scientific result of an operative methodology developed by a fully-fledged restoration department assisted from the outset by a laboratory of microbiology to provide support in research. This new approach necessarily extended also to the arrangement of the collections, which had hitherto characterized the activities of preservation. Bianchi halted the detaching of works from the bound volumes of the Fondo Corsini in 1968 after establishing on the basis of ample evidence that the items not removed had withstood the passing of time far better than those stored in cardboard containers. The broad experience accumulated in the conservation of the collections has today been channeled into the diagnostic

laboratory for matrices and the restoration laboratory for works of art on paper. These two laboratories of the Istituto Nazionale per la Grafica, depositaries of specialized knowledge and traditions in the conservation of the items in their particular fields, are currently developing in-depth examination of their constituent materials and scientific research aimed at identifying valid and up to-date methods of conservation. Confirmation of the work successfully carried out over the years is provided by the fact that the ING has been called upon repeated, especially in the last two decades, to supervise projects of conservation and restoration in the specific areas of competence.

In particular, the restoration laboratory for works of art on paper has developed and carried out various projects for major cultural events and a number of significant exhibitions featuring the ING collections. Attention should be drawn in this connection to the following: the exhibition Roma Veduta, which inaugurated the exhibition rooms in Palazzo Poli in 2000 and presented a number of suitably mounted large-format works; restoration of the drawings and prints of the Museo Civico – Pinacoteca Giuseppe

De Nittis in Barletta, which made it possible to compile the catalogue raisonné of the artist's graphic works that accompanied the exhibition De Nittis incisore, held in the ING between 1999 and 2000; the planning and supervision of work for the conservation of the Dotazione Giovan Battista Filippo and Ernesto Basile at the Università di Palermo - Facoltà di Architettura, which made it possible to hold two exhibitions, the first in Palermo and the second in Rome at the Camera dei Deputati in 2000; the exhibition La collezione del Principe, which celebrated the fourth centenary of the founding of the Accademia dei Lincei in 2004 with a display of the most important works from the Fondo Corsini; Puzzle Soleri. Etica ed invenzione urbana, held between 2005 and 2006 and providing an opportunity to experiment for the first time with new ways to exhibit large-scale architectural projects.



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■ Valorization of Cultural Heritage

Syremont starts up in 1987 within the Montedison group, from which it inherits a specific competence on scientific research. After 26 years devoted to research, diagnostics and the restoration of cultural heritage sites all over the world, Syremont is today specialized in a wide range of integrated services, mainly focused on the management of cultural assets.

Syremont developed its expertise especially in the fields of diagnostic and environmental monitoring, of conservation and maintenance, of architectural design and planning, and the re-qualification, valorization and fruition of the cultural heritage.

Scientific and technological research

Syremont scientific and technological investigation is done in cooperation with research centres, and with both national and foreign universities. Our company manages projects concerning the development and testing of products and services meant for the conservation of the environmental and cultural heritage. We developed advanced systems for protecting a wide range of materials and structures, while specialising in survey, diagnostics and environmental monitoring. The acquired knowledge was our basis for creating a line of specific products aimed at restoration and construction. This involved a continuous training of highly specialised professionals, capable of carrying out a vast range of interventions, in addition to surveys and further studies. We carry out our diagnostics by means of structural surveys (sonic and ultrasonic investigations radar and geo-radar, physical and mechanical analysis, infrared-red rays), through documentary surveys (archaeological, geological, urban, and extra urban maps, 2d and 3d degree elaborations), and by examining surfaces and building materials as well as microclimatic environmental conditions.





Restoration and Valorization

Syremont operates, according to the SOA mandatory certification, within restoration and maintenance projects, concerning decorated surfaces and art works, fitting out and interior finishing, carpentry, and internal & external cladding of items made of different materials.

Our company operates in both private and public contexts – urban areas, museums, theatres, castles, historic villas, parks and gardens—and wherever the upgrading of buildings, landscapes and urban areas is required for the purpose of public use.

Architectural and landscape design is one of our main concerns, in order to meet the needs of conservation. Therefore we plan and realise infrastructures and service-plants aiming to preserve and to upgrade the re-valuation, fruition and perusal of a given asset. Syremont also works in planning both temporary and permanent exhibition and fruition systems such as roofings, walkways, entertainment areas signboards, lighting, set design and multimedia corners. Syremont has also experience in the recovery of open spaces, such as historic gardens, parks and urban areas, through the setting up of sustainable infrastructures meant to increase their use. We plan integrated landscape systems as to re-qualify the interaction between the landscape and urban settlements; this is done through the functional restoration and re-qualification of areas according to their new functions, their receptivity and the events hosted.

The company is also involved in planning and realising fit-outs for temporary and permanent exhibitions through light and sound events, spectacularized guided tours, thematic parks, media production, communication and marketing.

Syremont's planning and design projects are intended in order to upgrade the fruition of the artistic heritage by supplying modern plants, endowed with sustainable cultural infrastructures, and by creating instruments for exhibitions and special events, while preserving at the same time the original asset and site identity along with new and modern shared spaces.







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Premise

■ The Church of Collemaggio

Throughout its long history, started between 1287 and 1294, the Church of Collemaggio underwent numerous interventions, mainly as a consequence of the high seismic activity of its territory. The earthquakes of 1349, 1461, 1703, 1915 and 1958 are especially worth mentioning. Between 1918 and 1962, the Civil Engineering Department (followed by the Public Works Agency) carried out massive intervention works, such as the addition of reinforced concrete in the curbs, the reconstruction of the transept dome, the building of a grid of beams to reinforce the façade, etc...

Afterwards, between 1970 and 1972, the local Superintendence also intervened, removing the Baroque wooden ceilings and heightening the aisle walls by 3 metres. At the end of the '90s, steel chains were integrated underneath the wooden aisle trusses.

Damage caused by the earthquake of April 6th, 2009 and related urgent interventions

The earthquake provoked serious consequences on the structure - damaged in virtually all its parts - thus highlighting its extreme vulnerability. Such damage, apart from being determined by the violence of the earthquake which caused devastation throughout the whole city of L'Aquila, is also connected to the lack of a global strategy regarding the consolidation and restoration interventions, carried out in a too partial and localised manner: some of these interventions even proved totally inadequate, such as the reinforced concrete curbs not toothed into the structure, or the reinforced concrete structures neither anchored nor coherent with the overall wall structure, the heightening of the aisle trusses, etc. Not to mention the inner structural weakness of some elements such as the two big "rubble masonry" pillars, constituted by non-cohesive, poor material and covered by disconnected, though high-quality, stone blocks.

The façade

At the time of the earthquake, the façade was under restoration and covered by a large scaffolding. Serious damage and local detachments especially affected the rose window. However, most of the damage is concentrated in the right side of the façade, which detached from the aisle wall, this provoking major cracks and dislocations as well as the leaning of small columns, which detached from the masonry. The consolidation works included the creation of a series of anchoring points in the detached portion as well as the re-positioning of the stones in the rose window.



The aisle

The left wall (North) slightly rotated outwards, this causing a horizontal crack, visible from inside the Church. Some chains broke in correspondence with the anchoring points; a series of temporary chains helped to restore an effective transversal containing action. The pillars particularly underwent major damage, also as a consequence of the strong vertical action of the seismic waves. Serious cracking affected almost the entire building and caused damage and leaking out of material. The immediate hoop reinforcement interventions by means of polyester strips carried out a few days after the earthquake, as well as the propping of all the arches of the aisle prevented the collapse of the building.

The apsidal area

The apsidal area is badly damaged and disrupted; part of the roof collapsed. The arches and the ribbing of the central vaults detached from the ribbed vault itself and risk to collapse, too. The creation of a new temporary structure made by metal trusses intends to provide a temporary roof and allow the anchoring of a few tie beams connected to two brackets in order to support the unsteady arch and ribbing respectively. The installation of the metal structures required the partial reconstruction of the summit of the walls damaged by the earthquake. The damage present in the apsidal area is also clearly visible from the outside. For safety reasons, a temporary solution was adopted with the aim of improving stability: the propping of the large window and the application of slightly pre-stretched polyester strips.

The bell tower

The bell tower presents severe damage. A wooden propping applied alongside the windows and hoop reinforcement interventions by means of polyester strips assured temporary stability.

The transept

The entire transept area collapsed, mainly as a consequence of the “blast” of the two central slabs, internally constituted by non-cohesive, poor masonry (clearly visible once the ruins had been removed – and covered by disconnected stone blocks, having a mere aesthetic function. It was a sort of “rubble masonry” lacking of the crucial hooping function alongside its perimeter.



The undamaged portion left of the two large pillars is no higher than one metre.

Once the ruins had been removed, a massive presence of reinforced concrete and bricks was discovered. The dome, recovered in its central part, was made of reinforced-concrete ribs and bricks. After the collapse of the structure, some reinforced-concrete curbs - unwisely not toothed into the wall - were found hanging and therefore had to be removed by the firemen.

Some synthetic fibre strips were applied alongside the corners with the aim of improving the overall static instability.



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■ Restoration of Palazzo Micheletti in L'Aquila

The companies RESTAURI INNOVATIVI TECNOLOGICI SRL (RES.IN.TEC ITALIA SRL) and LEONARDO SRL are working in the reconstruction site of Palazzo Micheletti situated in Via Castello, L'Aquila. The work is directed by Ing. Verlinghieri with the monitoring of the "Soprintendenza per i beni architettonici e paesaggistici dell'Abruzzo".

RES.IN.TEC. ITALIA SRL from Bologna is one of the most qualified Italian companies in the field of consolidation and seismic improvement of historical buildings and monuments in high-risk areas.

The company is always aimed at finding a balance between conservation and security and operates with the use of various technologies for restoration and structural reinforcement.

Thanks to the kind cooperation with RESTAURI INNOVATIVI TECNOLOGICI SRL, LEONARDO SRL was involved in a project for the reconstruction and could be an active and integral part in the protection of L'Aquila cultural heritage.

The work in the restoration site has also contributed the beginning of a collaboration with highly qualified professionals from the city. In our case is a pleasure to make a special mention of the work supervisor Ing. Verlinghieri.

LEONARDO SRL is a modern cultural laboratory. As specialists in the protection, restoration and maintenance of historical buildings and works of art, our know-how and expertise allow us to respect and optimise the history and identity of all types of cultural heritage.

LEONARDO operates in two spheres: ANALYSIS in the way of stratigraphic analysis of masonry and plaster/paint, historical analysis, materials analysis (chemical, physical, geological), thermographic and reflectographic analysis (ultraviolet, infrared), photogrammetric and vectorial surveys, archeological analysis and RESTORATION AND MAINTENANCE of paintings





(mobile assets: paintings and panels; non-mobile assets: frescoes, wall paintings, stucco) monuments (terracotta, sandstone, marble, plaster and other stone materials) and modern architecture.

Analysis and restoration - we believe that both are complementary and indeed fundamental to the effective and respectful restoration of historical assets.

This is why LEONARDO has chosen to organise itself in such a way as to be able to individually manage both of these phases with its own resources. This allows us to develop an integrated approach which unifies aspects often seen as distinct, and which is supported by a managerial philosophy which invests in professionalism, research, safety and the environment.

LEONARDO also holds the Certificate of Conformity to the UNI EN ISO 9001:2008 Standard for Quality Management Systems.

The company holds the following certificates enabling it to tender for public works: CATEGORY OS2 A - CLASS IV (restoration of decorative surfaces and of mobile cultural assets of historical and artistic interest) CATEGORY OG2 CLASS II (restoration and maintenance of protected non-mobile cultural assets).

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■ Restoration and seismic improvement of residential complex “Porta Napoli” In l’Aquila

Building bound by Architectural Heritage protection (D.Lgs 42/04)

This complex of 5 buildings represents one of the first examples of “social housing” in Italy, and for this reason it is protected as Historical Architectural Heritage. This compound was built by INCIS (National Institute for Government Employees Houses) around 1925-1930 to host government employees and their families.

These historical buildings have been heavily damaged by the earthquake that hit the region of Abruzzo (central Italy) on April 2009, rated 5.8 on the Richter scale, making them uninhabitable unless extensive and substantial restoration.

Main seismic vulnerability of the buildings was the poor quality of stone masonries, due to roughly-shaped stones, frequently undersized, and low consistency mortar, occasionally applied with undue thickness to compensate stones irregularity.

The aim of the restoration intervention was either a static consolidation and the seismic improvement of the buildings, achieved by reducing the causes of seismic vulnerability.

The intervention was designed on one side to increase walls mechanical strength, in order to make them able to suitable to absorb combined shear, compression and bending stresses typically induced by seismic action, on other side to optimize the structural response of the whole building.

Design strategy was first to repair all items damaged by the earthquake in order to restore original situation, and then to proceed with a global consolidation of the structures, to achieve the seismic improvements level required, and to increase ultimate strength and ductility of the buildings.

Masonry walls consolidation have been achieved through the “reinforced plaster” method,





i.e. the application of Fibre Net glass fiber mesh on both faces, connected transversely by mean of FRP connectors, and fixed by mean of a thin (3-4cm) plaster layer. Thanks to FRP absence of corrosion, mortar was lime-based type, ensuring the best compatibility with the existing masonry, good breathability and resistance.

The use of composite materials instead of steel assure long term durability and a reduced alteration of walls overall stiffness (inflexibility). The intervention was extended to all internal and external walls, either stone and bricks ones, at all levels of the building. Consolidation job was completed at the end of 2012 achieving, and often going beyond, expected improvements. At the moment construction site is in the final stage to perform last finishing.

The Company

FIBRE NET srl is a Company based in Udine (Italy) with a several-year-long experience in the field of FRP materials. We develop and manufacture FRP products and systems coping with the most challenging road, energy, building and industrial applications.

The acronym FRP (Fibre-reinforced polymers) define the composite materials made of a polymer matrix (thermosetting polyester, epoxy, or vinyl-ester) reinforced by mean of fibers (glass, carbon or aramid). FRP products can be 2 to 10 times stronger than steel, while weight can be less than 1/5, in addition, there are several others well-defined benefits common on all FRP products:

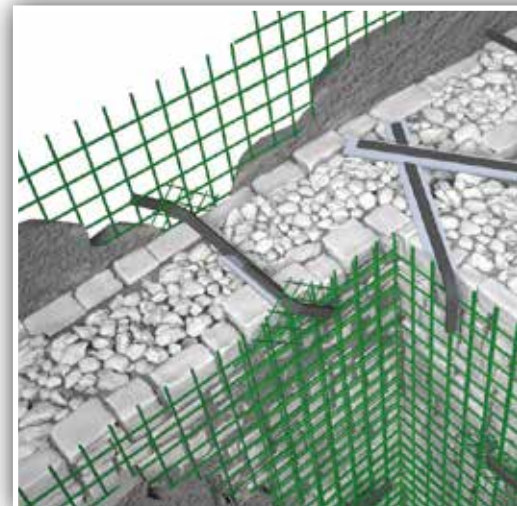
- Mechanical resistance
- Corrosion-proof
- Heat and UV ray-resistant
- Absence of thermal conductivity
- Adhesion of reinforcement to mortar
- Chemical/physical stability
- Recyclable
- Compatible with traditional and innovative materials

FRP materials have been developed over one century ago, while commercial uses started during early 1930s. Nowadays, thanks to the above mentioned benefits, they are extensively used in the aerospace, automotive, marine, construction industries, as well as sports and hobby equipments.

Historical building consolidation

The constant effort to improve and search for new technical solutions, the long term cooperation with research centers, laboratories and universities, the training of technicians and business enabled Fibre Net to develop FIBREBUILD, a range of FRP products and systems for structural reinforcement of existing masonry buildings, whether they are valuable or less. Any masonry, be it of stone, brick or mixed material, vault, as well as light weight floor screeds or low thickness, can be mechanically improved through FIBREBUILD system, consisting of FRP rods, mesh and accessories.

FRP meshes are integrated with the “reinforced plaster” method, which is widely recognized as the most effective technique, as it guarantees high degrees of improvement on historical



and existing walls. Mesh is fixed by mean of FRP connections evenly distributed over the whole surface of the structure, to achieve better mechanical strength, and avoid thermal bridges. Consolidation is guaranteed over the time by the total absence of corrosion weathering and network compatibility and accessories in FRP with mortars based on lime, gypsum, pozzolana, etc.

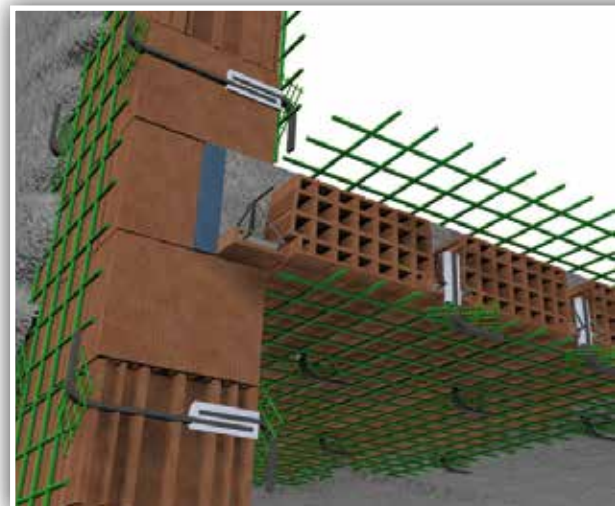
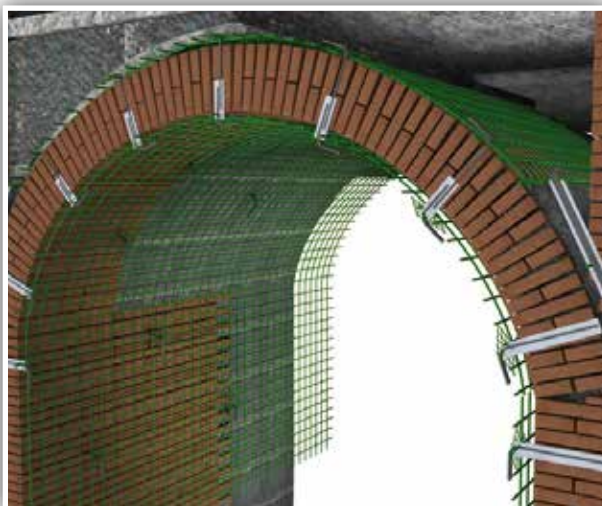
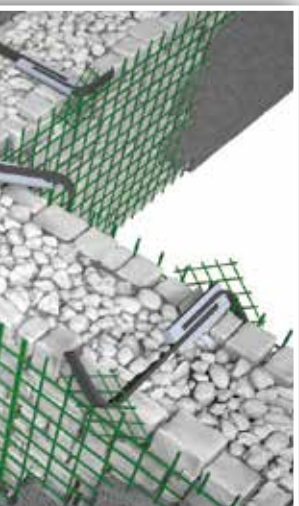
FIBRE BUILD systems help building efficient, diffuse and uniform reinforcements, which make the masonry ductile, while keeping the mortar low in thickness and reducing the overall charges, as compared to the conventional reinforcing materials. The results are extremely meaningful seismic improvement.

Reinforcement of vaults

The consolidation of the intrados and extrados of a vault consists in laying over the whole surface a FRP mesh with the weave size as required for the conditions of the substrate and of the structure. The mesh will adjust to any irregular substrates and the material is very low in weight, which helps easy and fast laying operations. The reinforcement will remain efficient over time also when mortars containing lime, clay, pozzolana, etc. are used. The reinforcement will be secured to the substrate with FRP connecting brackets.

Reinforcement of floors

The consolidation of wooden or of concrete and masonry floors with FIBREBUILD systems consists in making a new concrete slab reinforced with a FRP mesh. The new reinforced slab is then connected to the existing slab through special connections to obtain a new structure featuring greater mechanical performance. Because the FRP sheets are only a few millimeters thick, the reinforcement will fit better in the slab. This means that the load will be better distributed, while the overall thickness remains low. The slab is then joined to the perimeter walls through special FRP brackets



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■ **The art of saving the art: a painting damaged by the earthquake of l'Aquila finds new life and colors in Aramengo**

On the initiative of the Nicola Restauri srl – a restoration atelier based in Aramengo (ASTI) – it was possible to “adopt” and restore a first-half XVIIth century masterpiece painting from Abruzzo, “The Finding of the True Cross” by Giulio Cesare Bedeschini.

Nicola Restauri, a private company and a reality of excellence in the field of restoration founded by Guido Nicola in 1947, had pursued his goals for the protection of the arts in 1966 when they offered for free their competence during the Flood of Florence and collaborating with the emergency operations on the Holy Shroud after the fire of 1997 in Turin.

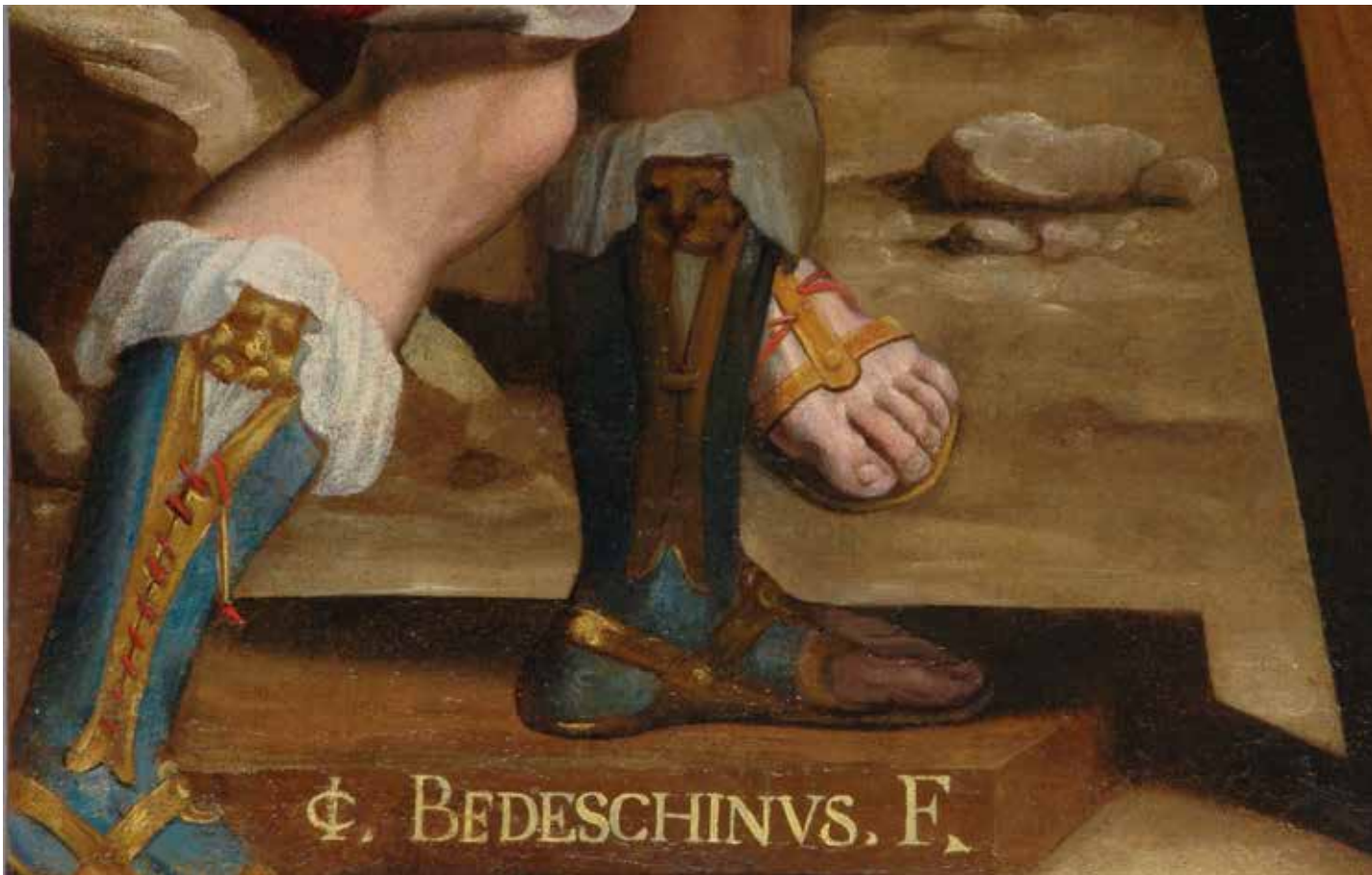
The Nicola atelier had already contacted the authorities of Abruzzo to offer for free its competence and professionalism: the desire to collaborate has been materialized in the 2010 edition of the Rotondi Prize to “Saviors of Art”, assigned to the Nicolas in 2002 for the Italy section. It is therefore gained the decision by the piedmontese atelier to finance and perform the restoration of the Bedeschini altarpiece, in very critical conservative conditions.

The partial collapse of the Church of San Francesco di Paola in L'Aquila, following the earthquake, had also involved the altarpiece by Bedeschini. The painting had been for a long time under the rubble in contact with direct and indirect humidity that had caused serious damage to the paint film and canvas support, already compromised by big breakthroughs, tears and curls, especially at the bottom.









The restoration, of considerable complexity and sensitivity - for which the Superintendence of L'Aquila had estimated a cost of 20,000 - lasted about 9 months.

The operation took place under the general supervision of the Superintendence for the Historical, Artistic and Ethno-anthropological Heritage of Piedmont (Valeria Moratti) on behalf of the Superintendent BSAE for Abruzzo - L'Aquila (Dr.ssa Caterina Dalia) in collaboration with the Cultural Heritage of the Archbishop of L'Aquila (Dr.ssa Giovanna Di Matteo).


After initial safety measures, functional for transportation from the Museum of Celano to the laboratory of Aramengo, the work has undergone careful conservative interventions which involved the removal of linings made in previous restorations - torn and overgrown with mold - the restoration of the flatness of the painting in the steam room with the correct repositioning and suturing of the numerous tears, grafts of old canvas into lost portions, a new lining reinforcement and a new frame.

The cleaning operation was preceded and accompanied by non-destructive imaging studies with UV and IR reflectography; the latter had revealed the presence of some repentance of the author during the execution of the painting and the removal of a character from the

scene. The long and laborious pictorial reintegration was carried out in tone above light and thin sublayer plastering. The several lacks of color were reconstructed using as a reference the image of the painting intact, as it was before the earthquake. The team of restorers had included Gian Carlo Tognin and Marco Massaglia for conservative intervention on the canvas support, Nicola Pisano for the instrumental analysis and IR and UV cleaning, Adriana Tognin for plastering, Rita Vai and Anna Rosa Nicola for the pictorial reintegration of the painting, Andrea Lombardini for photographs. The restoring operations - from collection of the painting until its final appearance - were also the subject of a documentary made by Marta Ghelma, Davide Scagliola and Bruno Zanzottera of ParalleloZero. Following this first intervention sponsored independently, the Nicola atelier has worked for the procurement of additional funds and donations from businesses, charitable organizations, associations and individuals for the restoration of other artworks from the churches of L'Aquila. Among the most important initiatives, many conferences and public presentations, an exhibition in the equipped halls of Aramengo with works by Flavio Sacco and Radu Dragomirescu and the exposure at the Abbey of Santa Maria di Vezzolano (Asti) of the handmade christmas crib created by Anna Rosa Nicola to raise funds through a detailed presentation of the project, giving visitors the opportunity to choose the works to "adopt" from those shown in the photographs.

The adoption project, developed by the Laboratory Nicola, continues today - extended to other valuable paintings and sculptures indicated by the competent bodies - presenting itself as a formula which combines intelligently mecenatism and technical skills to save part of our artistic heritage at risk.

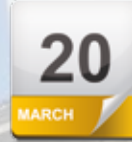
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 [Nicola.restauri](https://www.facebook.com/Nicola.restauri)









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■ Palace of Podesta' in Mantova

Restoration works, valorization and functional use of the Palace of Podestà in Mantova, one of the most important national monuments, are carried out by the Joint Venture between Piacenti Spa and the Consortium CCC (which entrusted the enterprises C.M.S.A Soc Coop., Diesse Electra and Cefla, to carry out the works) and directed by the Architect Paola Menabò (Commune of Milano).

The project team, led by the Architect Italo Rota, has the task of finding the appropriate solutions, for every single specific situation, to reconstitute structural stability to the building - that has been unused for long time - saving and appraising the internal decorations.

Current works consist of different preliminary safety interventions, studying, mapping, cataloging and dismantling (wooden platform roof, bookcases and old doors), and a careful stratigraphic campaign conducted even on floor surfaces than wall surfaces.

Concerning floors have been carried out stratigraphic surveys to control the possible presence of underlying floors and to identify the type of underlying vault structures in order to define the most correct structural consolidation methodologies of the vaults. During these surveys the digging out materials have been cataloged, showing several ceramic relics and two ancient coins; they can be saw inside temporary shrine placed where the relics have been found.

About wall surfaces they have been processed to a wide stratigraphic survey to acquire a clear and exhaustive idea on decorations and to examine in depth the knowledge on the conservation events. This stratigraphic survey has these goals:

Locating the real presence, the texture and the value of possible decorations hidden by the exterior painting coat.

Locating the real presence of decoration on the walls that are involved in demolition and reconstruction process or areas interested by the installations passage.

Controlling the possible presence of precious decoration in the structural surveys zones.

These surveys gave surprising and unexpected results as the finding of precious pictorial decorations from XIII century discovered in an area of unexpected interest; these discovery integrates and modifies the building history. The most important fact is the discovery of a pictorial knightly cycle from the beginnings of XIII century discovered at the sixth level of the building along the walls of four big rooms that formerly were a single big hall, maybe destined to public functions.

That paintings have some analogies with the frieze painted by Grixoplius on the nearby Palace of Ragione that share with the Palace of Podestà an important decorative season.

The stratigraphic surveys made at the fourth and fifth levels show, under the exterior painted layer, the presence of precious paintings, often illustrated, that can be referred to the late-Gothic and fifteenth-century phases until the redactions of the XIX century.

The Palace shows an articulated presence of prestigious historic and artistic proves, where the Gonzaga's inheritance – surely the most known in the area – represents only one of the several facets of the Palace and wherein is possible, even now, find many signs of the phases ensued from the XIII century until today.

The consequences of these articulated historic phases is the overlapping of several and different decorations.

The thirteenth-century part of the building (commissioned by Martinengo, the Podestà of Mantova), flanked to the civic tower, was later connected to the Palace of the ex General Warehouse by the building of the Arengario and then to the Palace of Ragione. Many remakes and architec-tonic modifications of the Palace follow one other even due to many blazes and to different use of the building as like the positioning of a prison in a wing of the Palace

To pledge the best quality during the restoration of the architectonic parts and of internal and ex-ternal decorated surfaces, actually are carried out preliminary test and protective actions as well as the elaboration of material mapping and the study of the degradation of every single room.

These methodological criterion that suppose the acquisition of documentation and the survey will allow to develop a focused and deep research on constitutive materials and on the adequate intervention methodologies, according to the principles of full compatibility, reversibility, differ-ent historic stratification and differentiation





Overall view of the complex of the monastery from the main square of the town of San Benedetto Po



Summary

The construction of the Monastery of “San Benedetto in Polirone” dates back to the sixteenth century, even if it was built over pre-existing structures of the eleventh century. The famous renaissance artist Giulio Romano is the author of the architectural outline and of the many important frescoes and decorations in the complex. The monastery is formed by several buildings irregularly distributed around two main cloisters.

In 2004, the municipality of San Benedetto Po, owner of a portion of the complex, decided to publish a tender for the restoration of part of the Monastery and for the creation of an ethnographic museum and other public spaces. The design team lead by Eng. Nicola Berlucchi won the tender for the preliminary and detailed architectural design and for the restoration of the decorated surfaces.

The team realized an overall project that included all the portions belonging to the Municipality. The restoration and renovation works were divided into separate portions and realized over the last 6 years, in order to guarantee the financial feasibility of the overall intervention.

The complex was refunctionalized, all bearing structures were reinforced and finally the plastered and decorated surfaces were restored to render a unitary common image. The project has included the optimization of internal routes for visitors and employees, the realization of new and efficient lighting and heating systems and the adaptation to the fire safety requests. All these interventions were carried on with the maximum respect for the identity of the existing structure, trying to minimize demolitions.

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2005-2011. Restoration of the Complex of San Benedetto in Polirone

Decision-making cross-referred to ICOMOS guidelines

- A.** read a monument, ensemble or site and identify its emotional, cultural and use significance
- B.** Understand the history and technology of monuments, ensembles or sites in order to define their identity, plan for their conservation, and interpret the results of this research
- C.** Understand the setting of a monument, ensemble or site, their contents and surroundings, in relation to other buildings, gardens or landscapes
- D.** Find and absorb all available sources of information relevant to the monument, ensemble or site being studied

The complex, even if unitary, was split among different owners with different necessities and priorities. Despite the client was just one among other owners, the preliminary phase of the design was focused on the entire site of the Monastery; the possible necessities of each owner and of each function were considered and studied in order to guarantee the sustainability for the restoration, and of the possible future intervention of the portions not actually being restored. Such sustainability was interpreted as an economical aspect (the future functions will be able to



The level of complexity of the interventions was increased by several additions and by many overlapping decorative layers stretched during the long history of the Monastery. Only badly made integrations and concrete plasters insertions were completely removed. The methodology adopted requested to maintain all other historical traces without choosing to privilege any particular period or style. The monument was considered as a “stratified document” that needed to be fully preserved. Such preservation was mediated with the necessity of a formal unity: for example, the decoration of the vault of the main library was characterized by wide lacks. The problem was solved with the restoration of the preserved areas and with the filling of lacking portions with a uniform neutral color, rendered with the geometrical pattern only. That allowed the general

readability of the overall image without introducing any fake. The restoration interested even stucco decorations and “marmorino” (fake painted marble) surfaces, that where accurately cleaned and preserved respecting the pre-existences.

Unfortunately a few months before the ending of the whole restoration works the strong earthquake damaged seriously all the buildings of the monastery, now the monastery is partially closed to public waiting for the strengthening projects.

Every specific decision concerning the re-organization of the internal rooms and the restoration of the decoration was agreed with the Department for Historic Architectonical Heritage, which was repeatedly involved during all the different phases of the work.

maintain themselves), as an artistic value (the modification will not affect the aesthetic value of the building) and as a coherence value (will future function be coherent with the existing ones). The team has decided to give a huge importance to the “constraints” of the site before trying to find any possible solution.

E. Understand and analyze the behaviour of monuments, ensembles and sites as complex systems

F. Diagnose intrinsic and extrinsic causes of decay as a basis for appropriate actions

In addition to an important historic research concerning the Monastery, the design group has completed a comprehensive survey of the building: after the geometrical survey (realized with laserscanner technology), the team designed a series of analysis to further understand the chemical and physical specifications of mortars and plasters, the presence of humidity and the conditions of all bearing structures (made of wood or masonry).

G. Inspect and make reports intelligible to non-specialist readers of monuments, ensembles or sites, illustrated by graphic means such as sketches and photographs

The municipality of San Benedetto Po, purchaser of the restoration, has promoted a series of conferences to explain the project to the citizens and to promote the ethnographic museum. The

The main cloister of Secolari after the interventions

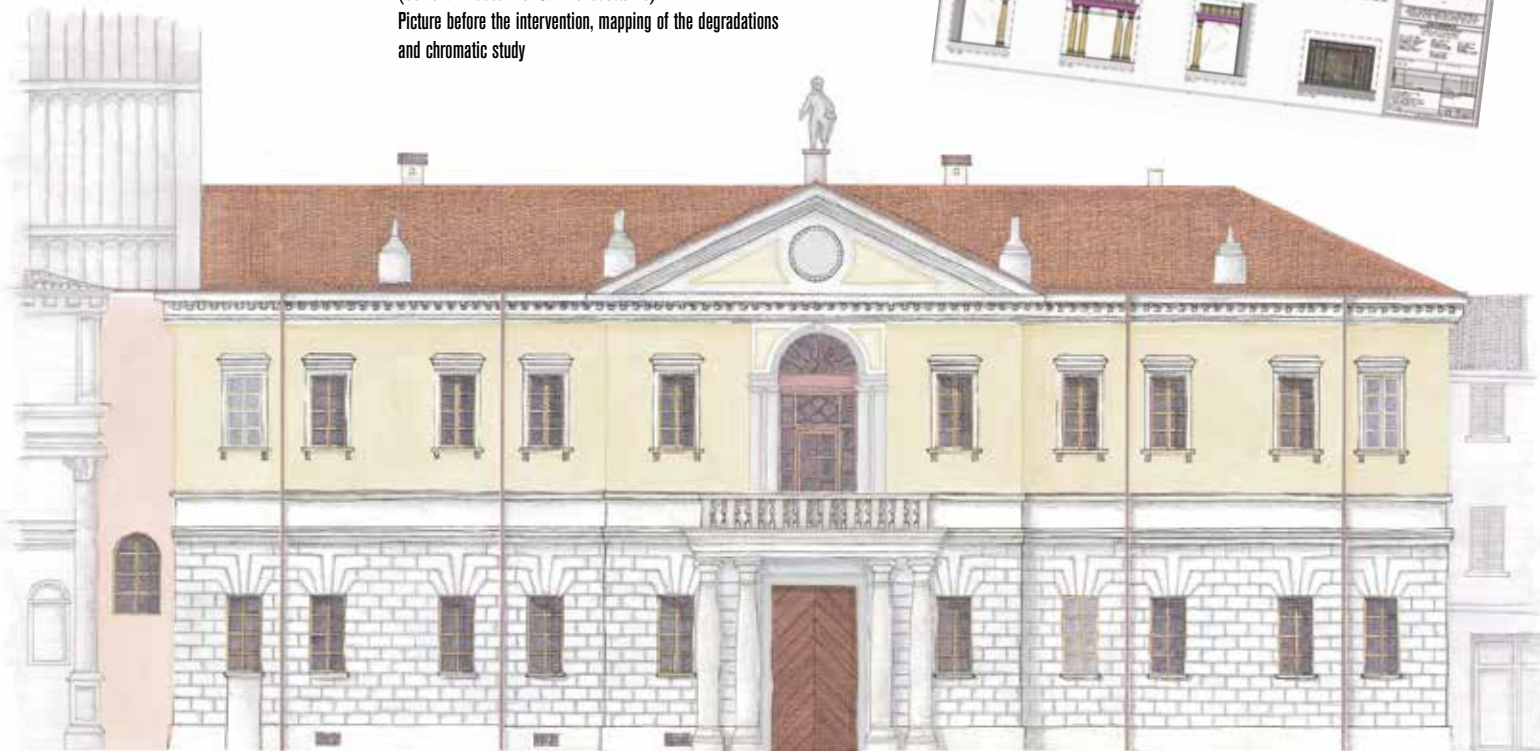




The northern façade of the Cloister of Secolari before and after the restoration



Main facade of the "Musei Civici Polironiani" (Comunal Museum of San Benedetto Po). Picture before the intervention, mapping of the degradations and chromatic study



The monumental stairway before and after the restoration



The main vault of the room of the monumental stairway before and after the restoration





An original fresco discovered under a more recent layer of uniform paint, cleaned and restored. Confrontation between the situation as it was before the intervention and result after the restoration



design team has always given a big support in preparing clarifying material, drawings, posters and presentations or even participating as lecturer.

H. Know, understand and apply Unesco conventions and recommendations, and ICOMOS and other recognized Charters, regulations and guidelines

I. Make balanced judgement based on shared ethical principles, and accept responsibility for the long-term welfare of cultural heritage

Since the building is scheduled under the protection of the Department for Architectural historic heritage of Mantova, every single modification of the monument needed to be discussed and authorized in advance. Such authorization depends on the conformity to the methodology delineated by the directives of the Ministry.

The choice to preserve every historic trace without privileging any particular style, derives from the responsibility of delivering a document to who will follow, without trying altering it. Only

harmful integrations were removed, e.g. concrete plasters, because were considered an extrinsic a cause of decay.

- J.** Recognize when advice must be sought and define the areas of need and study by different specialists, e.g. wall paintings, sculpture and object of artistic and historical value, and/or studies of materials and systems
- K.** Give expert advice on maintenance strategies, management policies and the policy framework for environmental protection and preservation of monuments and their contents and sites
- L.** Document works executed and make same accessible
- M.** Work in multi-disciplinary groups using sound methods
- N.** Be able to work with inhabitants, administrators or planners to resolve conflicts and to develop conservation strategies appropriate to local needs, abilities and resources

The tender for the work explicitly requested the construction of a multidisciplinary team. The experience acquired by our firm in the field has allowed the construction of several professional connections over the years with other specialized firms in every single field interested. Such decennial experience has allowed Eng. Berlucchi to take the role of design manager, to optimize the decisional multidisciplinary process.

The east wing of the museum & stucco decoration before and after the restoration





The overall look of the main room of the library before and after the interventions

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■ **The consolidated graphic representation, although the survey and elaboration methods change...**

As is well known, we are going through a moment of transition between the traditional classical representation and the representation provided by modern computer and photographic technology. The possibility of having a highly precise spacial definition of all the points and lines composing an architectural or archeological asset represents one of the main characteristics offered by our society, which, for over 20 years now, has been committed in the survey of buildings with a historical, artistic and archeological value. The 3D Laser Scanning survey is able to provide metrically correct, very detailed solutions both through vectorial and raster products, although they require a specific graphic encoding. Comparing the survey related to the “Complesso Monastico del Polirone” in San Benedetto Po (MN) and the survey regarding a portion of the “PalazzoTe “ of Mantua, it is clear that, the former (dated 1995) was carried out by means of classic techniques, in the survey of the maps and sections, as well as of photogrammetry, in the survey of the perspective drawings; whereas, in the latter , 3D Laser Scanning was adopted to obtain the same graphic art.

“TECHNICAL-DESCRIPTIVE REPORT OF THE INSTRUMENTAL SURVEYS CARRIED OUT IN THE CLOISTER OF SAN SIMEONE HISTORICAL COMPLEX OF THE MONASTRY OF SAN BENEDETTO PO IN POLIRONE

The first part of the works coincided with the materialization of the grid’s vertices; simultaneously, a series of target-tapes were applied inside the cloister, on the external walls and adjacent buildings. The polygonal section was obtained by means of a high-precision topographic tool, such as a TC2002 (Leica) and the survey data were calculated and compensated with a specific topographic software. The next step was the external plano-altimetric survey and the topographic survey of each single room, always connected to the main target network. Planimetrically, a horizontal section was implemented for every accessible floor, including the basements and attics. A Leica TCRA1102 and a Leica TRC1103 tacheometers were used, both equipped with coaxial laser for direct measuring, with non need of a reflector. The data were elaborated by the same software used for the polygonal section. For the project, around 20000 points were directly surveyed. A following survey was carried out directly – i.e. topographically and instrumentally – onto the entire attic area. The completion of the graphic information regarding the maps and sections was carried out through traditional direct measuring techniques. Conversely, for the survey of the perspective drawings, classic photogrammetric techniques were adopted. Graphically, due to their inclination from the frame of reference, a fictitious parametrization in X was chosen – in Z with absolute coordinates. As we always do, in each table a diagram shows the position of the





survey represented in the general reference table, where the parametrization with the relative coordinates of the survey and the position of the geographic North are also listed. The survey was carried out and represented for a restitution scale of 1:50”.

THE SECRET APARTMENT OF “PALAZZO TE” IN MANTUA.

In July 2012 the dimensional and architectural survey of the historical complex was carried out. In brief, the intervention proceeded as follows:

Primary geographic net

DENSIFICATION NET. By means of specific hardware, 6 anchorage points were materialized with the aim of covering the entire area to be surveyed, grant the connection with the vertices of the primary net and the intervisibility of the two anchorage points.

SURVEY OF THE PREMISES. The survey, having the aim of understanding the structural and architectural characteristics, was carried out through 3D Laser Scanner connected to the topographic grid created. Each premise was surveyed by means of a Laser Scanner: an HDS 7000 and a Leica C10 laser were used. During the survey, internal pictures were taken in each premise. The survey of the perspective drawings was backed up by the use of a high-resolution digital camera with optical calibration - alongside each survey point.

Elaborations

TOPOGRAPHIC CALCULATIONS OF THE SCAN-LEADING POINTS. All the scans were geo-referenced through total station, therefore the calculations referring to the topography were carried out by means of the Sierra Soft Prost Software.

SCANNING ELABORATION. All the scanning data were elaborated by Leica Cyclone Software: each scan was topographically related to the anchoring points created and therefore oriented on the basis of the local plane coordinate systems chosen. Cyclone Software allows to section the point clouds obtained from the scanning and therefore create the necessary vertical and horizontal profiles for the production of scale 1:50 maps and sections. During the elaboration, the portion of horizontal section was chosen building by building, on the basis of the most significant elements to be represented.

The pixels of the high-resolution digital photos were applied to the clouds obtained from the scanning of the external perspective drawings. This allowed the creation of orthophotoplans on which the perspective drawings were digitalized.

FINAL DRAWINGS. All the elaboration data were completed in an Autocad environment, divided up on the basis of their Layer. The maps show: the height of the floorings, the geometry of the assets, the height of the intradoses and beams, the drillings (including height and width), the type of ceilings, the staircases, the primary frames of the roofing and attics as well as of whatever could be represented for the 1:50 nominal scale.



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Salone dell'Arte del Restauro e della Conservazione dei Beni Culturali e Ambientali 2013

FerraraFiere, 20-23 March

2013 is an important year for Salone dell'Arte del Restauro e della Conservazione dei Beni Culturali e Ambientali of Ferrara, which is getting ready to celebrate its 20th anniversary with a calendar of the most interesting and relevant exhibitions and conferences.

The earthquake in Emilia Romagna

The earthquake that recently devastated Emilia Romagna has deeply affected its historical and monumental heritage, and the Fair could not help focussing its attention to the key role played by restoration in the rebuilding of these places after the earthquake.

An important contribution to discussion and research is given by the Department of Architecture of the University of Ferrara, TekneHub – Tecnopolo di Ferrara, Piattaforma Costruzioni, Rete Alta Tecnologia of the Region Emilia Romagna and the General Directorate for the cultural and natural heritage of Emilia-Romagna, which will explore these topics in a far-ranging conference, *Dov'era ma non com'era: il ruolo centrale del restauro nella ricostruzione post-sismica*, in two sessions: one about architectural emergency, the other one about aggregated historical buildings.

Dov'era ma non com'era will also be the name of another area will host companies that deal with surveying and diagnostic technology and instruments, vulnerability assessment methods and instruments, as well as the municipal authorities of the areas affected by the earthquake, who will present their reconstruction projects.

Another section of the Fair that is somehow associated with post-earthquake reconstruction is *Tecnologie del restauro e del recupero edilizio and architettonico* (Building and Architectural Restoration and Conversion Technology). The core of this area will be the development of a physical prototype of an architectural feature, using restoration techniques and materials, with restoration technology added to it: walls, wooden floors, partitions, floorings, detectors and monitoring devices.

Conservation, management and promotion of 20th-century architecture

The issue of reconstruction will bring to the Fair another important *focus on the conservation of the 20th-century architectural heritage*.

The twentieth anniversary of the Fair will offer an opportunity to “play” with the title of the exhibition section *XXHeritage: il progetto e la ricerca per l'architettura del Novecento* (Design and research for 20th-century architecture).

This section will host an exhibition of Niemeyer's architectures, with the support of Fundação Oscar Niemeyer of Sao Paulo, while Corbusier's role in India will be set in context with the help of three-dimensional maps and documents about the famous designer's architectures in Chandigarh and ATMA Building in Ahmedabad.

Restoration projects and restorers

There will be no shortage of events about more “classical” topics. The Ministry of Cultural Heritage will discuss major restoration projects completed all over Italy.

Florence's Opificio delle Pietre Dure will spend one day talking about its main ongoing or just-ended restoration projects.

International experiences and ideas

At Restauo, as usual, there will be no shortage of research projects and experiences of wide international scope, such as studies for the conservation and restoration of the Church of the Nativity in Bethlehem, the restoration of the Arena at Pula in Croatia, through to the restoration of Bagrati Cathedral in Georgia, a 11th-century Medieval building and one of UNESCO World Heritage sites, for which architect Andrea Bruno won the *International DOMUS Restauo e Conservazione Fassa Bortolo Award*, on a par with the restoration of Punta della Dogana in Venice by the famous Japanese architect Tadao Ando.

Once again, one of the Fair's most prestigious guests will be the *State Hermitage Museum* of St Petersburg. This year, Salone del Restauo will also find time to “play” at *Spazio B4B > Before\Bricks for*. A colourful multipurpose LEGO-like construction will be home to a tight schedule of events, providing food for thought about the value of heritage and conservation in architecture, through a method based on the famous colourful LEGO® SERIOUS PLAY®.



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In the framework of the 150th Anniversary for the foundation of the Politecnico di Milano, the Center for the Conservation and Promotion of Cultural Heritage proposes to the scientific and professional community an International Conference to discuss new frontiers about the conservation and enhancement of Built Heritage.

The conference has the ambitious mission to present and discuss the significant conservation projects and the safeguarding strategies for architectural heritage around the world- in different contexts, climates, and management conditions.

The idea of the Conference is to focus the 2 ½ day meeting in brain-storming and exchange, where important case studies will provide a wide overview of strategies, cutting-edge technologies, conservation practice and protection against main risks for Built Cultural Heritage. This conference brings together university researchers, professionals and policy makers to illustrate and discuss the most pressing issues concerning the conservation of archaeological, architectural and urban landscapes. In particular, the main goal of the conference is to illustrate and debate the multi-disciplinary approach to the conservation of complex Cultural Heritage sites.

General and thematic discussions on architectural and archeological Heritage are both encouraged, taking into account the different point of view of researchers who are engaged in the enhancement of knowledge and in the progress of science, and professionals in charge of safeguarding, planning and practice of restoration.

Hence, the main objectives of the conference are as follows:

- multidisciplinary approach for complex case studies
- The speakers are asked to highlight the collaboration of different field of knowledge and different specialization, showing the optimization of work planning, the efficacy of this action and the innovative obtained results.
- use of cutting edge technologies for survey, representation and imaging;
- Survey and database are now critical tools to manage the projects and the practice of a complex and advanced yard; imaging combined with the data set will be the key enabling technology in the next future.
- use of cutting edge technologies for material and structural diagnostic;
- non-invasive investigation methods, portable instruments and sensors for monitoring structures and surfaces connected in a network of smart-systems will provide a new knowledge of buildings.
- development of risk assessment and protection systems;
- emergency and dangerous situation have been faced in Italy and elsewhere in the last years; the research has improved the collective ability to react, practicing a well-developed response where the use of innovative technologies and protocols is crucial.
- new methodologies for intervention, preventive conservation and maintenance;
- in this area the collaboration among universities, research centers and companies to develop new methodologies, materials and strategies can be the necessary engine to innovate the dynamic of conservation and planned maintenance.
- sustainable management, fruition and promotion of the sites;
- the period of crisis should drive a new concept of fruition, developing new media and tools, new ways of sustainable management, a new idea of cultural tourism.
- development of guidelines and best practices.

Despite the long history of conservation practice and maintenance of sites, monuments and buildings, restoration is still a working field where protocols are often insufficiently applied and shared; a careful consideration can be an important aim of the Conference.

Keynote speakers will make their experience, representative of challenges and solutions adopted for the analysis, conservation and management of sites, available to the delegates:

Roberto Cecchi; Ministero Beni e Attività Culturali, Roma (I)

Eric Dohene, Scripps College, Claremont CA (USA)

Paolo Matthiae, Università La Sapienza, Roma (I)

Richard Prikryl, Charles University in Prague (CZ)

Nancy Proctor, Smithsonian Inst., Washington (USA)

Giovanni Schiuma, Università degli Studi della Basilicata (I)

Eugenio Vassallo, Università IUAV di Venezia, (I)

Elli Vintzileou, National Technical University of Athens, (GR)





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■ Emergency intervention at the Chiesa del Rosario in Cento

The Complex of the *Chiesa del Rosario* in Cento (province of Ferrara) is currently constituted by the Church itself and a parvis, an oratory, a sacristy in front of it, including a connecting corridor leading to an internal garden, which a last building of the complex overlooks (now the guardian's residence).

The building of the Church went on from 1633 to 1645 and in the second half of the 17th century the construction of the bell tower and oratory completed it.

Luckily, considering the importance of the decorations still conserved inside (some of which by Gian Francesco Barbieri, also called "Il Guercino"), the Church and its outbuildings underwent quite a few maintenance and restoration interventions throughout the centuries though it never got radically altered.

Such approach allowed the original 17th-century architectural characteristics to be kept unvaried up to present times, with the exception of the transformation and integration works carried out in the 18th century due to a sudden static instability of the chancel.

A first relevant earthquake, happened at night on May 20th 2012, altered the already precarious static conditions of the building. Particularly, cracks appeared alongside the vaulted covering structures of the Church's nave and alongside the outside wall of the bell tower – alongside the





level where the construction stands out from the Church.

Due to these serious static problems (though not compromising the stability of any of the parts constituting the complex), some security measures were implemented, thanks to the Provincial Command of Fire department of Ferrara, including the temporary closing of the “vicolo S.Salvatore” (Southern side of the complex) as a preventive measure in view of further analysis and/or temporary safety operations onto the bell tower.

A second important earthquake, happened in the morning of May, 29th 2012, had more serious consequences on the static conditions of the Complex, causing the collapse of the central portion of the second vault of the nave starting from the counter-façade and the worsening of the cracks present in the building.

The afore-mentioned structural instability, a real threat both for public safety and for the building itself, urged intervention. Therefore, thanks to decree n. 55 of 10/10/2012 by the Commissioner Delegate, the municipality of Cento set out **a project of extremely urgent works**, commissioned to a team of experts who had already been working on a project of an overall restoration intervention of the complex, such as Arch. Carla Alessandria, Alberto Anania, Alberto Ferraresi and Eng. Andrea Giannantoni.

The Company GERSO RESTAURO OPERE D'ARTE S.R.L. was awarded the Contract and the works started in December, 12th, 2012 scheduled to last for three months and providing for the following works:

- The reconstruction of the collapsed central part of the vault by means of specific techniques and materials perfectly compatible with the original ones, only after having propped



up and restored the lateral strips still operational (products used: MAPEI “Mape-Antique Strutturale” mortar and recovered ancient bricks). Then, above the reconstructed vault, carbon fibre strips were applied in order to increase stability and strengthen the anchoring to the external walls of the nave (products used: carbon fibres and specific anchoring procedure: Mapewrap Primer, Mapewrap 11, Mapewrap 31, MAPEI).

- In order to secure such resulting mechanism, give structural effectiveness back to the horizontal section of the bell tower, oppose the now inevitable shearing force with the fractured section, 4 internal metal angle-brackets are going to be applied all along the tower, connected to the wall by means of reinforced drillings. Such intervention also aims at constituting a permanent securing device and is bound to be completed, once safety is restored, with horizontal connections secured at various levels of the tower. The mechanical continuity of the various cracked parts will be completed by means of internal as well as external angle brackets, connected through angle reinforced drillings. Contrary to the internal ones, such external metal angle brackets are temporary and will be removed after the intervention is over. Lastly, the application of the polyester strips had an enclosing function regarding the lanterna and the top dome, in that they hold the horizontal radial push of the structure. Conversely, their application all along the belfry aims at containing the external corners with which to hold the cracked parts together in a sort of virtual propping of the collapsed portions. This material was preferred to steel strands or rods because it is extremely easy to use, apply and remove. Moreover, from a mechanic standpoint, these strips represent an efficient product: 150mm double-strip polyester flat slings with reinforced rings were used and a blocking system with a 50mm ratchet was chosen, having the same carrying capacity of a belt (5000daN). Such system is almost equal to the application of a S235 steel tie rod having a 20mm diameter.

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Urgent provisional work to secure the towers of the Castello delle Rocche in Finale Emilia

The emergency phase following destructive seismic events, like the ones that affected several historic centres of the villages in Emilia in May 2012, is always characterised, in its first stage, by a series of provisional interventions to secure the buildings.

Despite their temporary nature, which derives from their limited duration in time, these interventions still require a targeted and effective project, which must be drawn up without delay. In spite of being provisional, these interventions must be justified within more general objectives.

Furthermore, in the case of buildings of historic architectural value it is essential to combine people's safety with the preservation and safeguard of the asset in the long run.

Therefore these interventions must simultaneously meet criteria and needs which are sometimes in conflict with each other, among which:

- workers' protection and safety during the implementation phase;
- minimum intervention;
- reversibility and/or possibility to include the interventions to be implemented in a future project of general restoration and preservation works.

In the specific case of the towers of the Castello delle Rocche, the peculiarity of the asset, its barycentric position with respect to the historic centre, the fact that one of the three towers



TORRE A
 south-east



TORRE B south-west

faces a public road of strategic importance for the citizens of Finale, and the severe damage suffered, made it necessary to work out planning solutions different from the customary codified and more frequently used ones.

The three towers each have a different map cracking, which also depends partly on their different structural morphology, on the presence of connections between floors and walls only in two of them, on their position with respect to the building as a whole and to the connections to it.

On the top of the tower situated to the north-west, called tower C, in fact, there is a masonry core that partially supports the roofing. Furthermore, in this tower there were no tie rods, which, instead, were present in the other two towers.

Due to the earthquake the tower suffered a partial collapse of the roofing and of most of the perimeter battlements, and alarming cracks, from which it was possible to deduce that an overturning mechanism of the north wall was taking place, with overturning wedge, towards the street, inclined at an angle of about 30° from the vertical. To secure the wall from overturning, the hypothesis initially considered was to build an external shoring with metal elements that, given the high thickness of the masonry walls and the considerable height of the overturning wedge, would require placing two reinforced concrete beams in correspondence of the centre line of the current main road, adjacent to the building, each founded on 35 micropoles with a diameter of 150 mm and with a length of 8 ml each. However this hypothesis was discarded both for its operational difficulties and the risk of compromising the stability of the wall, and consequently the workers' safety during implementation activities. It was therefore chosen to build an external hoop reinforcement with sets of wire ropes on piers made with wooden beams



TORRE C
north-west





firstly and then to install heavy duty anchors, rather than prop up the outer wall. Preliminarily to this intervention, the roofing and the merlons that had already collapsed inside the tower were removed from the outside by a breakdown truck.

In the other two towers only limited portions of the merlons and of the embrasures between them had collapsed and removal operations of unsafe parts like tiles and bricks was quicker and easier.

The interventions to be implemented on the three towers, similar to one another from a typological point of view, were the following:

- installation of several external sets of horizontal hoops made of steel core ropes in correspondence of the merlons and brackets with the interposition of wooden thick boards;
- installation of timber shoring in the open spaces between the merlons;
- installation of a safety bolster above the last vault on top of the tower, using a truss with beams and joints, propping against the inside of the tower's perimeter walls to allow access and the safe implementation of the following intervention;
- installation of a structure with pipes and joints inside the room on top of the tower, anchored to the wall below, 20 cm from the perimeter walls and with a constant width of 1 m, comprising cross bracing in both directions, and protections against falling material;
- implementation of an anchoring system using pipes and joints with jutting out elements to be placed in the inside and outside in between the merlons, to prevent them from collapsing;
- filling of the main cracks on the merlons using a special lime mortar for the consolidation of historic buildings.

For Tower C, because of the masonry core on the top, the severe collapse of the roofing and battlements, the absence of connections between floors and walls, additional interventions were required, such installing 5 sets of permanent tie rods, building a temporary roofing anchored to the tower also by vertical wire ropes and protecting corner portions of solid and loose walls by spraying them with hydraulic lime mortar, which is easily removable, to prevent further disruption due to atmospheric agents.

This experience has required great flexibility and strong skills in adjusting the solutions considered each time from all the actors involved. The initial project, in fact, was drawn up without a structural survey or a comprehensive map cracking, since access to the towers was not possible. Besides, in the case of Tower C most of the supervision of works was carried out from the ground, with consequent difficulties in providing accurate instructions.

The intervention on Tower C was carried out directly by members of the National Fire Corps, while the interventions on the other two towers were implemented by the firm Schiavina srl.



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ANNO DI FONDAZIONE: 2011 (2003)
Studio AERREKAPPA S.R.L. progetta, dirige e realizza lavori di restauro di edifici storici e di ristrutturazione di immobili privati e pubblici, con materiali e tecniche innovative quali intonaci e pavimenti biocompatibili, impianti termici a parete e a pavimento, illuminazione tramite LED, sistemi domotici, pannelli solari, sistemi di climatizzazione ad evaporatori passivi e camini solari. Sensibile alle problematiche del risparmio energetico e di una architettura ecosostenibile, opera a Lecce dal 2011 come naturale evoluzione dello Studio Associato fondato nel 2003 da Cristina Caiulo, architetto, e Stefano Palara, ingegnere.

Studio AERREKAPPA S.R.L. was founded in 2011 by Cristina Caiulo, architect and Stefano Palara, engineer. Its field is the restoration of historical heritage and the renovation of private and public property, paying attention to the problems of energy saving with innovative technical plants, especially of lighting system, domotic technique, solar panels, air conditioning systems and evaporators passive solar chimneys.



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ANNO DI FONDAZIONE: 2007 (1998)
Studio di Architettura Marco Paolo Servalli & Adele Sironi, specializzato nel restauro di edifici storici e di culto e nella valorizzazione di immobili di pregio, sia pubblici che privati. Ogni progetto è eseguito con la massima professionalità al fine di restituire i manufatti antichi all'uso contemporaneo salvaguardandone gli elementi originali. Il metodo di lavoro mira a qualità a al rispetto dei tempi, e lo studio si avvale di collaboratori esperti e affidabili. Progettazione architettonica e direzione lavori, sia in Italia che all'estero. Altre aree di competenza: progettazione del paesaggio, riqualificazione aree urbane, progetti per il Fund Raising.

Architectural Firm Marco Paolo Servalli & Adele Sironi, specialized in the restoration of historic and religious buildings and the enhancement of prestigious properties, both public and private. Each project is executed with the utmost professionalism in order to restore the historic building to contemporary use while preserving original characteristics. Our working method is focused on quality and on timeliness, and the firm avails itself of expert and reliable collaborators. We carry out architectural design and construction supervision, both in Italy and abroad. Other areas of expertise include: landscape design, urban regeneration, and fund raising projects.



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info@syremont.it - www.syremont.it

ANNO DI FONDAZIONE: 1987
SYREMONT spa nasce nel 1987 dal Gruppo Montedison da cui eredita una specifica competenza sui fluoruri. Dopo 26 anni al servizio della ricerca, diagnostica, restauro dei beni culturali in tutto il mondo, oggi SYREMONT è in grado di offrire una più ampia gamma di servizi integrati focalizzati sulla gestione degli assets culturali. I nostri servizi sono principalmente basati su: ricerca scientifica e tecnologica a supporto di prodotti di restauro (Linee Akeogard® Edigard®); progetti e interventi di restauro e conservazione; distruzione di materiali organici (sistema "ELIX") e ingegnerizzazione tecnologica e impiantistica finalizzata alla manutenzione e/o creazione di asset culturali e paesaggistici per la fruizione e divulgazione: musei, mostre, eventi suoni e luci, visite guidate spettacolarizzate, parchi tematici, media production, comunicazione e marketing. Ciclo produttivo. Analisi fattibilità modelli di gestione - progettazione - opere - gestione.

SYREMONT begins in 1987 within the Montedison Group from which it inherits a specific competence in fluorine-based chemicals. After 26 years devoted to research, diagnostics and to the restoration of cultural heritage sites all over the world, SYREMONT is today a company specialized in a wide range of integrated services mainly focused on the management of cultural assets. Our full integrated working program is based on: a scientific and technological research centered on restoration and conservation products and services (Akeogard® Edigard® lines); the planning of restoration and preservation and intervention; destruction of organic materials (ELIX system); services related to the designing, planning, engineering and realization of cultural and environmental assets, intended for public fruition and divulgation, such as museums, exhibits, sound and light events, spectacularised guided tours, theme parks, maintenance and communication of cultural and environmental assets, intended for guided visits, exhibitions, events, sound and light events, spectacularised guided tours, theme parks, management, communication and marketing. Production cycle. Management models analysis - design - intervention - management.



S.K.M. SH
Soluzioni Kalkbratè per Murature
Via Tommaso Gargallo, 12 - 90143 Palermo
Tel: 091 6262447 - Fax: 091 303790
infoskm@skm-italia.eu - www.skm-italia.eu

ANNO DI FONDAZIONE: 2001
CERTIFICAZIONI: UNI ISO 9001
Operano nel settore di prodotti e delle tecnologie per il restauro Artistico, Architettonico e Monumentale. Particolare attenzione viene dedicata al problema dell'umidità di risalita capillare nelle opere murarie, sviluppando e realizzando il procedimento di deumidificazione elettrostatica con il campo elettromagnetico (indotto), tale procedimento, tramite l'emissione di un debole campo elettromagnetico (indotto), elettrostatica Kalkbratè e KontroLYO. Tale procedimento, tramite l'emissione di un debole campo elettromagnetico (indotto), interagisce con il campo elettromagnetico che spinge i dipoli dell'acqua verso il terreno.

Il prodotto: Deumidificazione elettrostatica delle murature - Indagini diagnostiche, termografie e analisi microclimatiche - Rinforszi strutturali in fibra di carbonio - Pitture manufatti di interesse storico-artistico

I servizi: Montaggio - Progettazione - Assistenza tecnica

Deumidificazione delle murature, da umidità di risalita capillare, con tecnologia Kalkbratè. Tramite l'emissione di un debole campo elettromagnetico (indotto), interagisce con il campo elettromagnetico (indotto) dell'acqua, creando una forza di tipo elettromagnetica che spinge i dipoli dell'acqua verso il terreno.

Deumidificazione elettrostatica delle murature, da umidità di risalita capillare, con tecnologia Kalkbratè. Tramite l'emissione di un debole campo elettromagnetico (indotto), interagisce con il campo elettromagnetico (indotto) dell'acqua, creando una forza di tipo elettromagnetica che spinge i dipoli dell'acqua verso il terreno.

Electrostatic dehumidification of masonries with Kalkbratè technology. Through the creation of an electromagnetic weak field (inductor), it interacts with the electromagnetic field (induced) of the water, creating an electromagnetic strength that pushes the dipoles of the water toward the ground.

1 ANALISI E PROGETTO > TESTING & DESIGN
3 INTERVENTI > TYPE OF WORKS

1 ANALISI E PROGETTO > TESTING & DESIGN
5 S E R V I Z I > S E R V I C E S

3 INTERVENTI > TYPE OF WORKS
5 S E R V I Z I > S E R V I C E S

1 ANALISI E PROGETTO > TESTING & DESIGN
4 APPRECIATION E TECNOLOGIE > EQUIPMENT & TECHNOLOGIES

1 ANALISI E PROGETTO > TESTING & DESIGN
SERVIZI > SERVICES

Studio Associato Benedetti e Grietto
START Solutions and Technologies
Via Ugo Betti 22, 20151 MILANO
Tel. +39 030 8080242 - Fax +39 030 8080242
www.start-conservazione
info@start-conservazione.it



Lo studio START fornisce servizi e consulenza nel campo della conservazione dei Beni Culturali, utilizzando metodologie innovative e tecniche analitiche avanzate per la Conoscenza, Conservazione e Valorizzazione, ottimizzando la gestione del Bene e minimizzando tempi e costi dell'iter progettuale. START provides services and consultancy in the field of cultural asset conservation, using innovative methods and advanced test techniques to obtain knowledge, conserve and valorize, optimizing the asset's management and minimizing project times and costs.

ANNO DI FONDAZIONE: 2009

1 ANALISI E PROGETTO > TESTING & DESIGN
SERVIZI > SERVICES

Via della Fonte di Fauno 2A - 00153 Roma

SPC SpA

STUDIO PROGETTAZIONE
E CONTROLLI
SPC s.r.l.

The SPC s.r.l. has been developing a unique experience and a proprietary know-how for the past 25 years reaching the excellence in the structural engineering with worldwide recognised expertise in preservation of cultural heritage structures and architectures. Partners and Legal Representatives are Ing.G.Croci, Ing.A. Bozzetti, Ing.F.Croci, Arch.A.Herzalla and Ing.C.Russo. Principal activities include: analysis and strengthening design of existing buildings; design of new modern complex structures using advanced techniques and materials; consolidation and restoration of monuments; investigations and diagnostic on structures and materials, including on-site and laboratory tests; project management of civil engineering and architectural projects.

La SPC s.r.l. ha sviluppato nel corso degli ultimi 25 anni una esperienza unica ed un know-how interno specifico raggiungendo l'eccellenza nel campo dell'ingegneria strutturale con una esperienza oramai riconosciuta in tutto il mondo nella conservazione delle strutture e delle architetture del patrimonio culturale ornamentale. Soci e rappresentanti legali sono: l'ing. G. Croci, l'ing. A. Bozzetti, l'ing. F. Croci, l'Arch. A. Herzalla e l'ing. C. Russo. Le attività principali includono: la progettazione di edifici esistenti, la progettazione di strutture moderne ad elevata complessità utilizzando tecniche e materiali all'avanguardia, il restauro ed il consolidamento di monumenti, indagini e diagnostica di strutture e materiali di laboratorio ed in sito, project management di progetti di ingegneria civile ed architettura.

1 ANALISI E PROGETTO > TESTING & DESIGN
SERVIZI > SERVICES

Via Nicolodi 48 - 57121 Livorno
Tel. +39 0586 426710 - Fax +39 0586 443552
soing@soing.eu - www.soing.eu

SO.I.N.G. Strutture e Ambiente Srl

STRUTTURE & AMBIENTE
SOING

Il principale Core business è svolto dalla Divisione Geotecnica Applicata, la cui area di intervento è su tutto il territorio italiano e su numerosi paesi esteri. Dal 2005 SO.I.N.G. è certificata secondo la norma ISO 9001:2008 e dal 2011 ha implementato il suo sistema di gestione della Qualità in un Sistema di Gestione Integrato Qualità e Ambiente, raggiungendo anche la certificazione secondo la norma ISO 14001:2004. Dal 2006 SO.I.N.G. è iscritta all'Albo Nazionale Gestori Ambientali, nella Sezione regionale della Toscana, Categoria 9 Bonifica dei Siti - classe D. Nel 2007 ha vinto il Primo Premio della C.C.I.A.A. di Livorno per il concorso "Impresa innovativa".

È una società di servizi innovativi organizzata secondo due divisioni operative, corrispondenti alle principali aree di intervento:
- Divisione Geotecnica Applicata la cui attività è incentrata nella progettazione ed erogazione di servizi di diagnostica e monitoraggio, eseguiti con tecniche geofisiche non invasive, applicate a: Beni Culturali, architettonici e archeologici; Strutture edili e civili; Geologia e Opere in Sottosuolo; Ricerca e Mappatura di Sottosuoli e Reti Tecnologiche; Ambiente: caratterizzazione di vaste zone potenzialmente inquinate; Agricoltura di Precisione; Monitoraggi speciali eseguiti senza uso di cablaggi, su Strutture, Edifici, Ponti, Vado e Stralli.
- Divisione Tecnico Ambientale la cui attività è incentrata nella progettazione ed erogazione di servizi applicati alla caratterizzazione ambientale ed alla bonifica di siti contaminati.

CERTIFICAZIONI: ISO 9001 - ISO 14001

1 ANALISI E PROGETTO > TESTING & DESIGN
2 MATERIALI > MATERIALS

Via Venosta 70 - 39020 Parcines (BZ)
Tel. +39 0473 966100 - Fax +39 0473 966150
office.partschins@roefix.com - www.roefix.com

RÖFIX SpA

www.roefix.com
RÖFIX

Repairs and restoration (with constant attention to bio-building, paints, coverings and thermal insulation systems for exteriors. Concrete, footing and foundations.
Risparmio per esterni. Calcestruzzi, massetti e fondi di posa.
Risanamento, restauro con un'attenzione costante per la bioedilizia, pitture, rivestimenti e sistemi di isolamento termico per esterni.

FILIALI: Parcines (BZ), Prevalle (BS), Comabbio (BA), Villanova (CN), Fontanafredda (PN)

CERTIFICAZIONI: Ambientali: ANAB / ICEA - Natureplus

ANNO DI FONDAZIONE: 1982



ANNO DI FONDAZIONE: 2000
CERTIFICAZIONI: SOA CAT- 0G1 I - 0G2 II - 0G2 III - 0G2 IV, ISO 9001: 2008 - EA28

Società specializzata in restauro di beni immobili sottoposti a tutela, restauro di superfici architettoniche decorate. Servizi di consulenza nel settore dei beni culturali.

Society specialized in restoration works of real estate under protection, and in restoration works of architectural, decorated areas. Consulting firm operating on the cultural heritage sector.

RESTAURARTE SH

Via SS Crocifisso 62 - 95024 Arcireale (CT)
 Tel. +39 095 7636015 - Fax +39 095 7636015
 info@restaurartesrl.it - www.restaurartesrl.it



ANNO DI FONDAZIONE: 2011

CERTIFICAZIONI: ISO 9001:2008 italiana e inglese Attestazione SOA Cat. 0G01 - 0G02 - 0S21

Restauro dei beni immobili sottoposti a tutela, progettazione e consolidamento strutturale, miglioramento sismico di edifici, rinforzi in fibra di carbonio, restauro tecnologici e conservativi, deumidificazione, impermeabilizzazione, risanamento e restauro c.a., realizzazione volte in canalicato e lapidee, restauro e manutenzione infrastrutture ed edifici di interesse pubblico, stadi, piscine, dighe, impianti sportivi, acquedotti, canali, impianti di modifica, ponti stradali e autostradali.

RES.IN.TEC.
 Italia Restauri Innovativi Tecnologici Srl

Via Serra, 22 - 40012 Calderara di Reno (BO)
 Tel. +39 051 725763 - Fax +39 051 726772
 info@resintec.it - www.resintec.it



ANNO DI FONDAZIONE: 1999

CERTIFICAZIONI: SOA cat - 0S2 III class. - 0G2 III class. ISO 9001 - Sincert SGS

Restauro di intonaci policromi e di decorazioni-materiali lapidei-consolidamenti strutture murarie e opere ligneo-deumidificazione e impermeabilizzazione di strutture murarie.

Restoration of polychrome plasters and decorations-stones-consolidation of wall and wood structures-repairs,dehumidification and waterproofing walls.

RESTAURI SH

Via di Prè 10/3A - 16126 Genova
 Tel +39 010 2462978 - Fax +39 010 2462978
 restauri@panet.it - www.restaurisrl.eu



ANNO DI FONDAZIONE: 1975
CERTIFICAZIONI: ISO 9000

Rimural dal 1975 produce materiali per l'edilizia e grazie alla sua consolidata esperienza si colloca ai primi posti per la qualità dei prodotti. La produzione comprende: malte e rivestimenti cementizi, rivestimenti minerali, massetti e pavimenti, adesivi e sigillanti, idropitture, linea restauro calce antica, rivestimenti ai silicati, impermeabilizzanti, prodotti da risanamento. Rimural ha svolto particolare attenzione ai problemi connessi al recupero edilizio nel massimo rispetto dell'ambiente, annovera fra i suoi prodotti rivestimenti speciali ad azione fotocatalitica e l'intera gamma di prodotti di bioedilizia, linea Biorimural, nata per proporre ecologiche alternative ai prodotti tradizionalmente impiegati nella costruzione o ristrutturazione di edifici.

Rimural since 1975 produces building materials and for its consolidated experience is placed at the top for the quality of products. The products include: cement mortars and coatings, mineral coatings, and floor screeds, adhesives and sealants, paints, lime restoration associated to building rehabilitation in the maximum respect for the environment includes among its products with special coatings photocatalytic action and the whole range of green building. Biorimural line, created to propose ecological alternative in substitution the traditionally used in the construction or renovation of buildings.

Km 2, S.P. Marina di Palma
 92020 Palma di Montechiaro (AG)
 Tel +39 0922 964032 - Fax +39 0922 964037
 info@rimural.com - www.rimural.com

RIMURAL SH

2 MATERIALI > MATERIALS

3 INTERVENTI > TYPE OF WORKS

3 INTERVENTI > TYPE OF WORKS

5 SERVIZI > SERVICES

3 INTERVENTI > TYPE OF WORKS

RENOVA RESTAURI SM

Via San G. M. Tomasi 88 - 97100 Ragusa
Tel. +39 0932 643602 - Fax +39 0932 257163
info@renovarestauri.it - www.renovarestauri.it



RENOVA RESTAURI è impresa specializzata in lavori di ristrutturazione e restauro prevalentemente rivolti a manufatti di pregio o valore storico. Grazie alla armonizzazione tra strumenti ed attrezzature innovative e tecniche/materiali tradizionali il nostro obiettivo strategico aziendale è creare valore aggiunto sugli assetti patrimoniali oggetto di intervento, garantendo alla committenza (sia essa pubblica o privata) alta qualità e controlli sistematici sul lavoro eseguito.

RENOVA RESTAURI is a company specialising in reconstruction and restoration, its primary concern is in buildings of interest and historically important buildings. The balance between innovative equipment and traditional materials allows us to create additional validity to the heritage buildings in question, guaranteeing the customer (both private and public) a high quality of work and systematic checks on the work undertaken.

ANNO DI FONDAZIONE: 2008
CERTIFICAZIONI: ISO-SOA

2 MATERIALI > MATERIALS

REALE RESTAURI di Forconi Cristina

Via Ormea 67/B - 10121 Torino
Tel: 011 6694675 - Fax: 011 6694675
realarestauri@tiscali.it - www.realarestauri.com



La nostra azienda è specializzata nel restauro di metalli, vetro e lampadari storici. Si eseguono lavorazioni su lampadari di qualsiasi genere, dimensione e stile, e soprattutto quelli tipici della tradizione storica italiana come ad esempio i lampadari veneziani di Murano e i lampadari in cristallo Maria Teresa o Impero. Il cliente, pubblico o privato, può contare sul nostro supporto per il restauro conservativo e museale, il tutto eseguito con alti standard di qualità artigianale. Azienda accreditata presso le Sovrintendenze

Our company is specialized in the restoration of metal, glass and historic chandeliers. We carry out work on lamps of any kind, size and style, and especially those typical Italian history such as Murano and Venetian chandeliers crystal chandeliers Maria Theresa or Empire. The client, public or private, can count on our support for the restoration and museum, all executed with high standards of quality craftsmanship. Company accredited by the Sovrintendenze

ANNO DI FONDAZIONE: 2000

CERTIFICAZIONI: Eccellenza artigiana Regione Piemonte

1 ANALISI/PROGETTO > TESTING & DESIGN

3 INTERVENTI > TYPE OF WORKS

PIACENTI SpA

Via Marradi 38 - 59100 Prato
Tel: 0574 470464 - Fax: 0574 471021
piacenti@restauratori.com - www.restauratori.com



The Piacenti S.p.a. carries out planning and execution activity in the field of cultural heritage restoration and conservation by his high specialized and qualified employees on wooden and polychrome objects, paintings on wood and canvases, stuccoes, wall paintings, artifacts, ceramic metallic and stone materials. Inside the headquarters, geared by technical equipment and wide workshops, every sectoral competence collaborates with the others, coordinated by autonomously, to carry out big public and private contracts for restoration and conservation works. It works in Italy, China, Turkey, Moldova, Russia.

La Piacenti spa svolge attività di progettazione, conservazione e restauro di beni di interesse storico-artistico e monumentale, disponendo di personale altamente specializzato nel trattamento di manufatti lignei policromi, di dipinti su tela e tavola, di stucchi e pitture murali, di reperti archeologici, materiali ceramici, metallici e lapidei. All'interno dell'impresa, che si avvale di attrezzature tecnologiche e di ampi laboratori, ogni competenza settoriale lavora in sinergia con le altre e viene coordinata dall'ufficio tecnico e diagnostico. L'azienda possiede i requisiti professionali, economici ed organizzativi che le permettono, autonomamente, l'esecuzione di grandi lavori pubblici e privati. Opera in Italia, Cina, Turchia, Moldova e Russia.

ANNO DI FONDAZIONE: 1875
CERTIFICAZIONI: ISO 9001:2008, CERTIFICAZIONE SOA: 0602-CLASSE III-BIS, OS02A-CLASSE V

3 INTERVENTI > TYPE OF WORKS

PGL di Dott.ssa Nadia Pastore

Via Per Locco 2 - 28898 Stresa (VB)
Tel. +39 347 2985008 - Fax +39 0323 33247
nadiapastore@virgilio.it



Restauro architettonico. Risanamento unitaria di risalita. Ecosabbiature con varie tipologie di inerti. Restauro artistico, puliture delicate e di precisione, consolidamento e protezione legno, marmi, granito "ossola" e pietre, cotto e ferro. Decorazioni e stucchi.

Architectural restoration. Ascending humidity improvement. Ecological sandblasting. Artistic restoration, soft and precision cleaning, consolidation and protection on wood, marbles, "ossola" granites and stones, cotto and iron. Decorations and stucchi.



MENCL SOFTWARE S.p.A.

Località Regozzano, 87 - 52100 Arezzo
Tel +39 0575 383960 - Fax +39 0575 382051
info@mencl.com - www.mencl.com



METADISTRETTO VENETO DEI BENI CULTURALI

Via della Libertà 12-VEGA PARK
30175 Marghera (VE)
Tel +39 041 5093046 - Fax +39 041 5093086
distretto@vegapark.ve.it - www.distretto@vegapark.ve.it

MONTINA

MONTINA di Rino Montina
Restauro e Conservazione
Via Monte Cimone 11/11 - 33100 Udine
Tel +39 3282152292
rinomontina@libero.it



N.O.V.A.R.I.A. R.E.S.T.A.U.R.I. S.R.L.
Restauro Opere d'Arte

N.O.V.A.R.I.A. R.E.S.T.A.U.R.I. S.p.A.
Via Marco Polo 19 - 28100 Novara
Tel +39 0321 691414 - Fax +39 0321 688698
novaria_r@starmova.it

ANNO DI FONDAZIONE: 1996

Azienda leader nella produzione di tecnologie per il rilievo metrico e modelli 3d da immagini, software per la fotogrammetria, mapping, cartografia digitale, ortofoto. Prodotti da utilizzare nel campo dei Beni Culturali, Archeologia, Architettura, Geologia, Studi del Territorio, Industria, sono: Zscan e EVO, per le riprese terrestri e Ufly per le riprese a bassa quota, per generare ortofoto e nuvole di punti 3d rgb da immagini digitali; OPK, stazione fotogrammetrica per la produzione massiccia di dati cartografici provenienti da immagini large format.

Mencli Software is a leading company for metric survey technology starting from images. We produce software solutions for photogrammetry, mapping, cartography, orthophoto. Main application field are: Cultural Heritage, Archeology, Architecture, Geology, Territory. Our principal products are: Zscan and Evo tech, easy to manage and allows a very simple 3d coloured point cloud generation; Ufly that uses images taken by UAV for mapping, 3d point cloud and ortho generation; OPK solution, for large format images orthophoto massive production.

Il Metadistretto Veneto dei Beni Culturali è sorto in base alle Leggi Regionali 8/2003 e 5/2006 con lo scopo di promuovere e coordinare progetti a livello nazionale ed internazionale, favorendo la collaborazione fra le aziende e le istituzioni che operano nel settore. Fanno parte del Metadistretto 24 istituzioni e oltre 300 aziende impegnate in tutti i settori legati ai beni culturali: restauro beni mobili e immobili, allestimenti museali, produzione di materiali per il restauro, laboratori di analisi e diagnostica, valorizzazione dei beni culturali, sistemi informatici, editoria.

The Venetian Cluster of Cultural Heritage was born on the basis of the Regional Laws 8/2003 and 5/2006 to promote and coordinate the projects at national and international level encouraging the collaboration between companies and institutions operating in the sector. 24 Venetian's highest Offices and over 300 companies are part of the Cluster, involved in all sectors linked to the cultural heritage: restoration of movable and immovable assets, museum arrangements, production of materials for restoration, analysis and diagnostics laboratories, valorization of the cultural heritage, informatics systems, publishing.

ANNO DI FONDAZIONE: 2000

Recupero e trattamento conservativo di pavimenti in cotto, di superfici lapidee e lignee. Eco-sabbatura. Repairs and conservative treatments on brick pavements, stone and wood surfaces. Ecological sandblasting.

ANNO DI FONDAZIONE: 1972

La N.O.V.A.R.I.A. R.E.S.T.A.U.R.I. S.p.A. è una società specializzata nel restauro, recupero e conservazione di Beni Culturali, quali opere d'arte mobili e beni immobili sottoposti a tutela. Dal 1972 si occupa di progettazione, indagini diagnostiche, ricerche, pronto intervento, messa in sicurezza, recupero e restauro di affreschi e dipinti su muro, stucchi, dipinti su tela e tavola, elementi lapidei e monumenti all'aperto, bronzi, tessuti, sculture lignee dorate e policrome. Al necessario operiamo smontaggio e trasferimento di Monumenti, Trasferimenti di gipsoteche e di pinacoteche e assistenza nei restauri dei loro contenitori (musei). Servizi di consulenza e perizie nell'ambito dei Beni Culturali.

La N.O.V.A.R.I.A. R.E.S.T.A.U.R.I. S.p.A. mette a disposizione esperienza, competenza e serietà in ogni delicata fase del restauro, garantendo un alto standard qualitativo e un continuo monitoraggio dei lavori eseguiti. È in grado di intervenire, autogestendosi, in situazioni di emergenza conservativa, anche a seguito di calamità.






L.A.P.I.S. di A. Lo Presti
Via della Regione 101/B
95037 S. Giovanni La Punta (CT)
Tel. +39 095 7514292 - Fax +39 095 7514292
info@lapislab.it - www.lapislab.it

L'azienda opera nel settore della diagnostica strutturale e delle indagini in situ ed in laboratorio preventive ai lavori di restauro e riqualificazione del patrimonio monumentale ed architettonico. Fornisce servizi di consulenza per la progettazione ed esecuzione di indagini propedeutiche al restauro, analisi del degrado e caratterizzazione dei materiali in laboratorio ed in situ, caratterizzazione composizionale e meccanico-fisica dei materiali edili. Svolge inoltre attività di ricerca in collaborazione con istituti Universitari ed aziende manifatturiere del settore della produzione di laterizi e matite.

Laboratory and in situ analysis in cultural heritage. Diagnostic services for restoration work. Analysis of natural and artificial stone decay. Characterization of mortars, plasters, concrete and wall painting. Physical and textural evaluation of masonries and stoneworks. Products and practices evaluation in restoration and building.

1 ANALISI E PROGETTO > TESTING & DESIGN
S S E R V I Z I > S E R V I C E S




LA BANCA DELLA CALCE SH
Via Tardini, 22 - 40129 Bologna
Tel/Fax +39 051 4842426
info@bancadellacalce.it - www.bancadellacalce.it

ANNO DI FONDAZIONE: 2009

La Banca della Calce custodisce materia e memoria della calce da costruzione e la rende disponibile per le opere di Restauro, nel rispetto di rigorosi protocolli di produzione e di stagionatura. L'impresa progetta e gestisce i Depositi della Calce, strutture analoghe alle antiche "bucche", dove sono disponibili lotti di gresoglio di calce invecchiato, da 12 a 48 mesi, certificati. Offre servizi qualificati, selezionando la calce più adatta alle esigenze dei nostri clienti e per restauri di qualità.

La Banca della Calce guarda la materia e la memoria di italiani building lime and makes it available for works of restoration, under strict production and aging protocols. The company designs, and manages "Building Lime Deposits", structures similar to the old "hole", where are available lots of certified slaked lime, aged 12 to 48 months. It offers qualified services, selecting the kind of lime more appropriate for needs of our customers and for quality restoration works.

2 MATERIALI > MATERIALS
S S E R V I Z I > S E R V I C E S



L.A.R.A. di Basile Vincenzo & C. s.a.s.
Via Roma 137 - 71038 Pietramontecorvino (FG) Tel./
Cell. +39 333 6104200
Fax +39 0881 555922
basile.vincenzo@inwind.it
www.lararestauri.it

CERTIFICAZIONI: OS02-CLASSE I

Impresa di restauro con attestazione SOA in categoria OS 2, class. II. La L.A.R.A. (Laboratorio Restauratori Associati), con esperienza ventennale acquisita nei vari campi del restauro: dai dipinti su tela e tavola, manufatti lignei, lapidei monumentali, tessuti e arazzi. Dal 1994 iscritta nell'elenco delle ditte accreditate dalla Soprintendenza Regionale della Puglia.

1 ANALISI E PROGETTO > TESTING & DESIGN
3 INTERVENTI > TYPE OF WORKS



LEGNODOC SH
Via Borgo Valsugana 11 - 59100 Prato (PO)
Tel. +39 0574 36953 - Fax +39 0574 40467
info@legnodoc.com - www.legnodoc.com

ANNO DI FONDAZIONE: 1997
CERTIFICAZIONI: UNI EN ISO 9001 : 2008

Fornitura di servizi di ispezione per fini diagnostici su strutture lignee in opere antiche e recenti; servizi di classificazione per legname a uso strutturale; assistenza e consulenza per interventi specialistici su strutture lignee; formazione e divulgazione tecnico-scientifica nel settore dell'impiego strutturale del legno.

Supplier of diagnostic inspection services for old and recent in-situ timber structures; grading of structural timber; assistance and consultancy for consolidation works on timber structures; training and technical-scientific information in structural use of timber.

1 ANALISI E PROGETTO > TESTING & DESIGN
5 S E R V I Z I > S E R V I C E S



2 MATERIALI > MATERIALS



KEIMFARBEN COLORI MINERALI SH

Schäves, Förche 10 - 39040 Naz - Scaives (BZ)
Tel: +39 0472 410158 - Fax: +39 0472 412570
info@keim.it - www.keim.it

Production and sale of pure silicate mineral paint and complementary mineral products.

KEIM, ecologico, economico, minerale. Produzione e vendita di pitture minerali ai silicati puri e prodotti complementari minerali. Pitture per facciate, pitture e Velature per calcestruzzo, pitture per interni, prodotti per il restauro ed il trattamento delle pietre, intonaci e rasanti minerali. Componenti MINERALI dei colori minerali KEIM sono la base della loro ineguagliabile qualità. Le caratteristiche principali dei sistemi a base di silicati sono: una vasta gamma di tinte, stabilità alla luce, longevità insuperata, riduzione dei cicli e dei costi di manutenzione, rispettano la salute e l'ambiente.

ANNO DI FONDAZIONE: 1988
CERTIFICAZIONI: ISO 9001 + 14001

2 MATERIALI > MATERIALS
5 SERVIZI > SERVICES



Prodotti & tecnologie per il recupero edilizio

KIMIA SPA

Via del Rame, 73 - 06134 Ponte Felcino (PG)
Tel. +39 075 5918071 - Fax +39 075 5913378
info@kimia.it - www.kimia.it

La lunga esperienza alle spalle e la continua ricerca e miglioramento rendono Kimia Spa un leader riconosciuto nella produzione e commercializzazione di materiali ad alta tecnologia per il restauro e recupero edilizio. Siamo stati i primi in Italia (inizio anni '80) a credere nella tecnologia dei materiali composti per il consolidamento strutturale (inizialmente in carbonio e vetro, ora anche in acciaio con matrici inorganiche), applicati con risultati di durabilità eccellenti, ma non solo... Kimia è anche maître precontenzionata ad alta durabilità, calce idrauliche naturali, soluzioni per impermeabilizzazioni, pavimentazioni, trattamenti protettivi e di pulizia, isolamento e deumidificazione: una gamma di soluzioni per il restauro e recupero completa, dalle elevatissime prestazioni e sempre conforme alle più recenti normative.

Great experience leading company operating in the production and trading of hi-tech materials for building recovery and restoration like: high durability prepackaged mortars, natural hydraulic limes, steel composite and FRP systems for the reinforcement of existing structures, solutions for waterproofing and floorings, protective & cleaning treatments, insulation and dehumidifications, complying to the latest building regulations.

1 ANALISIE PROGETTO > TESTING & DESIGN
2 MATERIALI > MATERIALS



KORA SH

Via Egidio Pini 57/A - 43126 Parma
Tel: 0521 940053 - Fax: 0521 980599
info@korasrl.com - www.korasrl.com

LO 1 (termografia)

KORA produce and propose high tech materials and building services. Make waterproofing systems to new building under water bed, for reconstruction and improvement also installed. Water-reactives resins injection and chemicals barriers. Assist laws firms, technicals study to prescribe materials and with detailed designs to support his products. To carry out thermographics, sclerometrics and ultrasonics inspections. Certified on LEVEL 2 (ultrasonic and sclerometric), LEVEL 1 (thermography).

KORA produce e propone materiali ad alta tecnologia e servizi per edilizia. Realizza sistemi impermeabilizzanti per nuove costruzioni sotto falda, per ristrutturazione per il risanamento anche con posa in opera. Iniezione di resine idroreattive e barriere chimiche. Affianca studi legali nel contenzo, studi tecnici nelle prescrizioni dei materiali e nei dettagli esecutivi a supporto dei prodotti. Esegue indagini termografiche, sclerometriche ed ultrasuoniche. Personale qualificato al LIVELLO 2 (ultrasuonica e sclerometrica), al LIVEL-

1 ANALISIE PROGETTO > TESTING & DESIGN
5 SERVIZI > SERVICES



L & R Laboratori e Ricerche Srl

Via Padre Angelo Secchi 7
95030 Gravina di Catania (CT)
Tel +39 095 336490 - Fax +39 095 7336297
info@lr-srl.it - www.lr-srl.it

La L&R Laboratori e Ricerche S.r.l. è una società di servizi per l'ingegneria che opera da diversi anni su tutto il territorio nazionale nel settore della diagnostica strutturale e dei controlli sui materiali. L'elevato livello tecnologico delle risorse impiegate, il "know how" acquisito nel settore, l'alta professionalità dello staff tecnico nonché le adeguate e innovative attrezzature utilizzate, fanno della L&R un'azienda altamente competitiva, con servizi ad elevato standard di qualità ed affidabilità.

FILIALI: Laboratorio di Catenuova (EN) - Italia
sui materiali ai sensi della 1086/71

ANNO DI FONDAZIONE: 2003
CERTIFICAZIONI: ISO 9001, SOA OS 21, in pronto di ricevere la Concessione Ministeriale per prove

L&R Laboratori e Ricerche S. r. l. offers a full spectrum of services for private and public clients in the field of consultancy, planning, training and safeguard of the building, structural, environmental, industrial and territorial heritage. The acquired "know-how", the high-quality staff as well as the appropriate and innovative equipment makes L&R Laboratori e Ricerche S. r. l. an extremely competitive company with the highest quality and reliability standards.



**FRANCESCO DEODATO
IMPRESA DI COSTRUZIONI**

Via Giardino 8 - 89851 Ionadi (VV)
Tel +39 0963 331172 - Fax +39 0963 331172
ideodato@tiscali.it

ANNO DI FONDAZIONE: 1988
CERTIFICAZIONI: SOA ISO 9001 : 2000 - EX 46/90 NUOVO DM 38/2010

La Nostra azienda opera fin dal 1988 nel campo edile. La passione con cui svolgiamo i nostri interventi e la voglia di migliorare i nostri servizi, si basano sulla qualità del prodotto finale. Nel tempo ci siamo specializzati nelle seguenti lavorazioni: Rinforzo e consolidamento strutturale, impiantistica ed illuminazione, pittura manufatti, restauro architettonico, risanamento e deumidificazione, manutenzione e restauro di complementi architettonici, trattamento e posa di pavimentazioni. Inoltre il nostro gruppo di lavoro è composto da tecnici abilitati, nel campo del Restauro Artistico (OS2), Archeologico (OS25) ed in quello Progettuale (con studi sui materiali, le opere e sulle componenti del sottosuolo che influiscono sul grado degli immobili). Attualmente stiamo realizzando edifici pubblici da certificare CasaClima classe A, inserendo di fatto la bio edilizia controllata nel nostro ambito lavorativo.



**GDL
Conservazione
& Restauro Srl**

GDL - CONSERVAZIONE E RESTAURO SH

Piazza Vittorio Emanuele II, 4 - 27041 Barbianello (PV)
Tel +39 0385 287010 - Fax +39 0385 287828
info@gdlrestauro.com
www.gdlrestauro.com

ANNO DI FONDAZIONE: 2007
CERTIFICAZIONI: UNI EN ISO 9001 : 2008
SOA 062 III

Restauro e Conservazione di edifici monumentali ed ecclesiastici.



GEOPRA SH

Via Indipendenza 106 - 46028 Serride (MN)
Tel. +39 0386 62628 - Fax +39 0386 960248
info@geogra.it - www.geogra.it

ANNO DI FONDAZIONE: 1994
CERTIFICAZIONI: SOA - cat OS 20 classe II

Laser Scanning 3D (Architettura, Archeologia, Infrastruttura, Industriale), Archeometria. Stereofotogrammetria Fotogrammetria Ortofoto. Topografia e GPS. Batimetria. Rilievi di interni. Elaborazioni grafiche e fotografiche.
3D Laser Scanning (Architettura, Archeology, Infrastructure, Industrial). Archaeometry. Stereophotogrammetry Photogrammetry Ortophoto. Topography and GPS. Bathymetry. Traditional Surveys. Graphic and Photographic information processing.



GEOMAR.IT Snc

di Raschieri A, Mellano M. e Boetti M.
Via Matteotti 5 - 12084 Mondovì (CN)
Tel. +39 0174 45920 - Fax +39 0174 45920
amministrazione@geomar.it - www.geomar.it

ANNO DI FONDAZIONE: 2001

Rilievi architettonici, laser scanner, elaborati grafici e fotografici. La società geomar.it nasce nel 2001, dall'iniziativa di tre professionisti da anni impegnati nel settore dell'applicazione di nuove tecnologie e metodologie informatiche nel campo dell'architettura e della topografia. La società eredita l'esperienza acquisita dai suoi ideatori nel corso dell'attività professionale.
Architectural surveys, laser scanner, graphic and photographic process.

La Ferrari Restauri si occupa di restauro di monumenti, dipinti murali, opere polichrome su tela, sculture e materiali moderni. Offre supporto per le campagne stratigrafiche, l'interpretazione dei dati di analisi chimiche, progetti di restauro e riqualificazione architettonica. Si occupa anche della ricerca e della vendita di prodotti per la conservazione fotografica e d'archivio.

Ferrari Restauri keeps ancient building and handworks. Preliminary we usual make diagnostic researches for studying the objects. A section is responsible for researching and selling products for storing photographic and archival documents conservation.

ANNO DI FONDAZIONE: 1992
CERTIFICAZIONI: SOA; OSO2 - classe I



Ferrari Restauri
Centro per la conservazione delle opere d'arte

Via Privata Maria Teresa 7 - 20123 Milano
Tel: 02 89013147 - Fax: 02 89013147
ferrestauri@fastwebnet.it
www.ferrarirestauri.it

Progettazione/costruzione di sistemi di rinforzo in F.R.P. (Fiber Reinforced Polymer) ad elevata resistenza meccanica e chimica, basso peso e spessore, per recupero e consolidamento di strutture.

Design and manufacturing of low weight and thickness FRP (Fiber Reinforced Polymer) systems with high mechanical and chemical resistance, suitable for structural reinforcement of existing buildings.

ANNO DI FONDAZIONE: 2001
CERTIFICAZIONI: ISO 9001 : 2008



composite engineering

FIBRE NET SH

Via Zanussi 311 - 33100 Udine
Tel: +39 0432 600918 - Fax +39 0432 526199
info@fibrenet.info
www.fibrenet.info



FLIR SYSTEMS SH

Via L. Manara 2 - 20051 Limbate (MI)
Tel: +39 02 99451001 - Fax +39 02 99692408
info@flir.it - www.flir.com

FLIR è leader mondiale nella produzione e commercializzazione di termocamere ad infrarossi im-
piegate in tutto il mondo per svariate applicazioni: manutenzione, ricerca e sviluppo, controllo di
processo ed automazione industriale, ispezioni edili, termoidraulica e molte altre ancora. FLIR ha
cinque stabilimenti di produzione dislocati negli Stati Uniti (Portland, Boston e Santa Barbara), in
Svezia (Stoccolma) ed in Estonia (Tallin) e dispone di uffici di vendita diretta in Belgio, Francia, Ger-
mania, Italia, Svezia, Regno Unito, Stati Uniti, Canada, Brasile, Cina, Giappone ed Australia. L'azienda
offre lavoro ad oltre 1.400 specialisti della tecnologia ad infrarossi, tutti estremamente motivati, e
fornisce i mercati internazionali attraverso una fitta rete di 60 sedi regionali, con funzioni di vendita
ed assistenza.

FLIR is the world leader in the design and manufacturing of infrared cameras that are used worldwi-
de within such fields as maintenance, product research & development, process monitoring and
building inspection. FLIR has manufacturing plants located in Sweden (Stockholm), France (Paris)
and Estonia (Tallinn), and the USA (Portland, Boston and Santa Barbara). Direct sales and service
offices are located in Belgium, France, Germany, Italy, Sweden, the United Kingdom, the US, Canada,
Brazil, China, Japan and Australia. The company numbers over 1,400 infrared specialists, and serves
international markets through a network of regional offices providing sales and support functions.

ANNO DI FONDAZIONE: 2007

Il Forum Italiano Calce è un'associazione no profit, che promuove lo sviluppo di esperienze e di conoscenza
dell'impiego della calce nel costruito e nel restauro attraverso: scambio, confronto e diffusione di notizie
e informazioni sul mondo della calce; organizzazione di congressi, seminari, incontri e corsi; promozione
della ricerca scientifica/pratica su calce, malte e pitture a base di calce sostegno allo sviluppo di tecniche
ad appropriate a livello industriale e artigianale per la produzione di calce aerea e/o idraulica naturale.

The Italian Lime Forum promotes the development of experience and knowledge of the use of lime in
building and restoration, through: exchanging, comparing and spreading news and information about the
world of lime; organizing congresses, seminars, meetings and courses; promoting the scientific research
and the practical use on lime, mortars or lime paints; supporting the development of appropriate techni-
ques, at industrial and artisanal level, for the production of air and natural hydraulic limes.



FORUM ITALIANO CALCE

Via Tosarelli 3 - 40128 Bologna
Cell. +39 327 5328288 - Fax +39 051 364309
info@forumcalce.it - www.forumcalce.it



Società specializzata nel settore della demolizione controllata, taglio e perforazione di strutture in cemento armato e muratura. Maestranze specializzate, esperienza nel settore, unite a tecnologie all'avanguardia permettono di operare anche su manufatti di particolare interesse artistico ed architettonico: in particolare, perforazioni eseguite mediante carotaggi continui a sola rotazione consentono di realizzare perfori per l'inserimento di ancoraggi nelle strutture esistenti in muratura per interventi di rinforzo e di consolidamento. Installatori Certificati tecnologia Bossong.

Company specialized in the field of controlled demolition, cutting and drilling works of reinforced concrete and masonry structures. Qualified workers together with well-advanced technologies, allow to work on buildings of artistic and architectural interests: drilling operations with rotation drilling bit are used to make boreholes in the masonry for the installation of strengthening and reinforcing anchors. Certified installers for Bossong technology.

EDIL3TRE Snc
di Passini e Perino
Via delle industrie 17 - 13856 Vigliano Biellese (BI)
Tel. +39 015 8123332 - Fax +39 015 8122184
info@edil3tre.it - passini.aldo@edil3tre.it
www.edil3tre.it



ANNO DI FONDAZIONE: 1995
CERTIFICAZIONI: SOA

3 INTERVENTI > TYPE OF WORKS

Consolidamento strutturale edifici con sistemi innovativi e tecnologie all'avanguardia. Perforazioni lunghe speciali. Installazione di ancoraggi e incatenamenti per rinforzo di murature. Miglioramento e adeguamento in funzione antisismica di Edifici. Posa FRP. Demolizioni controllate con utensili diamantati, perforazioni speciali e tagli cemento armato. Risarcimento delle murature umide con barriere e chimica per l'edilizia. Micro sabbatura ecologica per pulizia di marmi, graniti, materiali lapidei, murature faccia a vista, legno, ferro. Installatore certificato Bossong per sistemi di ancoraggio iniettati in murature storiche.

Structural strengthening buildings with innovative systems and well-advanced technology. Long special drilling. Installation of anchors and heavy duty anchors for masonry reinforcement. Seismic retrofitting of buildings and structural improvement and adaptation. Installation of FRP. Controlled demolitions with diamonds tools; special drilling and reinforced concrete cutting. Renovation of damp walls with barriers and construction chemicals. Micro blasting ecological cleaning of marble, granite, stone, masonry face brick, wood, iron. Bossong certified installer for anchoring systems injected into historic masonry.

DIAMANTECH SpA
Via A. Gramsci 10 - 25080 Nuvolato (BS)
Tel. +39 030 6915222 - Fax +39 030 6915222
info@diamantech.it - www.diamantech.it



ANNO DI FONDAZIONE: 1998
CERTIFICAZIONI: Procedura in corso per ISO e O2

3 INTERVENTI > TYPE OF WORKS
5 S E R V I Z I > S E R V I C E S

Casa Editrice specializzata nel settore dei periodici per l'architettura, l'ingegneria edile, i beni culturali: "Recupero e Conservazione" [la rivista italiana leader di settore], "City Project" [la prima free press di architettura in Europa], "City Energia" [la prima free press sul risparmio energetico e le energie rinnovabili], "L'edilizia" [la rivista italiana per l'ingegneria strutturale].

Publishing house specializing in architecture, building engineering and cultural assets publications: "Recupero e Conservazione" (Italy's leading magazine in the sector), "City Project" (Europe's first free press for architecture), "City Energy" (the first free press on energy saving and renewable energy), "L'edilizia" (Italy's structural engineering magazine).

DE LETTERA EDITORE Sas
Via A. Tadino 25 - 20124 Milano
Tel. +39 02 29528788
Fax +39 02 29517404
delettera@delettera.it
www.delettera.it



ANNO DI FONDAZIONE: 1990

5 S E R V I Z I > S E R V I C E S

Cooperativa Archeologia nasce a Firenze nel 1981 per operare nell'ambito della ricerca, della conservazione e dell'importanza sociale dei beni su cui agisce. Le attività vengono eseguite con un organico di oltre 200 operatori specializzati nel proprio settore di intervento e affiancati da consulenti scelti tra ricercatori altamente qualificati.

Cooperativa Archeologia was funded in Florence (Italy) in 1981 to work in research, conservation and enhancement of Cultural Heritage. It operates through branch offices, all over the country and in some foreign states. Cooperativa Archeologia focuses his attention to the quality of the intervention and the uniqueness and social importance of the goods on which it acts. The activities are carried out with a staff of over 200 professionals specialized in their field of intervention and supported by consultants selected from among highly qualified researchers.

COOPERATIVA ARCHEOLOGIA
Via Luigi La Vista 5 - 50133 Firenze
Tel: 055 576944 - fax: 055 576939
info@archeologia.it - www.archeologia.it



ANNO DI FONDAZIONE: 1981
CERTIFICAZIONI: UNI EN ISO 9001 - UNI EN ISO 14001 - OHSAS

1 ANALISI PROGETTO > TESTING & DESIGN
3 INTERVENTI > TYPE OF WORKS

3 INTERVENTI > TYPE OF WORKS



di Cesta Vincenzo
di Tarlo

ANNO DI FONDAZIONE: 2007
Restauro mobili antichi, ecosabbature legno, ferro e pietra

IL TARLO di Cesta Vincenzo
Via Dante 22 - 83045 Calitri (AV)
Tel. +39 328 6717592
Fax +39 0827 30178

3 INTERVENTI > TYPE OF WORKS



www.sverniciatura.it

ANNO DI FONDAZIONE: 1987
FILIALI: Milano (Pero), Firenze
Impresa di sverniciatura del legno con competenze tecniche, gestionali e ambientali di manutenzione serramenti. Distribuzione su tutto il territorio nazionale. Conservazione e difesa del legno.
Wood stripping company with technical, managerial and environmental skills in fixtures maintenance. Distribution on all the national territory. Wood preservation and defence.

CHORUS Sas
Via Cigliano 7 - 10153 Torino
Tel. +39 011 8170750
Fax +39 011 8124474
www.sverniciatura.it

1 ANALISI E PROGETTO > TESTING & DESIGN
5 SERVIZI > SERVICES



CNR - Istituto di Scienza e Tecnologia
dei Materiali Ceramici (ISTEC)
Via Granarolo, 64 - 48018 Faenza (RA)
Tel. +39 0546 699711 - 699773
Fax +39 0546 699719
www.istec.cnr.it
istec@istec.cnr.it

ANNO DI FONDAZIONE: 1980
Istituto di Ricerca, specializzato nell'attività di caratterizzazione di matite, ceramiche, lapidei e mosaici antichi e identificazione dei processi di degrado (archeometria e diagnostica). Sviluppo matite da restauro. Geopolimeri per il restauro. Normazione italiana ed europea. Formazione.
Research institute specializing in characterizing mortars, ceramics, stones and ancient mosaics and identifying deterioration processes (archeometry and diagnostics). Development of restoration mortars. Geopolymers for restoring. National and European standard activity. Training.

5 SERVIZI > SERVICES



CONFICULTURA
Via di Pietra 70 - 00186 Roma
Tel. +39 331 9767296
info@conficultura.it - www.conficultura.it

ANNO DI FONDAZIONE: 2011
La prima associazione delle imprese private gestori dei servizi museali. Fondata nel 2001, Conficultura è l'unica organizzazione in Italia rappresentativa delle imprese private che gestiscono i servizi per la valorizzazione e promozione dei Beni Culturali. La missione che ispira l'azione dell'Associazione è la promozione in maniera sostenibile per una sempre maggiore e migliore fruizione con l'incattivazione di forme ottimali di gestione dei servizi culturali e turistici. Conficultura, sulla base di quanto scritto nel suo Statuto, si pone al centro del dibattito culturale in atto per l'affermazione del sostanziale valore aggiunto che il privato può dare alla valorizzazione del nostro patrimonio storico e artistico con l'obiettivo di raggiungere forme più mature di collaborazione fra le istituzioni pubbliche e il settore privato specializzato. A questo fine Conficultura rappresenta le esigenze e le proposte delle "imprese della cultura" nei confronti delle principali istituzioni politiche ed amministrative, incluse le Soprintendenze, le Direzioni Regionali, il Ministero per i Beni e le Attività culturali, il Parlamento, il Governo e le forze sociali che operano nello stesso ambito dell'Associazione.

È un gruppo di professionisti operanti nei diversi settori dell'ingegneria. Tra le principali attività coordinate dai soci Ing. C. Algeri, R. Gervasoni e F. Rota si citano: consulenze a Enti pubblici e privati, studi di fattibilità, servizi di progettazione e D.L. con particolare attenzione a problematiche di sostenibilità energetica e ambientale, valutazione della vulnerabilità e della sicurezza sismica del patrimonio edilizio esistente, analisi e contrasto del degrado di materiali lapidei, modellazioni FEM sia in campo lineare che non lineare, diagnostica e monitoraggio, prove in situ. C-SPIN è stato promotore e referente, all'interno della Commissione Strutture dell'Ordine degli Ingegneri di Bergamo, del gruppo di lavoro "Conservazione dei beni monumentali e del patrimonio storico - Diagnostica e del monitoraggio strutturale" e collabora attivamente in corsi accademici con l'Università degli Studi di Bergamo.

ANNO DI FONDAZIONE: 2008

C-SPIN
Centro Sviluppo Progettazioni Ingegneristiche
Via Giulio Crescenzi 3 - 24123 Bergamo
Tel. +39 035 19965693
Fax +39 035 238640
info@c-spin.eu - www.c-spin.eu

||| C-SPIN

Trade and production of material and equipments for restoration, conservation, diagnosis, furniture museum. Design and construction of laboratories and equipment for analysis and restoration of cultural heritage. The Company is certified UNI EN ISO 9001:2000

del patrimonio culturale. Società certificata UNI EN ISO 9001:2000

arredi museali. Progettazione e realizzazione di laboratori ed attrezzature per l'analisi e per il restauro. Commercio e produzione di materiali ed attrezzature per il restauro, la conservazione, la diagnostica, gli

ANNO DI FONDAZIONE: 1988
CERTIFICAZIONI: UNI EN ISO 9001 : 2008

BRESCIANI SH
Via Breda 142 - 20126 Milano
Tel. +39 02 27002121 - Fax +39 02 2576184
info@brescianish.it
www.brescianish.eu



Supply, assistance, rental of geo-technical and geophysical instrumental for non-invasive checks on distributive del costruito-diagnostica del calcestruzzo, delle murature e del legno.

Fornitura, assistenza, noleggio di strumentazione geotecnica e geofisica-apparecchiature per controlli non

ANNO DI FONDAZIONE: 1969
CERTIFICAZIONI: ISO 9001 : 2008 QUALITY MANAGEMENT SYSTEM
FILIALE: Napoli

BOVIAR
sistemi integrati per la diagnostica e il monitoraggio
www.boviar.com

BOVIAR SH
Via Rho 56 - 20020 Lainate (MI)
Tel. +39 02 93799240 - Fax +39 02 93301029
info@boviar.com - www.boviar.com

Dal 1962 progettazione, produzione, commercializzazione di sistemi di fissaggio e sistemi di consolidamento per l'edilizia per applicazioni che vanno dal semplice ancoraggio ai più complessi interventi di consolidamento strutturale. Ai tradizionali ancoranti meccanici e chimici abitualmente utilizzati in edilizia si affiancano tecnologie per il rinforzo di strutture in muratura specifiche per interventi su manufatti di particolare interesse storico-architettonico.

Since 1962 design, manufacturing and selling of fixing and strengthening systems for building industry for simple fixing applications to complex strengthening intervention. A range of traditional mechanical and chemical anchors is integrated with technologies specially designed for masonry structures and in particular for historical buildings

ANNO DI FONDAZIONE: 1962
CERTIFICAZIONI: ISO 9001 : 2008
CE-ETA 11/0396 CE-ETA 09/0140 CE-ETA 09/0246 CE-ETA 11/0344
CE-ETA 11/0345 CE-ETA 08/0208 CE-ETA 11/0377
FILIALE: Roma

BOSSONG Spa
1962 50 2012
www.bossong.com
Sistemi di fissaggio
BOSSONG
info@bossong.com - www.bossong.com
consolidamento@bossong.com
Tel. +39 035 3846011 - Fax +39 035 3846012
Via E. Fermi 51, 24050 Grassano (BG)

5 S E R V I Z I > S E R V I C E S

2 M A T E R I A L I > M A T E R I A L S

4 A P P A R E C C H I A T U R E E T E C N O L O G I E > E Q U I P M E N T & T E C H N O L O G I S

1 A N A L I S I E P R O G G E T T O > T E S T I N G & D E S I G N

4 A P P A R E C C H I A T U R E E T E C N O L O G I E > E Q U I P M E N T & T E C H N O L O G I S

2 M A T E R I A L I > M A T E R I A L S

5 S E R V I Z I > S E R V I C E S

1 ANALISI E PROGETTO > TESTING & DESIGN
S E R V I Z I > S E R V I C E S

Via Santa Rosa, 25 - 01100 Viterbo (VT)
Tel. +39 0761 344697 - Cell. +39 340 164697
info@betagama.it - www.betagama.it
info@ibeniculturali.it - www.beniculturali.it

BETAGAMA Srl



1 ANALISI E PROGETTO > TESTING & DESIGN
S E R V I Z I > S E R V I C E S

Via Soncin Rotto 4 - 25122 Brescia
Tel: 030 291583 - fax: 030 45248
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BERLUCCHI Srl



1 ANALISI E PROGETTO > TESTING & DESIGN
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B5 Srl



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PER l'EDILIZIA

ATE - ASSOCIAZIONE TECNOLOGI



ANNO DI FONDAZIONE: 1990
ATE è nata nel Dicembre 1990 sulla spinta di diversi operatori nel campo dell'edilizia, è stata fondata nel 2000 e nuovamente nel 2010. L'Associazione si propone di sviluppare e approfondire il patrimonio culturale in ambito tecnologico tramite uno scambio di esperienze e notizie operative.

ANNO DI FONDAZIONE: 2005

CERTIFICAZIONI: UNI EN ISO 9001:2008 - Erogazione di servizi di ricerca storica, consulenza, studi di fattibilità, progettazione e direzione lavori di opere di architettura e ingegneria civile

La società B5 Srl indirizza e promuove l'esperienza e la specializzazione in progettazione architettonica e strutturale, consolidamento e restauro degli edifici, direzione lavori in Italia e in Europa, di uno studio professionale di tradizione più che trentennale, con le competenze in materia di innovazione tecnologica e metodologica di giovani professionisti affermati (arch. Francesca Brancaccio, ing. Ugo Brancaccio), attraverso i contributi e le specificità dei singoli soci. La B5 Srl opera nell'ambito di un Sistema di Qualità, adottando al suo interno e nei rapporti con i Clienti i criteri espressi dalle Norme UNI EN ISO 9001:2000.

B5 Srl engineering achieved a great experience and know-how in architectural and urban planning, in restoration of civil and monumental buildings, supervision of working in Italy and abroad, which comes from a successful long-term tradition, thanks to forty-year professional tradition with the innovative contributions and abilities of Francesca Brancaccio, Ph.D. and MA in architecture and Ugo Brancaccio, engineer, both specialized in the restoration of monuments. B5 Srl engineering operates in a Quality System, adopting in the relationship with customers, the criteria expressed by the regulations UNI EN ISO 9001:2000.

ANNO DI FONDAZIONE: 1981

La Società Berlucchi srl venne costituita nel dicembre 1981 dai Fratelli Francesco e Roberto Berlucchi proseguendo l'attività professionale del padre Ing. Antonio. Oggi, la Società si occupa di Progettazione e Restauro e si suddivide in 2 settori distinti. Ing. Roberto Berlucchi è responsabile del settore Progettazione, mentre il figlio, Ing. Nicola Berlucchi coordina il settore Restauro. Lo Studio Tecnico della Società Berlucchi può contare su un organico composto, oltre che dai due soci, da un gruppo di nove collaboratori tra ingegneri, architetti e geometri.

The company Berlucchi srl was established in December 1981 by the brothers Francesco and Roberto Berlucchi, carrying on the professional activity of their father Ing. Antonio. Today, the company works on new buildings and on restorations and is divided in two sections: Eng. Roberto Berlucchi is responsible of the Designing division, meanwhile his son, Eng. Nicola Berlucchi is responsible of the Restoration division. The designing team is composed by two senior partner engineer and nine employees (engineers, architects and technicians).

ANNO DI FONDAZIONE: 1988

Opera in diversi settori dei Beni Culturali e del restauro. Editora specialistica. Periodici: dal 1993 "i Beni Culturali, tutela, valorizzazione, attività culturali, architettura contemporanea e bioarchitettura" (il 1° del settore riconosciuto dal MiBAC, dalle Università), "Bollettino per i Beni Culturali" per varie direzioni regionali MiBAC, Coliane: Testimonianze di restauri, Archivi italiani ecc. Cantieri di restauro: progettazione, direzione lavori, sicurezza nei cantieri. Formazione: post-universitaria sul restauro. Organizzazione di Corsi, mostre, convegni, inventarizzazione e informatizzazione di reperti archeologici e di depositi museali. Servizi e consulenze: progetti per la valorizzazione dei Beni Culturali per enti pubblici e privati.

Services in the cultural assets and restoration sector: skilled training with post-graduate seminars; design work supervision; knowledge and valorisation; services and consultancy; inventory-taking and computer-aided filling for archaeological finds; organization of exhibits and conferences; trade publications concerned with cultural assets and modern architecture.



ACROPOLI srl - Salone dell'Arte del Restauro e della Conservazione dei Beni Culturali e Ambientali
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Segreteria organizzata di Restauro "Salone dell'Arte e della Conservazione dei Beni Culturali e Ambientali", la prima importante rassegna in Italia per la conservazione, la tutela e la valorizzazione del patrimonio architettonico, artistico e monumentale. Quattro intense giornate ricche di eventi (convegni, mostre tematiche) e incontri tecnici con le aziende espositrici, in quella che può considerarsi una capitale europea della cultura e del restauro. I numeri del Salone: 16.000 mq in 6 padiglioni moderni e funzionali; più di 300 espositori; 30.000 visitatori, 40 convegni internazionali; 110 incontri tecnici organizzati dagli espositori; 10 mostre tematiche.

Organizational office for Restauro, the "Art and Cultural and Environmental Assets Conservation Salon", the premier Italian event concerned with the conservation, protection and valorisation of architectural, artistic and monumental heritage. Four busy days full of events (conferences, theme exhibits) and technical meetings with exhibiting companies, in what can be considered the European capital of Culture and Restoration. Show figures: 16,000 sqm in 6 modern and functional halls; more than 300 exhibitors; 30,000 visitors; 40 international conferences; 110 technical meetings organized by exhibitors; 10 theme exhibits.

ANNO DI FONDAZIONE: 1997

L'Associazione italiana per il Patrimonio Archeologico Industriale (AIPAI), la sola operante in quest'ambito a livello nazionale, è stata fondata nel 1997 da un gruppo di specialisti del patrimonio industriale e da alcune tra le più importanti istituzioni del settore del Paese. L'AIPAI, articolata in sezioni regionali e commissioni di settore nazionali, conta oggi oltre 300 soci attivi e interagisce profondamente con università, centri di ricerca, musei, organi centrali e periferici dello Stato (Ministeri, Soprintendenze, Regioni, Province, Comuni, Comunità montane, Agenzie di promozione turistica e di sviluppo, ecc.). L'Associazione ha firmato nel 2008 un protocollo d'intesa con il TICCIH (The International Committee for the Conservation of Industrial Heritage) che la riconosce come suo unico rappresentante in Italia.

The Italian Association for Industrial Archaeological Heritage, the only one of its kind in Italy, was founded in 1997 by a group of industrial heritage experts and some of the most important Italian institutions in this field. It has over 300 members working in its regional sections spread all over the country and it cooperates with universities, research centres, institutions, museums, central and local State bodies (Ministries, Superintendencies, Regional and Provincial Authorities, Municipalities, Mountain Communities, Agencies for the promotion of tourism and local development, etc.). In 2008 AIPAI signed an agreement with TICCIH (The International Committee for the Conservation of Industrial Heritage), thus AIPAI became the official representative of TICCIH for Italy.

La professionalità, la qualità, la continua tendenza al miglioramento, in sinergia con la continua innovazione tecnologica, sono i punti di forza della nostra azienda. La politica di qualità è quella di fornire ai nostri Clienti servizi e prodotti perfettamente conformi ai requisiti concordati e perfettamente idonei a soddisfare le loro esigenze. La nostra azienda persegue costantemente la qualità secondo strategie di miglioramento continuo orientate alla massima soddisfazione del Cliente, assicurando sempre efficienza e tempismo. Gli obiettivi sono definiti e riesaminati costantemente secondo opportuni indici di qualità e sono determinati da un continuo impegno a promuovere e diffondere la mentalità dell'efficienza globale per ottenere i livelli di qualità prefissati.

ANNO DI FONDAZIONE: 1995
CERTIFICAZIONI: SOA: 0G01-classe I, 0G02-classe V, OS02-classe II, OS25-classe IV

L'idea imprenditoriale dell'archeobRes prevede la fusione delle logiche imprenditoriali con la passione per il restauro e la conservazione del patrimonio architettonico, artistico e archeologico, utilizzando le competenze e le conoscenze dei soci fondatori. La società opera su tutto il territorio nazionale nei settori specialistici del restauro monumentale, della ristrutturazione e del consolidamento di edifici storici, del restauro artistico e nel settore archeologico come partner. The company operates on throughout the country in the following specialist areas: renovation and consolidation of historical buildings, art restoration and in the following archaeological sector including all services of fact-finding investigation. The company has a "know-how" of absolute value, with recognized experts of its own technicians, experienced in their specific disciplines that allow to provide up a high quality final product.



elenco dei soci
members list

chies.A.Stico siciliano. Cinque casi nel Sud-Est. Presso il Politecnico di Milano - sede Bovisa - il convegno Recupero delle Aree Industriali dismesse: solo una risorsa territoriale o anche un patrimonio da salvaguardare? Presso il Saie di Bologna il Convegno sugli interventi nei centri storici in zone sismiche. A Roma con il Patrocinio della Conferenza Episcopale Italiana e la partecipazione diretta di relatori cei, inteso ad approfondire il tema del restauro dei beni ecclesiastici. L'Associazione è stata invitata con i suoi Soci a diversi seminari e workshop all'estero organizzati da ICE, tra cui in Israele a Tel-Aviv e in Libano a Beirut dal tema Conservation Made in Italy.

The first was held in Genoa and, in collaboration with Assorestauro's Technical-Scientific Committee, concerned the city's port waterfront. The second was held at the Maniace Castle in Syracuse and titled "Seismic Risk and Sicilian Churches. Five Cases in the Southeast". The Bovisa branch of the Milan Polytechnic was host to: "Recouping Abandoned Industrial Areas: Just a Local Resource or a Cultural Asset to be Protected?"

The SAIE show in Bologna hosted a conference on historic towns in seismic zones. A conference in Rome, sponsored by the Italian Episcopal Conference (CEI) and with CEI speakers, discussing the restoration/conservation of ecclesiastic assets.

The association and its members participated in a number of seminars and workshops the Italian Trade Commission (ICE) organized abroad, including one in Tel Aviv, Israel, and another in Beirut, Lebanon on Italian conservation methods and materials.

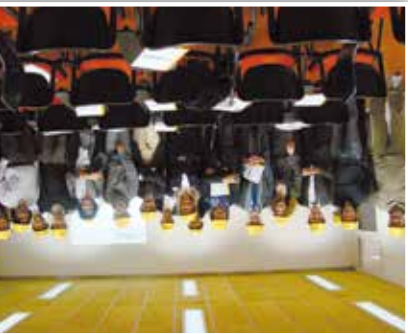
CANTIERI SCUOLA E CORSI DI FORMAZIONE WORKSITE SCHOOLS AND TRAINING COURSES

L'associazione è impegnata in incarichi conferiti dall'Istituto Nazionale per il Commercio Estero per la progettazione di percorsi formativi e l'assistenza tecnica finalizzati a interventi di restauro conservativo di importanti siti mondiali, compresa la fornitura di macchinari, attrezzature e materiali d'eccellenza prodotti da aziende italiane associate. Questi interventi sono un esempio dell'operatività e delle metodologie italiane nell'ottica di formare le professionalità locali a tutti i livelli, dalla direzione dei lavori alla direzione di cantiere, sino all'operatore, e di promuovere la collaborazione e lo scambio di esperienze tra gli specialisti dei paesi. Alcuni interventi di restauro sono la Porta di Pietro 1° Il Grande alla Fortezza dei SS. Pietro e Paolo a S.Pietroburgo, Russia e la Torre dell'Orologio di Palazzo Dolmabahçe a Istanbul. L'Associazione ha organizzato anche per conto di ICE dei corsi di formazione in Italia con visite a prestigiosi cantieri di aziende associate ad Assorestauro.

The association has been tasked by the Italian Trade Commission to devise training and technical assistance projects aimed at the conservation restoration of important sites worldwide, including the supply of the excellent machinery, equipment and materials made by Italian member companies. These projects provide examples of Italian work methods and equipment for the purpose of job training on every level, from work and worksite supervision to workers themselves, and to foster cooperation and experience-sharing between each country's experts.

Restoration projects include the Peter the Great Door on the Peter and Paul Fortress in St. Petersburg, Russia and the Clock Tower on the Dolmabahçe Palace in Istanbul, Turkey. On behalf of ICE the association has also held training courses in Italy, with tours of prestigious sites at which Assorestauro members are working.





Il primo convegno si è svolto a Genova con la collaborazione del Comitato Tecnico Scientifico di Assorestaurum sul tema del waterfront portuale di Genova; il secondo presso il Castello Maniace di Siracusa dal titolo Rischio sismico e patrimonio

CONVEGNI > CONFERENCES

In Italy we often complain about the distance that lies between the business world and the academic. An important bridge for dialogue between them has been constituted of a Technical Scientific Committee, a scientific consultancy team composed of renowned faculty members at Italy's major schools of restoration and conservation (the Milan Polytechnic, La Sapienza University in Rome, the Universities of Padua, Ferrara, Brescia and Genova).

The association fosters dialogue with the institutional world, that is, with the institutions and organizations protecting cultural assets: the Italian Cultural Assets and Activities Ministry, the Ministry for Economic Development, the Italian Trade Commission, standardization boards and the academic world.

Spesso in Italia lamentiamo un distacco tra le imprese e l'Università. Un importante ponte di dialogo è stata la costituzione di un Comitato Tecnico Scientifico, organo scientifico consultivo, al quale partecipano illustri esponenti di alcune tra le principali Facoltà e Scuole di Specializzazione di Restauro italiane (Politecnico di Milano, Università La Sapienza di Roma, Università di Padova, Università di Ferrara, Università di Brescia, Università di Genova).

L'associazione promuove il dialogo con il mondo istituzionale, ovvero le istituzioni e gli organismi di tutela dei beni culturali, il Ministero per i Beni e le Attività Culturali, il Ministero dello Sviluppo Economico e l'Istituto per il Commercio Estero, gli enti di normazione ed il mondo accademico.

PONTI DI DIALOGO > BRIDGES OF DIALOGUE

Founded in 2005, the Italian Association for Architecture, Art and Urban Restoration is the first Italian association of purveyors of materials, equipment, technology and services created for the cultural assets restoration and conservation sector, nationwide and internationally. It promotes studies and research, gathers data useful to the sector, analyzes market situations and trends; it helps prepare international standards that qualify member companies whom it assists and aids in getting quality and safety certification for their products and services.

Fondata nel 2005, l'Associazione Italiana per il Restauro Architettonico, Artistico, Urbano è la prima associazione italiana tra i produttori di materiali, attrezzature e tecnologie e i fornitori di servizi nata per rappresentare il settore del restauro e della conservazione del patrimonio sia a livello nazionale sia a livello internazionale. Promuove studi e ricerche e raccoglie notizie utili all'informazione settoriale, effettua analisi delle situazioni e dell'andamento dei mercati; partecipa all'elaborazione e alla divulgazione delle norme internazionali per la qualificazione delle imprese associate, assistendole e tutelando nella certificazione dei sistemi di qualità e sicurezza dei loro prodotti e servizi.

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